Essential Clinical Social Work Series

James W. Drisko
Melissa D. Grady

# Evidence-Based Practice in Clinical Social Work

Second Edition

Springer

# Essential Clinical Social Work Series

**Series Editor**

Carol Tosone, School of Social Work, New York University, New York, NY, USA

More information about this series at http://www.springer.com/series/8115

James W. Drisko • Melissa D. Grady

# Evidence-Based Practice in Clinical Social Work

Second Edition

Springer

James W. Drisko
School for Social Work
Smith College
Northampton, MA, USA

Melissa D. Grady
School of Social Service
Catholic University of America
Washington, DC, USA

ISSN 2520-162X ISSN 2520-1611 (electronic)
Essential Clinical Social Work Series
ISBN 978-3-030-15223-9 ISBN 978-3-030-15224-6 (eBook)
https://doi.org/10.1007/978-3-030-15224-6

© Springer Nature Switzerland AG 2019
This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.
The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.
The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG.
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Preface

Evidence-based practice (EBP) is a major shaping influence in clinical social work practice, in relation to economic policies, and in professional education. The definition of EBP remains contested; professionals still fail to distinguish EBP as a practice decision-making process from a list of treatments that have some type of research support (which are correctly called empirically supported treatments). All mental health practitioners should understand what EBP is, what it is not, and how it shapes both client options and their own practice experiences. This book explores EBP in depth and in detail. Our focus includes case exemplars that *show* how the EBP decision-making process is done in practice.

There are many recent books about evidence-based practice in social work and in other mental health professions. In reviewing these books, it appeared to us that most of the books on EBP have been written by researchers, bringing a particular point of view and expertise to the technicalities of EBP. These books are important to social workers and other mental health professionals because EBP involves a lot of technical details about research design, methods, and interpretation that are not always covered in other social work texts. On the other hand, the lack of a more direct practice and clinical viewpoint seemed to leave out a lot of the day-to-day realities clinical social workers confront in learning and using EBP in practice. Recent books also lacked much in the way of a broad and critical perspective on EBP as a social movement shaping policy, agency practice, and views of what constitutes “good” research. As we explored other books as resources for our students and for our own practice, we missed both a larger or meta-perspective on EBP and a lack of attention to doing it in clinical practice. This book seeks to illustrate through several cases how important clinical knowledge and expertise are in *doing* EBP well. We seek to introduce the core ideas and practice of EBP and then illustrate them by applying the concepts and processes to real-world cases. We also take a critical look at how EBP has been implemented in practice, education, and policy.

Eight years after we wrote the first edition of this book, EBP continues to be a major influence on clinical practice. Some areas of the book, particularly the research evidence used in our case examples, needed to be updated and made current. This we did carefully. We also added new case examples based on trauma and on opioid dependence as frequent contemporary concerns leading to undertaking clinical services. The core ideas of EBP appear unchanged, but the evidence it rests upon has evolved. Yet, the definition and uses of EBP remain unclear to many and are used by educators and researchers in ways that undermine clarity about what EBP is in practice. Further, the limited inclusion of populations of color, of LGBTQ+ persons, and of co-occurring disorders sadly limit the relevance of research results for many of today's clients. EBP has many merits but also some serious limitations. One key and continuing limitation is the lack of extensive high-quality research results on many client concerns and for many types of treatments.

We, the authors, are both clinical social workers with practice experience in a variety of settings and academic researchers. We have worked in community mental health, public schools, psychiatric inpatient and outpatient services, as well as private practice. Day-to-day practice challenges are very familiar to us both. Each of us has done quantitative and qualitative research on many aspects of practice theory, practice process, and practice outcomes. In addition, we are also teachers of clinical social work practice. We are committed to social work's core values and to the many merits of the person-in-situation perspective that distinguishes social work from related professions. While we think that EBP represents a useful approach to improving outcomes in clinical social work practice, we also think it is a complex social movement as well as a practice decision-making process. As social workers, we take a broad view of social phenomena and believe that EBP is best understood from several perspectives.

This book is intended for clinical social workers and other mental health professionals in practice. It will also be suitable for advanced level masters students and doctoral students. Many introductory level books on EBP emphasize procedures without much perspective or much detail. We seek to offer greater perspective, depth, and detail. This includes detailed examination of content from Cochrane Collaboration systematic reviews of practice research. Furthermore, we view many of the technical chapters of the book as *reviews* of research content, not initial introductions to the content. That said, we have tried to make the technical chapters clear but with enough detail for them to be useful to clinical social workers doing practice.

In our terminology and our examples of EBP, we have focused on the identification of treatment alternatives. We understand—and address—how EBP may be more broadly applied to the study of alternative diagnostic procedures, prognoses, prevention, prevalence, and economic analyses. We chose to focus our examples more narrowly to fit the interests of our intended audience of clinical social workers. We also have tried to locate our exploration of EBP in the context of social work professional values. Moreover, we think that the person-in-environment perspective can make a major, useful, contribution to EBP conceptualization and also believe it has implications for EBP methods.

In Chap. 1, this book will detail EBP as a practice decision-making process, but it will also critically examine EBP in its real-world context. We will provide a brief history of EBP and evidence-based medicine (EBM) from which it developed. We employ the contemporary model of EBP that includes four components: (1) the current clinical circumstances of the client, (2) the best relevant research evidence, (3) the client's values and preferences, and (4) the clinical expertise of the professional clinician. Research is just one part of the EBP practice decision-making process. Client views, preferences, and values along with clinical expertise are equally valued in this model, though, in many discussions of EBP, they are omitted or minimized. We aim for balance among the four components of EBP.

In Chap. 2, we will look at EBM and EBP as "public ideas" that are actively promoted by economic and political interests to shape public perceptions and social policy. We believe that clinical social workers who read this book will already be aware of how EBP is used to shape access to specific treatments and services and often to shape or limit funding for clinical services. Chapter 2 will also explore the way EBM and EBP, which have established hierarchies of research knowledge based upon the use of specific research designs and methods, are reshaping research funding priories and research education. This was done purposefully to prioritize experimental research evidence with strong interval validity. Yet, the impact of this hierarchy may be to devalue other forms of research (including qualitative research and Indigenous research approaches) and knowledge that have been actively promoted by social workers and others in the "science wars" of the last 20 years. We think that large-scale experimental research has great merit but is just one of the many valuable ways of knowing. Experiments are only as good as the conceptual base upon which they draw, the measures that operationalize concepts and theories, and the samples they use. Many aspects of research on clinical practice are neither simple nor fully resolved. Some of these unresolved and contentious issues relate to social work values on human diversity, social justice, and research. We want clinical social workers to have enough information to draw their own conclusions about the EBM and EBP research hierarchies.

In Chap. 3, we lay out the steps of EBP as a practice decision-making process. This process is what most people think of "as" EBP. We hope to introduce clinical social workers to this useful process and to identify both its strengths and its limitations. We differ on one point: that many lists of the steps of EBP include practice evaluation (Gibbs, 2002). Our view is that case-by-case practice evaluation is an essential part of good practice but that it draws on a very different logic than does the rest of the EBP model. We hope to help clinical social workers better understand the differences between the EBP practice decision-making model and case evaluation.

In Chap. 4, we explore assessment in EBP. As experienced clinical social workers, we find it odd that the EBP practice decision-making model does not include standards for assessment. We appreciate that the EBP practice decision-making model is intended to be generic and widely applicable, but we also believe a thorough and wide-ranging assessment is the only appropriate basis for treatment and service planning. Social workers use many different models of assessment, five of which we explore in some depth. Our goal is to help social workers better identify how the use of each model, including the American Psychiatric Association's assessment and diagnostic model, may exclude or de-emphasize issues of concern to clinical social workers. We also know that the realities of most managed care practice require very brief or single-session assessment, often with a very narrow focus on symptoms and risks. Such brief assessment procedures may not provide sufficient information to guide the best use of the EBP practice decision-making process. Limited assessment procedures may also omit aspects of social diversity and attention to both the positive and limiting influences of the client's social environment. To fail to attend to these issues is inconsistent with social work's core professional values (National Association of Social Workers, 2017).

Chapters 5, 6, 7, 8, 9, and 10 detail the EBP practice decision-making process. Chapter 5 addresses how to locate "the best available research evidence" in print and online sources. It also begins the complex process of evaluating the quality of research and the relevance of the available research to your client's needs and circumstances. Chapters 6, 7, and 8 provide detailed information on how to appraise research reports. Chapter 6 reviews research designs and the terminology used to describe them in EBM and EBP. This terminology frequently differs from the terminology used in social work research textbooks. Chapter 7 examines methodological issues including social diversity, sampling, tests and measures, and statistical analyses. Chapter 8 explores systematic reviews, the most highly regarded form of evidence in the EBM and EBP models, and also examines meta-analysis, the statistical technique used to compare mathematically the results of multiple studies on the same topic. Neither systematic reviews nor meta-analysis are covered in most social work research textbooks. Both are crucial to the EBM and EBP process. In addition, unfamiliar terms are explained and included in the book's glossary.

Chapters 9 and 10 address how to bring EBP research knowledge back to the client in plain language for consideration. Ultimately, the client makes the final decision about what treatment is best for them. EBP helps provide information and context to make a fully informed decision. We find many EBM and EBP textbooks do not place enough attention on these crucial steps in treatment or service planning. Contemporary EBP models require clinicians to discuss available treatment or service options actively and collaboratively with the client before a treatment plan is finalized. This is part of obtaining fully informed consent for treatment. Contemporary EBP models also empower clients to reject options that do not fit their values and preferences—even if these options are the "best" alternatives based on research evidence. Formally documenting that the steps of EBP have been followed and evaluations of practice are also examined.

The second part of this book, Chaps. 11, 12, 13, 14, 15, 16, 17, and 18, centers on the application of the EBP practice decision-making process through eight detailed case vignettes. The cases include various diagnoses, various ages and needs, various racial backgrounds, and different practice settings and illustrate varying successes in finding and implementing evidence-based treatments or services. We seek to illustrate the challenges of assessment and of identifying a single priority question to begin the EBP process. We also seek to illustrate how to engage clients in the EBP practice decision-making process and also examine how practice proceeds when research evidence is lacking or if research supported services are unavailable.

The third part of this book, Chaps. 19, 20, and 21, examines EBP in clinical social work education and supervision, pointing out some continuing issues. EBP has already had some impact on the content of social work education. It may also impact social work accreditation standards, though it is not yet specifically mentioned in the current Council on Social Work Education (2015) accreditation standards. Doing EBP will require new skills from clinical social workers and access to new resources such as electronic databases and may require new aspects in supervision. Chapter 19 explores issues in clinical social work education related to EBP. Chapter 20 examines issues related to clinical social work practice that are either intended or unintended consequences of the implementation of EBP and will also examine several issues of interest to clinical social workers that are not directly or adequately addressed by EBP research and procedures. Chapter 21 offers a set of conclusions and some recommendations for clinical social work practice, advocacy, and education.

We also offer an extensive glossary. Many terms in the glossary have extended descriptions in order to make them more useful to clinical social work practitioners. Finally, we offer two appendices. Appendix A is a model outline of a social work biopsychosocial assessment framework. With it, we seek to illustrate the complexity and scope of a thorough social work assessment. Appendix B is a bullet point summary of the strengths and limitations of EBP. We hope a succinct summary will be useful for review and reflection on the complexity of EBP.

Our overall purpose is to help clinical social workers understand EBP and to use it in practice. There is much to learn to do this successfully. At the same time, we hope clinical social workers will be critical consumers of EBP, a complex social movement with many dimensions and many components. We hope to keep EBP in context as we explore its merits and its limitations. Attentive engagement and critical thinking are strongly encouraged!

Northampton, MA, USA James W. Drisko
Washington, DC, USA Melissa D. Grady

## References

Council on Social Work Education (CSWE). (2015). *Educational policy and accreditation standards*. Alexandria, VA: Author.

Gibbs, L. (2002). *Evidence-based practice for the helping professions: A practical guide*. Belmont, CA: Brooks-Cole.

National Association of Social Workers (NASW). (2017). *Code of ethics*. Washington, DC: NASW Press.

# Acknowledgment

We would like to thank Dr. Carol Tosone, the series editor, for her request that we undertake and now update and expand this important project. Carol has been a steady source of support, of many good ideas, and a keen editing eye. We thank you.

Jennifer Hadley of Springer helped us do our first academic book. Thank you for your guidance and help through the process.

I (JD) am the child of two social workers who would be very proud to see this book completed. They pointed me in the direction of intellectual excellence. I am so grateful. My wife Marilyn watched and supported the whole project progress, and was very patient with the time it took to refine and finish. Thank you! My daughters Ann and Meghan are also sources of inspiration and creativity! Love you all.

In addition to the individuals mentioned above, I (MG) would like to thank my co-author who has been a tremendous mentor and source of support and guidance for me from the first day of my MSW practice course to this day.

Thank you also to my children, Ryan, Maggie, and Elizabeth, who inspire me every day to be a better person. Also, thank you to my husband Mark, who is my sounding board, my consultant, my editor, my best friend, and the greatest life partner I could have. You have always been my biggest cheerleader and I would not be where I am without your support.

Finally, I would like to thank my clients and students who continue to teach me every day how to be a better clinical social worker. This book is dedicated to them.

# Endorsements

*"This volume is a superb and user-friendly resource for clinical social workers interested in incorporating the EBP approach into their practice. It provides the intellectual and practical tools that practitioners need to use EBP wisely as well as to appreciate its limitations, with many case illustrations. Although the book can easily be used on its own by graduate clinicians and social workers administering programs that deliver clinical services, MSW programs that include specializations in clinical or direct practice should consider adopting this volume as a required text to equip their graduates for practice in the current context of accountable care."*

– Jeanne W. Anastas, Ph.D., LMSW, *former President of the National Association of Social Workers and Professor, NYU Silver School of Social Work, New York, NY*

*"Evidence-Based Practice in Clinical Social Work is the most exciting recent contribution to the emerging literature on evidence-based practice. Beautifully written by two broadly experienced clinicians and social researchers, the text is erudite, comprehensive, and apt to be greeted enthusiastically by practitioners across the human services. Among the many helpful and unique features of the book are the clinical vignettes included in six chapters that provide realistic and nuanced insights into the application of EBP to clinical decision making in diverse contexts. Few texts have considered evidence-based practice as a social movement or focused so thoughtfully on practical issues of key importance to clinicians, such as choosing optimal interventions from available treatment alternatives. If asked to select the single best book for students or practitioners interested in evidence-based practice, this is certainly the book I would recommend."*

– Matthew Owen Howard, Ph.D., *Frank Daniels Distinguished Professor, University of North Carolina at Chapel Hill and Editor, Social Work Research*

# Contents

## Part I What Is Evidence-Based Practice and How It Influences Clinical Practice

**Part II Case Examples of Evidence-Based Practice**

**Part III Evidence-Based Practice in Clinical Social Work Education and Ongoing Issues**

# List of Figures

# List of Tables

# Part I

# What Is Evidence-Based Practice and How It Influences Clinical Practice

# Chapter 1
# Introduction and Overview

Evidence-based practice [EBP] is a major influence on medical and mental health practice, research, and policy. In less than 25 years, it has become a central part of clinical training, research, and practice in all the mental health professions. Some authors have called it a “paradigm shift” in practice (Edmond, Megivern, Williams, Richman, & Howard, 2006; Pollio, 2015). EBP is also quite prominent in the social work professional literature. Several new journals have been started to share knowledge about EBP, including one in social work focused exclusively on evidence-based social work practice. The Council on Social Work Education, which accredits all BSW and MSW programs in the United States, has required education on “research-informed practice and practice-informed research” in both its 2008 and 2015 Educational Policy and Accreditation Standards.

Despite this growing influence and expansion of EBP, there is continuing confusion across professions about just what EBP is and how best to implement it (Carter Mastro, Vose, Rivera & Larson, 2017; Drisko, 2017; Grady et al., 2018; Wike et al., in press). In fact, Rubin and Parrish (2007) found a wide range of views about the nature and practice of EBP in a national survey of social work faculty. In national surveys of practitioners, both Grady et al. (2018) and Simmons (2013) found that a large majority of social workers understood EBP as providing treatments that had agency or payer approval, which is quite different than the actual definition of EBP. Terminology, emphasis, and application in practice vary from author to author, practitioner to practitioner, and researcher to researcher, leaving many social workers at a loss regarding how to define and ultimately practice using the principles of EBP. EBP is a complex social movement with several important dimensions. To begin this book, let’s start with some definitions and some background to set the stage for a more detailed exploration of EBP in clinical social work.

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_1

## What Is Evidence-Based Practice?

Greenhalgh (2010) offers one quite technical definition of evidence-based medicine (EBM) as "the use of mathematical estimates of the risk of benefit and harm, derived from high quality research on population samples, to inform clinical decision-making in the diagnosis, investigation, and management of individual patients" (p. 1). That is, a key feature of EBM and EBP is the use of research results drawn from entire populations to guide service planning for individuals. It is the application of large-scale research results in everyday clinical practice. This definition connects EBM and EBP to its origins and emphasizes research results. But it leaves undefined just how to make the best use of these research results in clinical practice. This book will address both what EBP is and how it influences the work and education of clinical social workers.

EBP has had such a profound impact on the medical and mental health professions that it is can also be viewed as a social and economic movement: an effort by a group of people to make a social or economic change. The extent of this social movement is so widespread that both the definition of EBP and its application can become confusing. Shlonsky and Gibbs (2004, p. 137) correctly pointed out that "EBP is in danger of becoming a catchphrase for anything that is done with clients that can somehow be linked to an empirical study…." First and foremost, as used in clinical social work circles, *EBP refers to a practice decision-making process*. The goal here is to include the integration of the "best research evidence" in everyday client services (Sackett, Strauss, Richardson, Rosenberg, Haynes, 2000, p. x). Second, in addition to the core practice decision-making process, EBP is also used to specify methods and objectives for research studies. In this second instance, the goal is to set standards for the kinds of evidence considered good enough for application in the practice decision-making process. Third, EBP is used in policy and administratively to require the use of specific treatments by clinicians based on the quality of the research evidence that supports their benefit to clients. In this third instance, the administrative goal is both to reduce costs and promote quality care. Beyond issues of just what constitutes "good enough" evidence, and how to make the best use of research evidence in clinical practice, the client's role in treatment planning and issues of professional autonomy and professional standards are also raised in EBP discussions. Understanding EBP in its many applications can be confusing. To begin, let us look at how EBM and EBP originated. This will clarify the core features of EBP and provide definitions for further exploration.

## The Foundations and History of EBP

Some scholars locate the origins of evidence-based medicine (EBM) and EBP in the very early efforts of physicians to identify the specific symptoms of medical disorders. Indeed, Park argues that the work of Persian healer Avicenna (Ibn Sinã) introduced the ideas of quantification and experimentation into medicine as early as 1025. Later, in France and England in the 1700s, physicians observed and counted numbers of patients with specific symptoms. Compiling data across many patients, these physicians began to reliably link clusters of symptoms with distinct medical disorders. By using such observational research, the characteristics of certain medical disorders were empirically identified. These early European efforts allowed for more accurate diagnosis of disorders and began what is today the science of epidemiology. Being able to diagnose disorders accurately was a pivotal conceptual and empirical step in providing more specific and effective treatments. Indeed, accurately identifying the problem to be treated is vital to today's EBP clinical practice decision-making process.

What is now called EBM and EBP today is grounded in the pioneering work of Scottish physician Archibald Cochrane. His life story clearly illustrates why having some knowledge of what works to treat specific disorders is so important for practice. Dr. Cochrane volunteered to fight in the Spanish Civil War and later served as a captain in the British army in Crete during World War II. He was captured and became a prisoner of war in 1941. Cochrane became the medical officer in charge of prisoners in Hildburghausen, Elsterhorst, and Wittenberg an der Elbe prisoner of war camps in Germany. He provided services to large numbers of Allied prisoners living in very difficult and traumatic conditions. Cochrane (1972, p. 5) writes of a clinical question about tuberculosis that illustrates his interest in distinguishing treatments that help from those that may injure:

> At Elsterhost all the POWs with tuberculosis (most of whom were far advanced) of all nationalities, were herded together behind the wire. Conditions were in many ways not too bad. Through Red Cross parcels we had sufficient food; we were able to "screen" patients and do sputum "smears" but radiographs [X-rays] were very limited. We could give our patients bed rest, pneumothorax, and pneumoperitoneum...
>
> ...I had considerable freedom of clinical choice of therapy: my trouble was that I did not know which [therapy] to use and when. I would gladly have sacrificed my freedom for a little knowledge. I had never heard then of "randomised controlled trials," but I knew there was no real evidence that anything we had to offer had any effect on tuberculosis, and I was afraid that I shortened the lives of some of my friends by unnecessary intervention…

Not knowing what treatments "work" made selecting treatments almost an arbitrary process. All professionals seek to use their knowledge and practice wisdom to help their clients improve and grow. Including research knowledge as routine part of clinical practice should improve results for individual clients. It also helps clinicians be more confident in their own decision-making and practice actions.

While Cochrane strongly advocated for the use of the scientific knowledge in making treatment choices, he was also a practitioner with empathy and a heart. Cochrane describes another case showing how important both human caring and accurate diagnosis can be:

> Another event at Elsterhorst had a marked effect on me. The Germans dumped a young Soviet prisoner in my ward late one night. The ward was full, so I put him in my room as he was moribund [near death] and screaming and I did not want to wake the ward. I examined him.

> He had obvious gross bilateral cavitation and a severe pleural rub. I thought the latter was the cause of the pain and the screaming. I had no morphia, just aspirin, which had no effect.
>
> I felt desperate. I knew very little Russian then and there was no one in the ward who did. I finally instinctively sat down on the bed and took him in my arms, and the screaming stopped almost at once. He died peacefully in my arms a few hours later. It was not the pleurisy that caused the screaming but loneliness. It was a wonderful education about the care of the dying. I was ashamed of my misdiagnosis and kept the story secret. (Cochrane with Blythe, 1989, p. 82)

Clinical expertise must always guide good clinical practice. Understanding the client fully and accurately is not replaced or given low priority in current practice models of EBM and EBP.

In 1972 Dr. Cochrane, who became a distinguished professor of Tuberculosis and Chest Diseases in Wales, published an influential book that started the contemporary evidence-based approach in medicine. His book *Effectiveness and Efficiency: Random Reflections on Health Services* argued for the use of experimentally based research in both clinical practice and in policy making. Cochrane argued that because health-care resources would always be limited, they should be used to provide those treatments and services which had been shown to be effective through rigorously designed research. He promoted the use of research results to distinguish (1) treatments that are effective, from (2) treatments that are harmful and ineffective and from (3) treatments that are benign but ineffective. He heavily emphasized the importance of drawing evidence from experimental studies also called randomized controlled trials (RCTs) because these provide compelling information about the causes of changes made by treatments. A central idea of the EBP process, namely, the integration of the best available research knowledge to help decide what treatment is likely to be the most effective, was introduced. Knowledge based on experimental research or RCTs was also clearly prioritized.

Cochrane's writing points out the significance of accurate and thorough assessment, coupled with the clinician's attention to realistically available resources, and using the best available research knowledge. Note that several different types of professional expertise are combined with the knowledge provided by quality research. Current approaches to EBP still draw on these core ideas, but add to them actively engaging with, and actively collaborating with, clients to include their views and their willingness to participate in a proposed treatment plan. Current approaches to EBM/EBP also heavily emphasize clinical expertise as combining and integrating all these components of assessment and treatment.

## The Overall Goals of EBP

Cochrane (1972) sought (1) to increase the number of truly helpful treatments, (2) to reduce the use of harmless treatments that did not help the target disorder, and (3) to eliminate harmful treatments that did not lead to improvement but caused other harm. This overall goal remains a fundamental macro- or policy-level focus of EBP and EBM today. The goal of reducing harm may seem more applicable to medical practice than to clinical social work practice. Yet there are costs (harms) in the effort, expense, and time taken by ineffective and potentially harmful treatments. Further, in some circumstances, risk of death and bodily harm are real issues for mental health patients. Where clients are asked to undertake treatments that may exacerbate risk (such as risk of suicide for people who improve from severe depressions), the same concerns apply to clinical social work practice. For all health and mental health professionals, reducing harmful treatments, and increasing helpful treatments, remains a very appropriate and critical goal.

Cochrane thought that EBM/EBP should lead *both* to improved outcomes for individual clients and more efficient use of available monies, resources, and services. That is, the EBP model should allow for more efficient and effective use of health-care resources at the policy level while leading to the most effective treatment options for individual clients. Gains in both improved client outcomes and in making optimal use of health-care resources result.

Of course, these gains should appear in the aggregate, but evidence-based policy decisions may not automatically improve services for any given individual. In the United States, some policy-level decisions may exclude certain patients from coverage and specific types of treatment, differentiating policy- and patient-level results. Such difficult policy and economic choices have also been made in other Western countries. Because EBP has both micro- or client-level application and macro- or policy-level implications, it is always important to be clear about how EBP is being viewed in any given article or report.

## Defining the EBM/EBP Practice Decision-Making Process

While we have emphasized the impact of Dr. Archie Cochrane in originally promoting the concepts behind EBM, many authors credit other, more contemporary, physicians as the originators of EBM and EBP. Indeed, the “McMaster Group” (1981), led by Dr. David Sackett, promoted the incorporation of research knowledge into medical practice in the 1980s. Another member of the McMaster group, Dr. Gordon Guyatt (Guyatt, Rennie, Meade, & Cook, 2008, p. xx), states that the first published use of the term “evidence-based medicine” was in an article of his in 1991. The McMaster Group promoted and systematized the process of EBM in a series of articles published in the 1990s. These Canadian physicians advocated for the EBM practice decision-making process that gave form to Cochrane’s pioneering ideas. Their work made EBM an international social movement.

Sackett, Rosenberg, Muir Gray, Haynes, and Richardson (1996) offered an early and still widely cited definition of EBM:

> Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. (pp. 71–72)

Following Cochrane, their initial emphasis was on actively including research knowledge in the practice decision-making process. Some social workers "remain loyal to the definition and intention of the term as conceive by its originators" (Soydan & Palinkas, 2014, p. 1). While including research knowledge in practice, decision-making *is* the defining feature of EBM and EBP, and a great strength, its everyday application, has proved neither simple nor straightforward. Practice requires balancing research results with the values, preferences, and situational factors impacting each unique client and the expertise of the clinician.

Indeed, this early definition of EBM had some serious limitations when applied to real-world clinical practice. Haynes, Devereaux, and Guyatt (2002, p. 38) note that the early definitions of EBM and EBP "de-emphasized traditional determinants of clinical decisions" and "overstated the role of research in clinical decision making." They do not mean to imply that research knowledge is unimportant, only that *it is one part of several* that shape practice decision-making. To make EBP more useful in practice, current definitions are simpler and more balanced: emphasizing that "research alone is not an adequate guide to action" (Haynes et al., 2002, p. 38).

The current definition by the same group of Canadian physicians is that EBM is "the integration of best research evidence with clinical expertise and patient values" (Sackett et al., 2000, p. x). Here research findings are one part of a multi-part process that also includes the client's current clinical circumstances and the client's personal preferences and views, all weighed and integrated through professional clinical expertise. No one part has priority over the others.

This contemporary definition has also been applied in social work definitions of EBP by Rubin and Bellamy (2012), Gibbs and Gambrill (2002), the National Association of Social Workers [NASW] (n.d.), as well as Mullen and Shlonsky (2004) and in numerous published articles. NASW (n.d., para 5) states that "EBP is a process in which the practitioner combines well-researched interventions with clinical experience, ethics, client preferences, and culture to guide and inform the delivery of treatments and services." Rubin and Bellamy (2012, p. 7) state that "EBP is a process for making practice decisions in which practitioners integrate the best research evidence available with their professional expertise and with client attributes, values, preferences and circumstances." This more inclusive definition of the EBP practice decision-making process will be used throughout this book. Yet, as we will see, EBP may be defined differently for purposes other than practice decision-making. These different perspectives on EBP may not involve such balanced consideration of research knowledge with professional expertise and client preferences.

## What Makes Up the EBM/EBP Practice Decision-Making Model?

Haynes et al. (2002) state that the contemporary EBP practice decision-making model has four parts. These are (1) the current clinical circumstances of the client, (2) the best relevant research evidence, (3) the client's values and preferences, and

**Fig. 1.1** The four components of the evidence-based practice model (Adapted from Haynes et al. 2002)

(4) the clinical expertise of the professional clinician. They emphasize that the professional expertise of the clinician is the "glue" that combines and integrates all the elements of the EBP process. Clinical expertise is the cement that holds the other parts of the model together. Note, too, that the client has ongoing, active input into the clinical decision-making process. (Would we really expect a client to engage in a treatment plan they thought was irrelevant or offensive to their values?) Research evidence is indeed one key ingredient, but it is not privileged over other factors. Clinical practice decision-making is an active, multidimensional process. Figure 1.1 graphically illustrates the four parts of EBP and how clinical expertise is the overarching and integrating component of the model.

Gilgun (2005) states that just what is meant by patient values has neither been well conceptualized nor well examined in current EBP models. This is an area of great interest to social workers that deserves further study. Religious and cultural values, individual beliefs and concerns, and personal principles and attitudes would all appear to be aspects of client values. In addition, past experiences with health-care providers and systems, as well as other people with power and authority, may shape client preferences and actions. Socially structured differences and oppression may profoundly influence and individual's comfort, use, trust, and openness in health and mental health-care delivery. Immigrants and others may simply be unfamiliar with Western models of mental health care. All these factors may impact on a client's decision to seek, to stick with, and to actively participate in mental health services.

Clinical expertise "encompasses a number of competencies that promote positive therapeutic outcomes" (American Psychological Association, 2006, p. 276). All graduate-level clinical practitioners should possess these basic professional competencies. These core competencies include the ability to conduct a clinical assessment, make diagnoses, systematically formulate cases, and develop treatment plans, each with a clear rationale and justification. They also include the ability to implement treatments, to monitor progress, and to evaluate practice outcomes. Clinical expertise has a strong interpersonal component, requiring that clinicians can form therapeutic alliances, self-reflect, and understand the impact of individual, cultural, and contextual differences on treatment (Huey, Tilley, Jones, & Smith, 2014). Such contextual differences also include practical and resource limitations that influence practice decision-making.

Despite this clear statement, Gilgun (2005) argues that clinical expertise warrants better conceptualization and further study. We may know what clinical expertise is, in general, but may lack knowledge of its important specific details.

Clinical expertise is required to assess the client's clinical state and circumstances. It is also required in facilitating the client's sharing of their preferences and values. Both processes may take place in stressful circumstances and under time pressure. Both clinical and research expertise is needed to find, appraise, and link research evidence with the client's particular circumstances. EBP, as a practice decision-making process, is made up of several components. It is important that clinical social workers have a clear understanding of EBP *as a practice decision-making process*.

Not only are there several definitions of EBM and EBP in print, there are also other efforts to link research and clinical practice. As we discuss next, these efforts are not quite the same as EBP but may share a focus on integrating research results into practice and policy. These similar but distinct approaches, and their terminology, often appear when clinicians apply the EBP model in practice. It is important to distinguish EBP from other uses of research evidence to inform practice and policy.

## How the EBP Practice Decision-Making Process Differs from "Empirically Supported Treatments" and "Best Practices"

Clinicians may read about "research supported treatments" [RSTs], "empirically supported treatments" [ESTs], or "evidence-based interventions" [EBIs] or "best practices." These have some aims in common with EBP but focus on *treatments models* and their supporting evidence. They are not directly about *how* to include research knowledge in practice but rather they address what research support exists in the literature regarding different treatments. Unfortunately, these terms have varying definitions and sometimes apply a very different logic. For example, "research supported treatments," "empirically supported treatments," or "evidence-based treatments" are *usually* based on ideas from the Division 12 (Clinical Psychology) of the American Psychological Association [APA]. This APA task force argued that treatments can be rated based on the quality and extent of their research support. Specifically, treatments supported by two or more carefully completed experiments, or ten or more single systems design studies, can be called "empirically supported treatments [ESTs] or "research supported treatments [RSTs]." They also required the use of a treatment manual and that persons other than the originator of the treatment under study complete some of the outcome research (Chambless & Hollon, 1998). When this model is applied, the *treatments* that demonstrate statistically significant improvement using these research methods may be called "RSTs" or "ESTs." Note that Truijens, Zühlke-van Hulzen, and Vanheule (2019) find that use of a treatment manual did not improve outcomes over treatments that were not manualized.

The emphasis in RSTs is on showing that specific *treatments* have demonstrated effectiveness. Note, however, that this terminology and model focus on rating specific treatments for specific populations or targeted issues, rather than on how to make decisions for treating a specific client. RSTs are helpful at the policy planning level or possibly as a starting point in making clinical decisions but are not based on the EBP practice decision-making model. “Empirically based interventions” (ESIs) usually apply a similar approach to rating programs or specific interventions. Unfortunately, the terminology is applied inconsistently and is not based on a single set of standards. The label “best practices” is sometimes applied to treatments or interventions using the RST approach and criteria, but it is also used inconsistently in the literature and lacks a single consensus definition. The terminology can be confusing, so a clear understanding of what EBP is and, is not, can be a valuable guide. Critical thinking is vital to doing EBP well.

## EBP in Social Work

In social work, EBP arose as the single-case evaluation effort declined in prominence. In the 1980s and early 1990s, many social workers advocated the use of single subject or single system research designs to evaluate and document the outcome of social work practice efforts and improve accountability. This movement was called the “Empirically Based Practice” movement although its focus and methods were quite different from today’s EBP (Okpych & Yu, 2014). The goal of this effort was to improve clinician and agency accountability (Campbell, 1992). Specifically, empirically based practice sought to demonstrate that social work services were effective on a case-by-case basis (Kazi & Wilson, 1996; Sheldon, 1983). Monitoring and evaluation should always be part of good clinical practice, yet the single-case study approach contrasts with EBM and EBP models that focus instead on large-scale, population-level, research results.

Although single-case practice evaluation is a useful method, the limitation of the effort was that single-case research designs do not always show conclusively that the treatment or program *caused* any benefit or harm that occurred (Kazdin, 2010, 2016). Single-subject evaluation can document whether or not a client has improved, but a single application cannot generally demonstrate that the treatment, rather than other factors, caused this change. Importantly for the profession, the empirically based practice effort of the 1980s affirmed that evaluation is a key part of professional practice. It also supported the need for social workers to use several different qualitative and quantitative evaluation methods.

As EBM gained prominence in the late 1990s, social work began to adopt the contemporary EBP model as a more rigorous way to guide treatment decision-making before treatment starts. Single-case evaluation is still an extremely valuable method for monitoring and evaluating treatment impact on a specific case. In the twenty-first century, the older empirically based practice movement, focusing solely on single-case evaluation, was replaced in prominence by EBP, and a new emphasis on using large-scale, population-based research results. In practice, EBP focuses on using research to inform the selection of assessments and/or treatments before they are started; the single-case evaluation movement instead focused on assessing individual client improvement. Yet some social work researchers now argue for combining EBP with single-case evaluation measures (Gibbs, 2002).

The shift toward incorporating EBP into social work practice become still more evident when in 2001 the Council on Social Work Education [CSWE] accreditation standards required content on “empirically based knowledge, including evidence-based interventions” be taught and assessed in all accredited BSW and MSW programs. In both its 2008 and 2015 accreditation standards, CSWE required that “research-informed practice” and “practice-informed research” must both be taught in conjunction with critical thinking and clear attention to diverse client views. This slightly different from “evidence-based practice” language was used to allow social work programs some flexibility in how they characterize and implement content on including research in treatment decision-making. One approach programs may use will be to focus on EBP, but this is not the only way programs can meet this educational accreditation standard. Since an accredited degree is crucial to obtaining licensure to practice, clinical social workers matriculating from accredited programs should be knowledgeable about the intersection of research and practice. This foundation includes valuable knowledge, values, and skills for contemporary clinical social work practice.

Today’s emphasis on EBP often makes clinical social workers question if there was any research evidence that their efforts were beneficial in prior years. The answer is that there is an extensive research foundation for clinical practice in social work and in the allied mental health fields. It has been developed over more than 100 years. This research base takes many different forms and asks a wider range of questions than does the EBP model. What EBP brings is a specific focus on population-based research using experimental methods.

## Wasn’t There Any Previous Evidence that Treatments Worked?

Clinical social work practitioners have many questions about their clients and their practice efforts. Are the assessment methods we use accurate? Do they address both psychological and social needs? How can we individualize treatments to best meet the needs, identities, values, and “style” of each client? What are the markers of progress toward larger outcomes we can use to guide our efforts? Do clients make meaningful change? Do these changes last? Do some people get worse even with treatment? How can we better help people who drop out or never really engage? Overall, mental health practitioners are curious people who ask many questions, who can tolerate partial answers and ambiguity, and who use many types of evidence to answer these complex questions in changing circumstances. Practitioners want to know about a variety of complex issues.

Over the past 25 years, calls for greater professional accountability, concerns about rising health-care costs, and efforts to improve treatment outcomes have all come together to force mental health professionals to better demonstrate that what they do "works." In 1999 the US Surgeon General David Satcher published a comprehensive review of mental health concerns and treatments. The report was based on a review of "more than 3,000 research articles and other materials, including first-person accounts from individuals who have experienced mental disorders" (US Department of Health and Human Services, 1999). The report clearly stated that mental health is a fundamental part of overall health and that mental health disorders are "real" and significant health issues. This careful review of research supported two major findings: (1) that the "efficacy of mental health treatments is well documented" and (2) "that a range of treatments exists for most mental disorders" (Abstract). From these key findings, "the single, explicit recommendation of the report is to seek help if you have a mental health problem or think you have symptoms of a mental disorder" (Chap. 8). The US government, after an extensive professional review, found strong research support for the effectiveness of mental health treatments and encouraged their use.

That mental health services are generally effective was not a new finding in 1999. Since the 1930s many research studies have demonstrated that psychotherapy is generally effective across theoretical orientations and intervention techniques (Bergin & Garfield, 1971, 1978, 1986, 1994; Chorpita et al., 2011; Lambert, 2004; Wampold, 2001, 2010). Of course, this does not mean that all treatments "work," or work for a specific client or that there are no harmful, or unethical, or culturally insensitive interventions. Yet there is a massive body of evidence, based on multiple research methods, that indicates psychotherapy works (American Psychological Association, 2013; Huey et al., 2014).

In the 1970s a research technique called meta-analysis was developed to aggregate and compare the experimental outcomes of different therapies for a single disorder such as depression or anxiety. (We will explore meta-analysis in depth in Chap. 8.) A growing number of meta-analyses demonstrate that, in general, the effects of therapy are as good, or better, than is found for most medical procedures (Wampold, 2001, 2010). This is especially impressive when one considers that the outcomes of therapy and mental health services address not only specific symptoms but also intrapersonal quality of life, personal identities, interpersonal functioning, and engagement in community social roles and in school or job performance. Further, psychotherapy produces enduring outcomes that are likely to continue after the end of formal treatment (Grant, Huh, Perivoliotis, Solar, & Beck, 2012; Lambert & Ogles, 2004). Mental health services may be costly to provide, but they have also been found to reduce both medical and hospital costs in some cases (Miller & Hendrie, 2008; The President's New Freedom Commission on Mental Health, 2003).

While the Surgeon General and the US Department of Health and Human Services were studying mental health services, EBP emerged as a growing influence on mental health practice and policy. Since the late 1990s, discussion of the delivery of mental health services has become strongly linked to EBP, with almost all public and private payers advocating for its implementation. Indeed, the rise in influence of EBP has occurred hand in hand with important efforts to reduce health and mental health-care costs while maintaining or improving service quality.

To look in detail at how EBP is linked to research, clinical practice, and policy, a recent example may be informative. The complex interplay of the quality of research methods, applications to practice, and policy issues are reflected in a very public discussion about how to treat depression.

## An Example: Is Medication Useful for Treating Depression?

A series of articles and letters illustrate several issues about evidence-based practice and doing clinical practice in the era of EBP-managed care. Specifically, a meta-analytic summary of studies on depression was published in a prestigious medical journal (Fournier et al., 2010). The authors are well-qualified mental health professionals from several high-profile medical research centers. They aggregated the results of several large-scale, high-quality, experimental studies on depression. Their work largely conformed to the standards of EBM and EBP research. Their article reported that medications are not helpful for treating depression unless one is severely depressed. For mild to moderate depression, study results show medication is no more effective than is psychotherapy, placebo, or the passage of time. This was a very controversial finding.

In heated response, a newspaper column questioned the new study's methods and findings and further claimed that it included too few studies and too few medications to draw such a firm conclusion (Friedman, January 11, 2010). The author of this newspaper column is a well-qualified professor of psychiatry from another high-profile medical center. The column's author also stated that the real test of an effective antidepressant is not just that it relieves symptoms but that it should keep depression from returning. Later reoccurrence of depression is known to become more likely with each depressive episode, but this was not a measure of outcome in the original summary article. This summary of evidence, the critics claimed, both lacked rigor and did not target some issues important to patients.

Other letters expanded on these themes, with another psychiatrist (who was the past president of a psychiatric organization) noting that depression responds to psychotherapy and always warrants a thorough diagnostic assessment (Freedman, January 11, 2010). Another letter from a prominent psychiatrist and researcher stated that mild to moderate depressions were often not diagnosed or treated and again noted that psychotherapy was often underutilized by general practitioners who more commonly treated all severities of depression with medications (Price, January 11, 2010). Yet another letter from a psychologist (and former president of a state psychological association) noted that this exchange of views pitted "competent researchers against clinicians" (Brush, January 11, 2010). He added that "the best clinicians practice flexibility in approach, depending on the needs of their patients."

This set of exchanges among professionals shows that many points of view exist regarding how to include research in clinical practice. Simple conclusions about best practices must be viewed critically as partial or tentative. The ongoing issues include: Does useful evidence exist on the topic I need to know about? Does the research address the specific kinds of outcomes I and my client seek? Is the research comprehensive and valid? Were the study participants like my client in terms of age, gender, race and other social identities? Does the research point to a single best treatment? Are other treatments available which were not fully studied but which may be helpful to my client? How does my client understand the best treatments reported in the literature? Are there cultural or practical factors that may make this treatment a poor fit for this client in this situation? Are these practices ethical? Can I deliver this treatment or are there other nearby services that can provide it? Are there any ethical issues in working with managed care payers? EBP has many dimensions, and, while a very helpful part of practice, it does not replace careful and ethical practitioner decision-making.

Behind the "evidence" are differences in perspective about the quality and comprehensiveness of research on treatment outcomes and differences on approaches to practice (Goodheart, Kazdin, & Sternberg, 2006; Mace, Moorey, & Roberts, 2001; Petr, 2009; Trinder, 2000). Legitimate and long-standing differences exist on the quality of available research and the methods by which summary conclusions are drawn. Further, some scholars note that the "active ingredients" of many treatments are unknown or not well specified or that some treatments do not actually qualify as legitimate psychological interventions (Wampold, 2010). It may be that simple summaries of treatments omit attention to vital factors that help make the treatments "work" or not.

Still, some authors claim that using any treatment lacking a strong evidence base is unethical, a form of malpractice (Myers & Thyer, 1997). Yet it may also be unethical or inappropriate to use treatments found effective for majority populations on people of different cultural backgrounds or values (Zayas, Drake, & Jonson-Reid, 2011). Unique clients come with multiple needs and offer imperfect information (Morales & Norcross, 2010). The complexity and ambiguity of real-world mental health cases do not always allow for simple answers. Client values, preferences, and actions vary widely. Professional expertise and critical thinking are always required when doing EBP.

On the political front, there is an "image management" issue as researchers are represented as knowledgeable and competent, having clear-cut answers contrasted with practitioners who are represented as uncertain or imprecise and therefore incompetent. Public perceptions may be actively shaped and manipulated as a part of the health-care debate. Yet to frame professional mental health practitioners as incompetent in contrast to knowing researchers is a false and unhelpful dichotomy. EBP is a key part of the health-care industry where administrative control and cost management matter along with quality care. But to devalue practitioners may only undercut public perceptions of health-care professionals and may perhaps reduce service utilization by people in need. Accessible, high-quality care must be an overall goal for mental health researchers and providers alike. Fewer labels and accusations, and more engaged discussion, are a more appropriate course for professionals to undertake.

## EBP: A Movement in Crisis?

Greenhalgh, Howick, and Maskrey (2014) point out that the EBM/EBP movement has had several unintended consequences. First, they argue that the "evidence-based" "quality mark" has been misappropriated and distorted by vested interests (p. 2). That is, the economic influence of drug and medical device manufacturers has led to the expansion of "disease" to include baldness and other limited risks as they set the EBM/EBP research agenda. The influence of these economic powers is also coupled with unusual or "surrogate" measures of disease in tests of treatment outcomes that may not be the best or most realistic measures of effectiveness (p. 2). Second, they point out that statistically significant results may not necessarily link to noticeable clinical improvement. In large populations, small differences may prove to be statistically significant, but client-level improvement may not necessarily follow. For example, lung cancer screening is recommended for older people who have been long-term smokers, even if they have quit for several years. Screening is correctly advertised to reduce lung cancer deaths by 20%. But these people have a 98% chance of living for the next 7 years without screening: 20 of 1000 will die from lung cancer. With screening, a person has a 98.4% chance of living for the next 7 years: 16 out of 1000 unscreened individuals will die from lung cancer. (A calculator for specific risk results by age, gender, and years of smoking is found at http://nomograms.mskcc.org/Lung/Screening.aspx.) This is indeed a 20% improvement but a very small change in terms of the total number of people positively affected. Here we see that statistically significant results do not always translate into meaningful changes in outcomes for specific individuals.

Third, Greenhalgh et al. (2014) note that there has been a flood treatment "guideline" based on research evidence. They argue that the volume of available research evidence has become unmanageable. They cite Allen and Harkins' (2005) study of one hospital's daily intakes, covering 18 patients with 44 diagnoses and 3679 pages of national guidelines (an estimated 122 hours of reading) relevant to their immediate care. Doing EBM/EBP can present a crushing time burden. Fourth, Greenhalgh et al. (2014) point out that treatment rules and guidelines "poorly map" to the complexity of comorbid and multi-morbid client conditions. That is, guidelines may be very useful for a single, clearly defined, health concern but often fail to provide guidance for the multiple, simultaneous, client concerns frequent in clinical practice. Fifth and finally, they note that "inflexible rules and technology driven prompts may produce care that is management driven rather than patient centered" (p. 2). Economic interests and practice guidelines may interfere with informed, client-based decision-making. As a result, these authors advocate "for a return to the movement's founding principles–to individualise evidence and share decisions through meaningful conversations in the context of a humanistic and professional clinician-patient relationship" (p. 5).

In social work, still another serious limitation of the available EBP research hampers practice. Contemporary outcome research on psychotherapy and social services has not included sufficient numbers of people of color and other diverse groups to demonstrate differential effectiveness (Hamel et al., 2016). While large-scale studies often include minorities, there is a greater need for research results focusing specifically on diverse populations (Lee, Fitzpatrick, & Baik, 2013; Redwood & Gill, 2013). Further, many research summaries do not describe the populations from which the results were drawn beyond sample sizes and sometimes percentages of males and females. This lack of detail about social identity and social supports potentially limits the relevance of outcome research for clinical practice with diverse populations. This limitation has been known for many years (Miranda, Nakamura, & Bernal, 2003) and has begun to be addressed by several professional organizations, but clinically useful results remain very limited (Morales & Norcross, 2010). EBP is a complex social movement with many assets but also with some serious developmental and implementation concerns.

## Summary

EBP provides a model for integrating the results of population-level research into individual practice decision-making along with client values and preferences and clinical expertise. It seeks to improve positive outcomes and reduce harmful or ineffective treatments. It should help clinical social workers be more confident in their recommendations and for clients to have greater confidence in the intervention they are starting.

The contemporary EBP model emphasizes professional expertise as integrating knowledge of the clients' situation and needs with the best available research evidence as well as the client's values and preferences. The expertise of the clinician is also integrated into this process. Research evidence is one key part of the model, but not all there is to it. There are other efforts that seek to identify effective treatments that are like EBP but are not identical it. One of these efforts is the empirically supported treatment or research-supported treatment model developed in psychology. Other kinds of evaluation efforts focus on outcome evaluation for single clients rather than populations. Differences in terminology are very important but can be confusing.

Clinical social workers need to be knowledgeable about EBP, including understanding what it is and what it is not. In collaboration with their clients, they need to thoughtfully use the EBP process to plan for effective interventions. This process will involve including the client's values and preferences, as well as taking into account the client's social environment. Social work's person-in-environment perspective needs to be paired with carefully reading the literature to understand the terminology and key ideas applied by researchers, administrators, and policy planners. In doing so, clinical social workers must remain careful and critical consumers of articles and books on EBP, as well as on ESTs and RSTs.

From its foundations in the ideas of Dr. Archie Cochrane, EBM and EBP link research and practice at both policy and practice levels. Yet the information needs, and interests, of clients, clinical practitioners, researchers, and policy makers may not always be the same. We will examine three different perspectives on EBP in the next chapter.

## References

Allen, D., & Harkins, K. (2005). Too much guidance? *The Lancet, 365*, 1768.

American Psychological Association. (2006). Evidence-based practice in psychology (A report of the APA task force on evidence-based practice). *American Psychologist, 61*, 271–285.

American Psychological Association. (2013). Recognition of psychotherapy effectiveness. *Psychotherapy, 50*(1), 102–109.

Bergin, A., & Garfield, S. (Eds.). (1971). *Handbook of psychotherapy and behavior change: An empirical analysis*. New York: Wiley.

Bergin, A., & Garfield, S. (Eds.). (1978). *Handbook of psychotherapy and behavior change* (2nd ed.). New York: Wiley.

Bergin, A., & Garfield, S. (Eds.). (1986). *Handbook of psychotherapy and behavior change* (3rd ed.). New York: Wiley.

Bergin, A., & Garfield, S. (Eds.). (1994). *Handbook of psychotherapy and behavior change* (4th ed.). New York: Wiley.

Brush, J. (2010, January 11). Letters: Looking at ways to treat depression. *The New York Times Online*. Retrieved from http://www.nytimes.com/2010/01/12/opinion/l12warner.html.

Campbell, J. (1992). Single-subject designs for treatment planning and evaluation. *Administration and Policy in Mental Health and Mental Health Services Research, 19*(5), 335–343.

Carter, E., Mastro, K., Vose, C., Rivera, R., & Larson E. (2017). Clarifying the conundrum: Evidence-based practice, quality improvement, or research?: The clinical scholarship continuum. *Journal of Nursing Administration, 47*(5), 266–270.

Chambless, D., & Hollon, S. (1998). Defining empirically supported therapies. *Journal of Clinical and Consulting Psychology, 66*, 7–18.

Chorpita, B. F., Daleiden, E., Ebesutani, C., Young, J., Becker, K., Nakamura, B., et al. (2011). Evidence-based treatments for children and adolescents: An updated review of indicators of efficacy and effectiveness. *Clinical Psychology: Science and Practice, 18*, 154–151.

Cochrane, A. (1972). *Effectiveness and efficiency: Random reflections on health services*. London: Nuffield Provincial Hospitals Trust. Excerpts are also available online at http://www.cochrane.org/about-us/history/archie-cochrane

Cochrane, A., & Blythe, M. (1989). *One man's medicine*. London: BMJ (Memoir Club).

Council on Social Work Education (CSWE). (2001). *Educational Policy and Accreditation Standards*. Alexandria, VA: Author.

Council on Social Work Education (CSWE). (2008). *Educational Policy and Accreditation Standards.* Alexandria, VA: Author.

Council on Social Work Education (CSWE). (2015). *Educational Policy and Accreditation Standards*. Alexandria, VA: Author.

Drisko, J. (2017). Active collaboration with clients: An under-emphasized but vital part of evidence-based practice. *Social Work, 62*(2), 114–121.

Edmond, T., Megivern, D., Williams, C., Richman, E., & Howard, M. (2006). Integrating evidence-based practice and social work field education. *Journal of Social Work Education, 42*(2), 377–396.

Fournier, J., DeRubeis, R., Hollon, S., Dimidjian, S., Amsterdam, J., Shelton, R., et al. (2010). Antidepressant drug effects and depression severity: A patient-level meta-analysis. *Journal of the American Medical Association, 303*(1), 47–53.

Freedman, J. (2010, January 11). Letters: Looking at ways to treat depression. *The New York Times Online*. Retrieved from http://www.nytimes.com/2010/01/12/opinion/l12warner.html

Friedman, R. (2010, January 11). Before you quit antidepressants. *The New York Times Online*. Retrieved from http://www.nytimes.com/2010/01/12/health/12mind.html

Gibbs, L. (2002). *Evidence-based practice for the helping professions: A practical guide*. New York: Brooks-Cole.

Gibbs, L., & Gambrill, E. (2002). Evidence-based practice: Counterarguments to objections. *Research on Social Work Practice, 12*(3), 452–476.

Gilgun, J. (2005). The four cornerstones of evidence-based practice. *Research on Social Work Practice, 15*(1), 52–61.

Goodheart, C., Kazdin, A., & Sternberg, R. (Eds.). (2006). *Evidence-based psychotherapy: Where research and practice meet*. Washington, D.C.: American Psychological Association.

Grady, M. D., Wike, T., Putzu, C., Field, S., Hill, J., Bellamy, J., et al. (2018). Recent social work practitioners' understanding and use of evidence-based practice and empirically supported treatments. *Journal of Social Work Education, 54*(1), 163–179.

Grant, P., Huh, G., Perivoliotis, D., Solar, N., & Beck, A. (2012). Randomized trial to evaluate the efficacy of cognitive therapy for low-functioning patients with schizophrenia. *Archives of General Psychiatry, 69*, 121–127.

Greenhalgh, T. (2010). *How to read a paper: The basics of evidence-based medicine*. Hoboken, NJ: BMJ Books; Blackwell-Riley.

Greenhalgh, T., Howick, J., & Maskrey, N. (2014). Evidence-based medicine: A movement in crisis? *British Medical Journal (BMJ), 348*, g3725. Retrieved from https://www.bmj.com/content/348/bmj.g3725

Guyatt, G., Rennie, D., Meade, M., & Cook, D. (2008). *Preface to users' guides to the medical literature: Essentials of evidence-based clinical practice* (2nd ed.). New York: McGraw-Hill.

Hamel, L., Penner, P., Albrecht, T., Heath, E., Gwede, C., & Eggly, S. (2016). Barriers to clinical trial enrollment in racial and ethnic minority patients with cancer. *Cancer Control, 23*(4), 327–337.

Haynes, R. B., Devereaux, P., & Guyatt, G. (2002). Physicians' and patients' choices in evidence-based practice. *British Medical Journal (BMJ), 324*, 1350.

Huey, S., Tilley, J., Jones, E., & Smith, C. (2014). The contribution of cultural competency to evidence-based care for ethnically diverse populations. *Annual Review of Clinical Psychology, 10*, 305–338.

Kazdin, A. (2010). *Single-case research designs: Methods for clinical and applied settings* (2nd ed.). New York: Oxford University Press.

Kazdin, A. (2016). *Research design in clinical psychology* (5th ed.). New York: Pearson.

Kazi, M., & Wilson, J. (1996). Applying single-case evaluation in social work. *The British Journal of Social Work, 26*(5), 699–717.

Lambert, M. (Ed.). (2004). *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed.). New York: Wiley.

Lambert, M., & Ogles, B. (2004). The efficacy and effectiveness of psychotherapy. In M. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., pp. 139–193). New York: Wiley.

Lee, H., Fitzpatrick, J., & Baik, S. (2013). Why isn't evidence-based practice improving health care for minorities in the United States? *Applied Nursing Research, 26*(4), 263–268.

Mace, C., Moorey, S., & Roberts, B. (Eds.). (2001). *Evidence in the psychological therapies: A critical guide for practitioners*. Philadelphia, PA: Taylor & Francis.

McMaster Group - The Department of Epidemiology and Biostatistics, McMaster University Health Sciences Center. (1981). How to read clinical journals, [part] I: Why to read them and how to start reading them critically. *Canadian Medical Association Journal, 124*(5), 555–558.

Miller, T., & Hendrie, D. (2008). *Substance abuse prevention dollars and cents: A cost-benefit analysis.* DHHS Pub. No. (SMA) 07-4298. Rockville, MD: Center for Substance Abuse Prevention.

Miranda, J., Nakamura, R., & Bernal, G. (2003). Incusing ethnic minorities in mental health intervention research: A practical approach to a long-standing problem. *Culture, Medicine and Psychiatry, 27*, 467–486.

Morales, E., & Norcross, J. (2010). Evidence-based practice and ethnic minorities: Strange bedfellows no more. *Journal of Clinical Psychology: In Session, 66*(8), 821–828.

Mullen, E., & Shlonsky, A. (2004, September 24). *From concept to implementation: The challenges facing evidence-based social work*. PowerPoint from the Faculty Research & Insights: A Series Featuring CUSSW Faculty Research. Retrieved from https://www.columbia.edu/.../Mullen%20&%20Shlonsky%20no%20notes%209-26-04.ppt

Myers, L., & Thyer, B. (1997). Should social work clients have the right to effective treatment? *Social Work, 42*, 288–298.

National Association of Social Workers. (n.d.). *Evidence-based practice*. Retrieved from https://www.socialworkers.org/News/Research-Data/Social-Work-Policy-Research/Evidence-Based-Practice

Okpych, N., & Yu, J. (2014). A historical analysis of evidence-based practice in social work: The unfinished journey toward an empirically-grounded profession. *Social Service Review, 88*(1), 3–58.

Petr, C. (Ed.). (2009). *Multidimensional evidence-based practice: Synthesizing knowledge, research, and values*. New York: Routledge.

Pollio, S. (2015). Guest editorial—Evidence-based education: From paradigm shift to social movement—And back again? *Journal of Social Work Education, 51*(4), 619–623.

Price, L. (2010, January 11). Letters: Looking at ways to treat depression. *The New York Times Online*. Retrieved from http://www.nytimes.com/2010/01/12/opinion/l12warner.html

Redwood, S., & Gill, P. (2013). Under-representation of minority ethnic groups in research–Call for action. *British Journal of General Practice, 63*(612), 342–343.

Rubin, A., & Bellamy, J. (2012). *Practitioner's guide to using research for evidence-based practice* (2nd ed.). Hoboken, NJ: Wiley.

Rubin, A., & Parrish, D. (2007). Views of evidenced-based practice among faculty in master of social work programs: A national survey. *Research on Social Work Practice, 17*, 110–122.

Sackett, D., Rosenberg, W., Muir Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Editorial: Evidence-based medicine: What it is and what it isn't. *British Medical Journal, 312*, 71–72.

Sackett, D., Strauss, S., Richardson, W., Rosenberg, W., & Haynes, R. (2000). *Evidence-based medicine: How to practice and teach EBM* (2nd ed.). Edinburgh: Churchill Livingstone.

Sheldon, B. (1983). The use of single case experimental designs in the evaluation of social work. *The British Journal of Social Work, 13*(1), 477–500.

Shlonsky, A., & Gibbs, L. (2004). Will the real evidence-based practice please stand up? Teaching the process of evidence-based practice to the helping professions. *Brief Treatment and Crisis Intervention, 4*(2), 137–153.

Simmons, B. (2013). *Individual, agency and environmental factors impacting clinical social workers' involvement with evidence-based practice*. Unpublished doctoral dissertation, Smith College School for Social Work, Northampton, MA.

Soydan, H., & Palinkas, L. (2014). *Evidence-based practice in social work: Development of a new professional culture*. New York: Routledge.

The President's New Freedom Commission on Mental Health. (2003). *Transforming the vision.* Retrieved from https://www.cartercenter.org/documents/1701.pdf

Trinder, L. (2000). Evidence based practice in social work and probation. In L. Trinder & S. Reynolds (Eds.), *Evidence-based practice: A critical appraisal* (pp.138–162). Ames, IA: Blackwell Science.

Truijens, F., Zühlke-van Hulzen, L., & Vanheule, S. (2019). To manualize, or not to manualize: Is that still the question? A systematic review of empirical evidence for manual superiority in psychological treatment. *Journal of Clinical Psychology, 75*, 329–343. https://doi.org/10.1002/jclp.22712

United States Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Mental Health. Cited section is online at www.surgeongeneral.gov/library/mentalhealth/chapter5/sec3.html

Wampold, B. (2001). *The great psychotherapy debate: Models, methods and findings*. Mahwah, NJ: Erlbaum.

Wampold, B. (2010). *The basics of psychotherapy: An introduction to theory and practice*. Washington, D.C.: American Psychological Association.

Wike, T.L., Grady, M.D., Stim, H., Massey, M., Bledsoe, S.E., Bellamy, J. & Putzu, C. (in press). Newly-trained MSW social workers use of evidence-based practice and evidence-supported interventions: Results from an online survey. *Journal of Social Work Education.*

Zayas, L., Drake, B., & Jonson-Reid, M. (2011). Overrating or dismissing the value of evidence-based practice: Consequences for clinical practice. *Clinical Social Work Journal, 39*(4), 400–405.

# Chapter 2
# Three Perspectives on Evidence-Based Practice

In addition to guiding practice decision-making, both evidence-based medicine (EBM) and EBP are being used at a policy level to reshape clinical practice. Cost containment, cost cutting, and, in many cases, profit making are shaping the policies that orient health-care practice. The implementation of EBP is often standardized rather than used to support decision-making by the individual client and clinician. As Romana (2006) states, "EBM has typically been implemented through clinical guidelines, protocols, or best practices, all which are used to standardize, not individualize, patient care" (p. 1). Beyond shaping policies, EBM and EBP are increasingly being used administratively to shape practice. Improving the quality of care while reducing costs is the recent mantra of managed care providers. Epidemiological research and EBM/EBP provide one valuable framework for evaluating service quality, though various minority populations are often not adequately represented. Further, at policy and administrative levels, the implementation of EBP may conflict with client preferences and with professional autonomy. The methods of EBP may even be applied to evaluation of individual professionals. To understand EBP requires attention to the overall context in which it is embedded.

From another perspective, EBM and EBP have begun to alter research priorities in ways that may restrict the variety of research approaches and methods used to understand and evaluate clinical practice. A key strength of EBM/EBP is its use of population-level research results based on experimental (or RCT) research designs. Yet overemphasis, or exclusive focus, on such research designs may undermine attention to other types of research and inquiry that are also important to practice knowledge building. In this way EBM/EBP may serve to promote some types of research knowledge while limiting others. For example, Larner (2004, abstract) states that the emphasis on experimental research in EBP has excluded systemic family therapy "because it is language-based, client-directed and focused on relational process rather than step-by-step operational techniques." Relevant to clinical social work practice, research on understanding persons in situations, on human diversity, on identifying environmental factors that impact treatment effectiveness,

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_2

and on the processes of clinical practice may be de-emphasized in favor of large-scale outcome research. Social work researchers and educators who for the past 30 years have advocated for "many ways of knowing" (Hartman, 1994) may find one method is favored, and funded, above all others. Issues of epistemology, ontology, values, and human diversity in research may lose traction, while specific methods gain favor.

In this chapter we will explore how EBP is used beyond practice, but in ways that influence how practice is funded and provided. The four components included in the contemporary definitions of EBM and EBP may not always be highlighted in policy level and research discussions. The roles of clinical expertise and of client values and preferences may become secondary or even marginal when EBP is viewed from these other perspectives. Our goal is to ensure the context in which EBP is located and shaped is part of how clinical social workers understand this social movement. In turn, clinical social workers may be better able to advocate for themselves and for their clients.

## The Policy Level and Administrative Applications of EBP

There is no question that high-quality research evidence, drawn from large samples and appropriately applied in practice, can save lives and improve services. In medicine, efforts to apply evidence-based standards for acute coronary patient care, for sepsis in the use of respiratory ventilators, and even for handwashing have all reduced illness and mortality. One study found that strictly following the guidelines for acute coronary care treatment might have reduced patient mortality by 22% after 1 year (Alexander et al., 1998). These guidelines addressed acute use of just three medications. Applying the results of large-scale, population-based, research can improve service outcomes in important ways. In 2002, large-scale epidemiological research established that the harms of estrogen replacement therapy for postmenopausal women were much more severe than first believed (Women's Health Initiative, 2002). These harms were not apparent until a large-scale research project aggregated individual experiences. Routine treatment practices were quickly changed in ways that saved women's lives and reduced overall harm. Even what appear to be small changes, such as routine handwashing, can prove to be very important to improving aggregate outcomes and reducing risks. The importance of such efforts may only become clear when very large groups of people are studied and compared. How EBP is applied at the policy level shapes much of the health and mental health delivery system.

Both the EBM and EBP movements must be understood in the larger context of macro-level models of health-care delivery. In the United Kingdom, in Canada, and in the United States, many initiatives drawing on the EBM and EBP models now shape public and private health-care funding and delivery. Each of these countries faces the very real challenge of containing health-care costs while providing services to a large and aging population. In each of these countries, policies were developed to eliminate unnecessary health-care services and to improve overall outcomes. Note that these macro-level goals are fully consistent with the purposes of EBM set forth by Dr. Archie Cochrane. In the United States, a major part of this effort was the expansion of managed care in the 1980s and 1990s. Further, health-care providers were viewed as having financial incentives for providing more services than might really be needed. A tension between the interests of health-care organizations and profession providers became increasingly evident.

In 1984, a study by Wennberg revealed that the kinds of treatment provided by physicians around the United States varied widely in both diagnosis and in prescribed procedures. Other studies found similar variation in diagnosis and most prevalent treatments by geographic region. Epidemiological and actuarial studies would predict more or less consistent rates of diagnosis and comparable use of treatments across the country. Tanenbaum (1999, p. 758) states that these results were interpreted to mean "that physicians were uncertain about the value of alternative treatments and that their actions were consequently influenced by clinically extraneous factors such as tradition and convenience." In other words, physicians did not explore, weigh and decide what treatment to use on the basis of the best evidence. Dr. Cochrane's earlier concerns seemed very well founded and still very relevant.

Reed and Eisman (2006) state that this top-down perspective was adopted enthusiastically by the health-care industry. "Health care professionals were portrayed as major causes of waste, inefficiency, needless expense…" (p. 14). This argument, combined with claims that physicians would gain financially from providing more services, even if unnecessary, made health-care professionals a target for improved management and administrative control. In turn, health-care organizations in the United States and also in the United Kingdom and Canada began initiatives to transfer administrative authority from clinical providers to the health plan personnel. These initiatives were intended to standardized care practices and reduce variation in delivered services. They also served to limit access to services and to reduce overall demand, which achieved cost savings for funders. As Romana (2006) notes, standardization of care rather than individualization of care was how EBP was implemented administratively. In the United States, health-care corporations will gain in profits by reducing service access and costs. This corporate financial incentive, which produced large profits for for-profit health-care companies, is not widely viewed as problematic.

Not only funders but governmental agencies took up this argument. A series of efforts by the US National Institutes of Health in the 1990s began to promote the importance of teaching health-care professionals to use research-supported treatments (RSTs). Emphasizing "quality over numbers," they also promoted the use of administrative strategies to ensure that such RSTs were used widely and consistently. Governmental support and funding promoted the expansion of administrative control of professional practice in health care. During these years, parallel efforts in the national health system of the United Kingdom and Canada also took place (Trinder, 2000b). EBP has quickly become a social movement (Pope, 2003).

Tanenbaum (2003) states that managed care framed the debate over EBP into a "public idea" contrasting good scientific research evidence against faulty clinical judgment. To solve the problem of faulty practitioner judgment, research evidence was used administratively to direct health-care practice. A public idea (Reich, 1988) is a form of marketing common in political campaigns and product promotion. Complex social phenomena, like drunk driving or health care, are framed simply to highlight certain features of concern. In a public idea, a single, simple summary is presented that includes an image of both the causes of the problem and its optimal remedy. For drunk driving, the public image was one of repeat offenders causing horrible accidents, and the remedy was to put such offenders in jail. The limitation of the argument is that, overall, many more drunk driving accidents are caused by everyday people who drink too much—not repeat offenders (though they do pose a problem). Preventive education would likely reduce accidents more effectively than does jailing repeat offenders (Moore, 1988). Public ideas simplify complex social issues and may also distort them. Public ideas may give undue credibility to specific approaches to solving complex problems, rendering other useful solutions less prominent or less acceptable. They actively, and politically, shape public opinion.

Tanenbaum (2003) calls EBP a public idea of great rhetorical power. Indeed, who can argue with evidence? What scientific or rationale approach remains for those who would argue with "evidence." As Brush (January 11, 2010) states, EBP can pit "competent researchers against clinicians." Those who define good evidence have great power and influence. In this instance, those who define the best evidence also have both economic and political power over the services they fund. "We only reimburse for services that are evidence-based" (Lehman, 2010, p. 1) which provides a powerful rationale for payers to restrict or refuse services without full regard for the needs, values, and input of the individual client. The public idea of EBP emphasizes only part of a very complex situation.

When clinical practice is simply seen as a product in need of repair, its complexity and its many merits are minimized or ignored (Schwandt, 2005). While controlling health-care costs is an issue almost everyone would support, it can be undertaken in a manner that does not divide funder, client, and practitioner. As we shall see, this image also suggests a great deal more certainty about "what works" than may be found in treatment outcome research, especially for diverse populations.

It is also important to note that the policy-level focus on EBP emphasizes research results but does not address individual client needs and circumstances, nor does it address client values and preferences. It also omits attention to the pivotal role of clinical expertise and firsthand clinical assessment. The policy and administrative perspective on EBP appears to be based on a very different understanding of EBP than is the practice decision-making model of the McMaster Group (1981). Population-based research results are widely applied to critique the individualized actions of clinical practitioners. Administrative judgment may also replace the assessment of clinical social workers and other providers who have different training, qualification, and much greater access to the individual client.

Mace (1999) states that the United Kingdom's National Health Services views EBP as a cornerstone of the effort to include quality assurance in the responsibilities of providers. While few would argue with quality services and professional accountability, funders, clients, and professionals may differ on what constitutes the best available services for a specific client in a specific situation. They may differ on what is the key problem, on what treatments and related services are appropriate to address it, and on what constitute suitable measures of treatment outcome. Administrative attention to the aggregate needs, and to cost cutting, may not always fit with ethical and appropriate client-specific decision-making. There are important differences of perspective between people focused on large-scale, aggregate outcomes and others focused on specific outcomes for a single client. Yet, at the same time, service costs and quality must be reviewed to control costs for all. There can be, at times, an understandable tension between the practices and goals of administrators and practitioners.

As we can see, EBP is actually a complex social movement. This means that the way EBP is understood, and the elements of EBP that are emphasized, will vary with the particular purposes of the author or speaker. It is important that clinical social workers bear mind that EBP can have a different "look" depending on the focus of the speaker. Yet in practice, the key influence is the clinical expertise of the social worker who must integrate the client's clinical circumstances, particular values, and views with the best current research knowledge in making practice decisions.

## *Using Evidence in Evaluations of the Performance of Professionals*

In addition to administrators potentially using EBP to influence and direct how services are delivered to clients, "evidence-based" arguments are being used politically and economically to evaluate, and hire or fire, individual professionals. For example, during the summer of 2010, the *Los Angeles Times* published a series of articles regarding the performance of public school teachers in Los Angeles (*Los Angeles Times*, n.d.). The series included the online, public, posting of the evaluations of approximately 6000 teachers. The names of the teachers were also posted. These evaluations were paid for by the public school system, and some people argued that they were open information. However the teachers and their union officials stated they believed the evaluations were personal information to be used privately within the school system. Reputations were affected in a very public forum, with little opportunity for response by individual teachers.

Another aspect of the debate centered on a "value-added analysis," a research model that ranked teachers' impact on student achievement. The results of this statistical analysis were then used to decide whether or not teachers should be fired or re-hired. In effect, teachers would retain or lose their jobs based on their evaluations, which were linked to the measured achievement of their students. Some people argued that teacher quality was crucial to student achievement. It is, of course, difficult to argue that some teachers are more effective than are others. Still, opponents of the model argued that many other factors including student nutrition, degree of parental support, and prior "social promotion" of students who had previously not demonstrated grade appropriate achievement all distorted the evaluations. They argued that to put all the responsibility for student performance on the teacher was neither valid nor fair. Here outcome measures (the student's annual achievement) were interpreted and used as key measures of the teacher's competence, dedication, and effort. Notably, researchers spoke for both points of view (Dillon, September 1, 2010).

Similar efforts to grade teacher performance using student test scores are underway in New York State (Otterman, 2011). Teachers, using their political power, tried to expand the base from which judgments about their effectiveness were made. Noting that because student performance was influenced by parental support, including adequate nutrition and sleep, they argued parents should also be evaluated. Florida State Representative Kelli Stargel filed a bill that would require elementary school teachers to evaluate parents based on "the quality" of their involvement in their children's schools (Postal & Balona, 2011). In parts of Alaska and in Pennsylvania, parents are fined if their children are frequently truant (Associated Press, 2010; Levy, 2011). There is considerable developmental research supporting the view that parental support is an important factor in child development and school performance. However, solutions to resolve these concerns often prove complex and multifaceted. More administrative oversight of professionals may not prove sufficient or effective in improving service outcomes. Nonetheless, the public idea of EBP may suggest such actions.

In mental health care, managed care companies sometimes profile individual clinical practitioners (Panzarino & Kellar, 1994). The number of clients, types of disorders, number of sessions, and often the client's satisfaction are each tracked and recorded. This information may be used to drop clinicians from company "panels" and are, in effect, ratings of clinician performance or cost-effectiveness. It is not hard to imagine that the administrative use of EBP could both shape the nature of treatments clinicians can use and perhaps become a part of how a clinician's performance is evaluated.

States and some insurance providers are already establishing lists of what they consider to be empirically supported treatments or best practices. For example, the Minneapolis Veterans' Administration (VA) health-care web site (2018) usefully lists empirically supported treatments for several disorders. (Note carefully—this is a list of what this VA defines as empirically supported treatments based on "controlled" research—though they label the list as "evidence-based treatments." Understanding terminology is important!) Practicing clinical social workers also report that their states and private insurance payers frequently suggest "evidence-based treatments" for specific disorders. Clinicians also state that, in some cases, payers may refuse to authorize certain treatments for specific disorders due to what the payers claim is the lack of a sufficient evidence base for the proposed treatment.

It is important to note that neither lists of empirically supported treatments nor best practices are necessarily based on kinds of evidence and methods used in EBP. How clinician effectiveness is conceptualized and measured will matter greatly to clinical social workers, much as it does to Los Angeles public school teachers. The administrative uses of EBP are an important driving force in its rapid adoption and promotion. The term "EBP" can also be used administratively and economically in ways that are still developing but that do not always fit with the formal definition of EBP as a process. Using the label does not constitute accurate or correct use of EBP. All four parts of the EBP process—clinical situation, client's values and preferences, the best research knowledge, and clinical expertise—actually define EBP, not simply a list of treatments.

Of course, it *is* appropriate to use evidence in the evaluation of professional performance. No one would seriously argue that performance should not be tied to evidence. The issue is what kinds of evidence are most informative and how we understand them in context. To evaluate the quality of a teacher solely by the performance of his or her students may overrate the impact of a teacher. It surely diminishes the impact of social contexts including adequacy of space, materials, and equipment not to mention the child's family supports and social circumstances. Similarly, clinical social workers often work with clients with multiple disorders and stressors that may directly impact the client's ability to engage in treatment and demonstrate "success." The appropriate use of research evidence requires fair and comprehensive models that fit with our best ideas about how complex systems work. Values, critical thinking, and theories all have a place in the optimal selection and use of research evidence (Gambrill, 2001).

It is very important to consider how, and by whom, the term EBP is being used. Administrators, funders, researchers, and mental health clinicians may have different goals and information needs. Clinical practitioners may look for situation-specific treatment planning help, while researchers dispute what constitutes the "best" methods to generate evidence, and payers seek to limits costs while maintaining service quality. Each of these endeavors has real merit. Each endeavor is also multifaceted and complex. Yet the view of EBP each perspective generates is somewhat distinct. Let us next consider the research perspective on EBM and EBP.

## EBP, Many Ways of Knowing, and Qualitative Research

Tanenbaum (2003) argues that EBP is a public idea that purposefully shapes public perception. Many authors call EBM and EBP a social movement (Trinder, 2000b). We argue that a third perspective on EBP suggests it may also be an effort to shape, and perhaps to restrict, how science and research evidence are understood and valued. EBP may be the next research paradigm. Paradigms shape how research is designed, funded, and taught. The impact of changes in research paradigms extends well beyond the university. Nespor (2006, p. 123) states that paradigms are results of "tensions and conflicts that stretch outside the university to state bureaucracies, pressure groups, big corporations, community groups." Paradigm debates may start within the academy, but their impact is much more widespread. As noted in the first section of this chapter, the impact of EBP may have profound economic and political consequences for mental health practice. To frame this perceptive on EBP, we begin with some recent history on the debates regarding what Hartman (1994) calls "many ways of knowing" that took place in social work and allied fields in the 1980s and 1990s. Note that this is the same period of time in which EBM and EBP first became prominent.

Until the mid-twentieth century, there were few challenges to the centrality of the scientific method and knowledge as guides for the professions, including social work. In the early 1900s, a philosophy called logical positivism was promoted as a way to build mathematically based laws or models that accurately represented the world. In the hard sciences, such scientific laws had proved useful for over 200 years. However, the underlying justifications for the "truth value" of scientific theories began to be challenged. In 1962 Thomas Kuhn published *The Structure of Scientific Revolutions*, a book that argued science was, in part, socially determined and did not progress solely through test and analysis. Kuhn argued that Western scientific knowledge had developed through a series of revolutions or "paradigm shifts" in which the framework through which scientists viewed the world changed in incompatible fashion. One widely cited example is the paradigm shift from a Ptolemaic or Earth centered view of the solar system to a Copernican or Sun centered view of the solar system. Scholars following Kuhn argued that human influences and power structures shape scientific knowledge. Different points of view about *how* we know and the *value* of science became more apparent during the 1970s and 1980s. The view that science is a social construction and is shaped by economic, political, and cultural forces became more prominent in both the social and hard sciences.

In the late 1980s and 1990s, the "science wars" contrasted science with other ways of knowing (see Flyvbjerg, 2001; Nelkin, 1996; Ravetz, 1979). The differences were both about epistemology, or ways of knowing, and about research methods. Postmodernist scholars pointed to social knowledge as a social construction that is situated in a particular time and place and shaped by the economics, politicos, and social norms of the times (Foucault, 1964; Lyotard, 1984; Rorty, 1979). They doubted "objective" methods could produce social "truths" (Quine, 1953). Feminist and cultural scholars noted how the interests and voices of women were often omitted or minimized in scientific scholarship (Belenky, Clinchy, Goldberger, & Tarule, 1986; Harding, 1986). Indigenous scholars noted how the very different ways of knowing of aboriginal peoples were devalued and omitted in scientific scholarship (Kovach, 2009, 2018; Tuhiwai Smith, 1999). Critical scholars noted how political interests shaped research funding and the application of research results (Foucault, 1964; Habermas, 1990). Some scholars advocated that research should include social action (Fals-Borda & Rahman, 1991). For some, the kinds of work that constituted "research" expanded considerably.

Arguments affirming the value of small sample, intensive research were also made during this time. Some scholars argued that clinically relevant and import research often used methods quite unlike those most valued in EBP. Rustin (2001) points out that a lot of valuable clinical and developmental research is small scale and intensive in format, rather than large scale and extensive. He points out how Ainsworth's (1964, 1978) Strange Situation Test helped generate a typology of attachment styles that later proved to hold up in many different countries and cultures. Intensive study of a few mothers and children led the way to an innovative approach to understanding attachment and the consequences of its disruption. Rustin further notes how Stern's (1985) in-depth studies of babies and mothers pointed out that babies possess many more perceptual and meaning-making capacities than had previously been identified. Rustin argues for methodological pluralism and shows how clinical insights at the micro level can benefit many forms of research. EBP's focus on large-scale experimental research has value, he states, but is not the only approach to productive clinical research.

Along similar lines, Tonelli (1998, 2001), a physician working with respiratory disease, argues that clinical experience and physiologic rationale are two types of medical knowledge that differ in kind from population-based epidemiological evidence. Tonelli believes their devaluation in EBP reflects a conceptual error. This is because clinical expertise, physiologic rationale, and epidemiological research are distinct kinds of knowledge that do not belong on the same graded hierarchy. Many kinds of evidence may have relevance to clinical decision-making. Buetow and Kenealy (2000) and Buetow and Mintoft (2011) argue that EBM too severely limits the use of nonscientific knowledge, including patient intuition, that may complement and enhance EBP decision-making.

There are many kinds of research and knowledge that might extend, complement, or enhance EBM and EBP. Many of the more formal and well-developed forms of knowledge development are collectively known as qualitative research. We next explore how qualitative researchers argued for the merits of their approaches and methods in "science wars."

## *Qualitative Research and EBP*

During the 1990s many social workers advocated for greater attention to qualitative research (Drisko, 1997; Gilgun, Daly, & Handel, 1992; Popay & Williams, 1994; Riessman, 1994; Rodwell, 1998; Shaw, 1999; Sherman & Reid, 1994). Qualitative research is frequently portrayed as a simple dichotomy contrasted with quantitative, statistical research in social work textbooks. More accurately, qualitative research consists of a wide-ranging family of related research approaches and methods. Qualitative research has many different purposes and draws upon a range of different epistemological or philosophical premises (Drisko, 1997, 2013). It emphasizes discovery, context, witnessing, understanding meaning, and understanding process and can include social action and even can aspire to liberation. Qualitative research is widely used to develop, refine, and even to test theory. Advocates for expanding attention to "many ways of knowing" (Hartman, 1990) promoted the use of nonquantitative research approaches. In social work and allied fields, the number of publications using these methods increased during the 1990s and early 2000s.

Whether, and if so, how, EBM and EBP will include "many ways of knowing" is uncertain. Indeed, EBP hierarchies of evidence continue to locate the results of case studies and qualitative research on the lowest levels of evidence. As attention is directed to quantitative outcome studies, other research purposes and methods are actively or implicitly devalued. In this way, EBM and EBP may represent a social movement to restrict certain kinds of research and to privilege other forms. Popay and Williams (1998) call this the "Gingerbread Man Threat," that qualitative researchers will be gobbled up by their better funded and more powerful quantitative colleagues. In effect, the EBP research hierarchy resolves the science wars by omitting many kinds of research, mainly due to its dependence on population-based, quantitative, experimental studies. In this way, EBP may be viewed as an implicit action in a long-term academic and economic disagreement.

The choice to devalue qualitative research has both a clear rationale and some serious consequences. The purpose of the research hierarchy is to promote research results with strong internal validity or the ability to make cause and effect claims. This is one way to document the quality of research results. On the other hand, it allows very little room for change and innovation as diverse populations, social needs, conceptual systems, and diagnoses change over time. The EBM/EBP research hierarchy does not address what innovations to explore when treatment prove ineffective, or how new treatment models would be created.

Greenhalgh (2010, p.163) points out that qualitative research "is not just complementary to, but in many cases a prerequisite for... quantitative research..." That is, the concepts, diagnosis and treatment model tested for effectiveness in EBM and EBP research are routinely developed and refined using qualitative research designs and methods. Without openness to qualitative research, there is no way for new ideas, new disorders, and new treatments to be developed. To some authors, it is shortsighted to relegate qualitative research to the lowest levels of evidence, especially because the results of such research may significantly shape the substance of later quantitative studies.

Popay and Williams (1998) argue that qualitative research may be seen as "enhancing" EBM and EBP or as "different" from them. Black (1994) points out four ways in which qualitative research can enhance EBM and EBP. He states it (1) can help researchers understand how and why interventions work, (2) can help identify new variables and hypotheses for future study, (3) can help clarify unexpected results from quantitative studies, and (4) can help improve the accuracy and relevance of quantitative research. Yet Popay and Williams (1998) see even greater potential in qualitative research's differences from quantitative research. They note it (1) can help identify "taken for granted" aspects of health care and of potential risks, (2) can help professionals understand the experience and meaning of being a patient and of receiving a diagnosis, (3) can provide different sources of information and perspective from clients and important others (including subjective assessments of outcome), and (4) can explore the impact of agency practices and complex policies on clients. In this way qualitative research helps identify what EBP may miss, omit, or render invisible. Qualitative research can complement EBM and EBP as well as enhancing them.

Trinder (2000a) notes that the Cochrane Collaboration had begun a Qualitative Interest Group. She argues that it is vital that qualitative and other "non-RCT" research be accepted and valued on their own terms, rather than fitted awkwardly and inappropriately into an existing framework (p. 231). However, a decade later the role of qualitative research in EBM and EBP is still unclear (Nelson, 2008). Greenhalgh (2010) points to standards for quality in qualitative research but does not address how qualitative research fits with the larger EBM model. The Cochrane Qualitative Interest Group offers conference workshops on specific methodological topics, but the larger question of how qualitative research is valued and included in EBM and EBP remains unanswered.

In social work, Rubin and Bellamy (2012) state that qualitative research may be the appropriate source for answers about client's experience with illness or social challenges. This may prove to be one important use for qualitative research. Gilgun (2005) further points out that better conceptualization of patient values and patient preferences would help clarify key aspects of the EBM and EBP process. She adds that professional expertise and the personal experiences of the professional also deserve conceptual elaboration and further study. Petr (2008) offers a variation on EBP that emphasizes the voices and views of clients as the basis for determining effectiveness. His multidimensional approach to EBP expands the narrow focus on symptoms to include other areas of interest to clinical social workers and clients. Qualitative researchers, and many clinical investigators using qualitative research methods, make valuable contributions to the practice knowledge base.

The EBM/EBP hierarchy of evidence and research designs has many merits. It is one valuable way to enhance practice decision-making and, in the aggregate, to make the best use of limited health-care resources. Still, critical thinking is required to ensure that the assumptions embedded in the EBM/EBP model are fully understood and recognized. As a social movement, EBM and EBP advocate for the use of specific techniques and specific kinds of evidence. These merits have strong supporters as well as some cogent critiques. Clinical social workers must consider both the strengths and the limitations of EBM and EBP research methods as they impact on practice.

## Summary

In this chapter we have explored how EBP is not solely a practice decision-making process. We argue that EBP can be viewed from three different perspectives which point out different aspects of the social movement that is EBM and EBP. The practice decision-making process is the core of EBP. From this first perspective, EBP adds to the responsibilities of clinical social workers. Yet from policy and administrative perspective, EBP is a way to increase accountability and reduced costs while improving service outcomes. At its worst, it may also restrict professional autonomy and replace it with administrative oversight. The large-scale quantitative methods prioritized in EBP may also be applied to the evaluation of individual professional performance. From a research perspective, EBP seeks to generate population-level outcome studies that can identify effective treatments and reveal possible risks. Yet EBP may also reduce attention to important epistemological, value, and contextual issues that shape research, especially on diverse populations. Qualitative research and other non-quantitative ways of knowing are devalued in the EBP evidence hierarchy and in related research funding. These methods may produce knowledge that can be useful to direct clinical practice and to administration and policy efforts. Critical thinking about the EBP model and its application is appropriate.

## *A Starting Point for the Clinical Social Work Practitioner*

A very useful starting point for clinical social work practitioners is to learn about EBP and to be able to use it to inform treatment planning decisions. Still, practitioners must always use this information in combination with professional expertise and critical thinking to meet the needs and interests of clients. Terminology is often used in ways that are confusing and may not fit with the correct definition of EBP as a process.

In the next chapter, we will explore the several "steps" of the EBP practice decision-making model. This model organizes the practice application of research results to direct clinical social work practice.

## References

Ainsworth, M. D. (1964). Patterns of attachment behavior shown by the infant in interaction with his mother. *Merrill-Palmer Quarterly of Behavior and Development, 10*, 51–58.

Ainsworth, M. D. (1978). *Patterns of attachment: A psychological study of the strange situation*. New York: Lawrence Erlbaum Associates.

Alexander, K., Peterson, E., Granger, C., Casas, A. C., Van der Werf, F., Armstrong, P., et al. (1998). Potential impact of evidence-based medicine in acute coronary syndromes: Insights from GUSTO-IIb. *Journal of the American College of Cardiology, 32*, 2023–2030.

Associated Press (2010, December 13). *Some Alaskan parents fined if kids skip school*. Retrieved from www.foxnews.com/us/2010/12/13/alaska-parents-fined-kids-skip-school/#ixzz1NTeOsepm

Belenky, M., Clinchy, B., Goldberger, N., & Tarule, J. (1986). *Women's ways of knowing*. New York: Basic Books.

Black, N. (1994). Why we need qualitative research. *Journal of Epidemiological Community Health, 48*, 425–426.

Brush, J. (2010, January 11). Letters: Looking at ways to treat depression. *The New York Times Online*. Retrieved Jan. 12, 2010 from http://www.nytimes.com/2010/01/12/opinion/l12warner.html

Buetow, S., & Kenealy, T. (2000). Evidence-based medicine: The need for a new definition. *Journal of Evaluation of Clinical Practice, 6*(2), 85–92.

Buetow, S., & Mintoft, B. (2011). When should patient intuition be taken seriously? *Journal of General Internal Medicine, 26*(4), 433–436.

Dillon, S. (2010, August 31). Formula to grade teachers' skill gains acceptance, and critics. *The New York Times*. Retrieved from http://www.nytimes.com/2010/09/01/education/01teacher.html?ref=magazine&pagewanted=all (print version September, 1, 2010, p. A1).

Drisko, J. (1997). Strengthening qualitative studies and reports: Standards to enhance academic integrity. *Journal of Social Work Education, 33*, 187–197.

Drisko, J. (2013). Standards for qualitative studies and reports. In R. Fortune et al. (Eds.), *Qualitative research in social work* (2nd ed., pp. 1–34). New York: Columbia University Press.

Drisko, J., Corbin, J., & Begay, P. (2019). Multiple ways of knowing: Teaching research under EPAS 2015. *Journal of Ethnic & Cultural Diversity in Social Work*. https://doi.org/10.1080/15313204.2019.1590887.

Fals-Borda, O., & Rahman, M. (Eds.). (1991). *Action and knowledge: Breaking the monopoly with participatory action research*. Lanham, MD: Rowman & Littlefield Publishers.

Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again*. New York: Cambridge University Press.

Foucault, M. (1964). *Madness and civilization: A history of insanity in the age of reason*. New York: Random House.

Gambrill, E. (2001). Social work: An authority-based profession. *Research on Social Work Practice, 11*, 166–175.

Gilgun, J. (2005). The four cornerstones of evidence-based practice. *Research on Social Work Practice, 15*(1), 52–61.

Gilgun, J., Daly, K., & Handel, G. (1992). *Qualitative methods in family research*. Thousand Oaks, CA: Sage.

Greenhalgh, T. (2010). *How to read a paper: The basics of evidence-based medicine*. Hoboken, NJ: BMJ Books; Blackwell-Riley.

Habermas, J. (1990). *The philosophical discourse of modernity*. Cambridge, MA: MIT Press.

Harding, S. (1986). *The science question in feminism*. Ithaca, NY: Cornell University Press.

Hartman, A. (1990). Many ways of knowing. *Social Work, 35*(1), 3–4.

Hartman, A. (1994). Many ways of knowing. In W. Reid & E. Sherman (Eds.), *Qualitative research in social work* (pp. 459–463). Washington, DC: NASW Press.

Kovach, M. (2009). *Indigenous methodologies: Characteristics, conversations, and contexts*. Toronto, ON: University of Toronto Press.

Kovach, M. (2018). Doing indigenous methodologies: A letter to a research class. In N. Denzin & Y. Lincoln (Eds.), *The sage handbook of qualitative research* (5th ed., pp. 214–234). Thousand Oaks, CA: Sage.

Kuhn, T. (1962). *The structure of scientific revolutions* (3rd ed.). Chicago, IL: University Chicago Press.

Larner, G. (2004). Family therapy and the politics of evidence. *Journal of Family Therapy, 26*, 17–39.

Lehman, A. (2010). Adopting evidence-based practices: Our hesitation waltz. *Schizophrenia Bulletin, 36*(1), 1–2.

Levy, M. (2011, January 20). Lebanon school district sued over excessive truancy fines**.** *The Huffington Post.* Retrieved from www.huffingtonpost.com/2011/01/20/pennsylvania-truancy-fines_n_811833.html

*Los Angeles Times.* (n.d.). *Grading the teachers: Value-added analysis*. (A series of articles published over the summer of 2010). Retrieved from http://www.latimes.com/news/local/teachers-investigation/

Lyotard, J.-F. (1984). *The postmodern condition*. Minneapolis, MN: University of Minnesota Press.

Mace, C. (1999). Psychotherapy and the modernization of the UK health service. *European Journal of Psychotherapy and Health, 2*(2), 217–227.

McMaster Group - The Department of Epidemiology and Biostatistics, McMaster University Health Sciences Center. (1981). How to read clinical journals, [part] I: Why to read them and how to start reading them critically. *Canadian Medical Association Journal, 124*(5), 555–558.

Minneapolis VA Health Care System. (2018). *Mental health: Evidence-based treatments*. Retrieved August 24, 2018 from https://www.minneapolis.va.gov/services/MentalHealth/MHebt.asp

Moore, M. (1988). What sort of ideas become public ideas? In R. Reich (Ed.), *The power of public ideas* (pp. 55–84). Cambridge, MA: Ballinger Publishing.

Nelkin, D. (1996). The science wars: Responses to a marriage failed. *Social Text*, (46/47, 14), 93–100.

Nelson, A. (2008). Addressing the threat of evidence-based practice to qualitative inquiry through increasing attention to quality: A discussion paper. *International Journal of Nursing Studies, 45*(2), 316–322.

Nespor, J. (2006). Methodological inquiry: The uses and spaces of paradigm proliferation. *International Journal of Qualitative Studies in Education, 19*, 115–128.

Otterman, S. (2011, May 25). Tests for pupils, but the grades go to teachers. *The New York Times Online*. Retrieved from www.nytimes.com/2011/05/24/education/24tests.html?_r=1&ref=education

Panzarino, P., & Kellar, J. (1994). Integrating outcomes, quality and utilization data for profiling behavioral health providers. *Behavioral Healthcare Tomorrow, 3*(6), 27–30.

Popay, J., & Williams, G. (1994). *Researching the people's health: Social research and health care*. London: Routledge.

Popay, J., & Williams, G. (1998). Qualitative research and evidence-based healthcare. *Journal of the Royal Society of Medicine, 91*.(Supp 35, 32–37.

Pope, C. (2003). Resisting evidence: The study of evidence-based medicine as a contemporary social movement. *Health, 7*(3), 267–282.

Postal, L., & Balona, D-. M. (2011, January 18). It's time to grade parents, new bill proposes. *The Orlando [FL] Sentinel*. http://articles.orlandosentinel.com/2011-01-18/news/os-teachers-grade-parents-20110118_1_parental-involvement-parent-appeals-grade-parents

Quine, W. V. O. (1953). Two dogmas of empiricism. In W. V. O. Quine (Ed.), *From a logical point of view* (pp. 20–46). Cambridge, MA: Harvard University Press.

Ravetz, J. (1979). *Scientific knowledge and its social problems*. Oxford: Oxford University Press.

Reed, G., & Eisman, E. (2006). Uses and misused of evidence: Managed care, treatment guidelines, and outcomes measurement in professional practice. In C. Goodheart, A. Kazdin, & R. Sternberg (Eds.), *Evidence-based psychotherapy: Where practice and research meet* (pp. 13–35). Washington, DC: American Psychological Association.

Reich, R. (1988). *The power of public ideas*. Cambridge, MA: Ballinger Publishing.

Riessman, C. (Ed.). (1994). *Qualitative studies in social work research*. Thousand Oaks, CA: Sage.

Rodwell [O'Connor], M. (1998). *Social work constructivist research*. New York: Garland.

Romana, H.-W. (2006). Is evidence-based medicine patient-centered and is patient-centered care evidence-based? *Health Services Research, 41*(1), 1–8.

Rorty, R. (1979). *Philosophy and the mirror of nature*. Princeton, NJ: Princeton University Press.

Rubin, A., & Bellamy, J. (2012). *Practitioner's guide to using research for evidence-based practice* (2nd ed.). Hoboken, NJ: John Wiley & Sons.

Rustin, M. (2001). Research, evidence and psychotherapy. In C. Mace, S. Moorey, & B. Roberts (Eds.), *Evidence in the psychological therapies: A critical guide for practitioners* (pp. 27–45). New York: Brunner-Routledge.

Schwandt, T. (2005). The centrality of practice to evaluation. *American Journal of Evaluation, 26*, 95–105.

Shaw, I. (1999). *Qualitative evaluation*. London: Sage.

Sherman, E., & Reid, W. (Eds.). (1994). *Qualitative research in social work*. New York: Columbia.

Stern, D. (1985). *The interpersonal world of the infant*. New York: Basic Books.

Tanenbaum, S. (1999). Evidence and expertise: The challenge of the outcomes movement to medical professionalism. *Academic Medicine, 74*, 757–763.

Tanenbaum, S. (2003). Evidence-based practice in mental health: Practical weakness meets political strengths. *Journal of Evidence in Clinical Practice, 9*, 287–301.

Tonelli, M. (1998). The philosophical limits of evidence-based medicine. *Academic Medicine, 73*(12), 1234–1240.

Tonelli, M. (2001). The limits of evidence-based medicine. *Respiratory Care, 46*(2), 1435–1440.

Trinder, L. (2000a). A critical appraisal of evidence-based practice. In L. Trinder & S. Reynolds (Eds.), *Evidence-based practice: A critical appraisal* (pp. 212–241). Ames, IA: Blackwell Science.

Trinder, L. (2000b). Introduction: The context of evidence-based practice. In L. Trinder & S. Reynolds (Eds.), *Evidence-based practice: A critical appraisal* (pp. 1–16). Ames, IA: Blackwell Science.

Tuhiwai Smith, L. (1999). *Decolonizing methodologies: Research and indigenous peoples*. Dunedin, NZ: University of Otego Press.

Wennberg, J. (1984). Dealing with medical practice variations: A proposal for action. *Health Affairs, 3*, 6–12.

Women's Health Initiative. (2002). Risk and benefits of estrogen plus progestin in healthy postmenopausal women: Principal results from the Women's Health Initiative randomized controlled trial. *Journal of the American Medical Association, 288*(3), 321–333.

# Chapter 3
# The Steps of Evidence-Based Practice in Clinical Practice: An Overview

The evidence-based medicine [EBM] and evidence-based practice [EBP] movements follow the overall goals of Dr. Archibald Cochrane, who sought to increase the use of effective treatments while reducing the use of ineffective or harmful treatments. In addition, EBP is usefully understood via three different perspectives in the social work and allied professional literatures. As such, the focus of EBP discussion will differ based on the perspectives of (1) clinical practitioners, (2) researchers, and (3) funders or program administrators. While these different audiences all are key parts of the EBP movement, their specific purposes and uses of evidence vary widely.

Many summaries of EBP begin by defining the steps of EBP as it applies to direct clinical practice. In turn, most clinical social workers view EBP as a set of steps that help structure treatment planning and decision-making. Out of context, these seemingly structured steps of EBP decision-making may feel like an imposition on professional expertise and autonomy. Their intent, however, is to help clinicians include the best available research knowledge as one part of their clinical decision-making process. In the contemporary model of EBP, the client's clinical state and circumstances, research knowledge, and the client's own values and interests are all integrated using the clinical expertise of the social worker. The steps of EBP help guide and orient the use of research knowledge in clinical practice, but do not simply determine clinical choices. In other words, the EBP process will not automatically lead the clinician to one clearly discernable "right" answer. Clinicians must navigate through and incorporate many pieces of information for each client they serve. They must use their professional expertise and judgment to determine how best to weigh the various available clinical and research information. The client collaboratively guides and shapes the treatment plan.

It is important to keep in mind that the EBP model has been applied to other aspects of practice besides choosing treatments. It may also be used to select among preventive interventions or to examine the etiology or origins of medical disorders. In medicine and psychology, EBM/EBP is also applied to the selection of differential

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_3

diagnostic tests and procedures. In medicine, it is used to examine the prognosis or course of an illness, including survival rates over time. In administration and finance, the EBP model is even applied to economic decision-making (Oxford Center for Evidence-based Medicine, 2009, 2016). The EBM/EBP research approach can be applied to decision-making in many areas of professional practice and practice management. Our focus in this chapter will be on using EBP as a practice decision-making process in clinical practice.

## The Six Steps of EBP in Clinical Practice

The steps of the EBP practice model guide practice decision-making. These steps must always be based upon a thorough assessment of the client and the client's circumstances (Grady & Drisko, 2014). The assessment process allows the clinical social worker to learn both the foreground and background needs of the client. (Assessment will be the focus of the next chapter in this book.) Foreground needs usually become the priorities of interventions, while background needs provide context that may influence if, and how, treatment is likely to proceed. In all cases, the intervention plan generated by the clinical social worker must be discussed collaboratively with the client to determine if the plan is understood by the client, is acceptable to the client, is seen as appropriate given the client's circumstances, and is likely to be effective. Clinical expertise is applied to determine if the plan is feasible and includes all relevant factors.

Combining research knowledge, client needs and preferences, and professional expertise starts with the identification of a priority practice issue and then moves through a sequence of steps. Scholars vary in the number of steps they name in the EBP process, but the core ideas do not vary.

The steps of the EBP practice decision-making process are:

1. Drawing on client's needs and circumstances learned in a thorough assessment, identify answerable practice questions and related research information needs.
2. Efficiently locate relevant research knowledge.
3. Critically appraise the quality and applicability of this knowledge to the client's needs and circumstances.
4. Actively and collaboratively discuss the research results with the client to determine how likely effective options fit with the client's values, preferences, and culture.
5. Synthesizing the clinical needs and circumstances with the choices of the client and the relevant research, develop a plan of intervention considering available options.
6. Implement the intervention.

Note that these steps make the use of research results as a key part of practice decision-making. This is a clear goal of EBP. Note carefully that the needs, values, and culture of clients are also actively included and may have precedence over research findings. Clinicians, therefore, must constantly consider how to understand the research findings given the unique situation of the client and how much of the research can be applied to that particular client, given the client's unique presentation and context in which treatment will take place.

## How Practice Evaluation Links to EBP

A few authors add a seventh step to the EBP process (Gibbs, 2002). This additional step is to evaluate the effectiveness of the delivered intervention(s). We view monitoring and evaluation as an integral part of all good professional practice. We do not, however, view it as a part of the EBP process because it draws upon a very different research logic than does most of the EBP model. Practice evaluation is about determining the effectiveness of a treatment for one specific client, while the research model of EBP draws on the average results of research across a large group of clients or patients. Single-case evaluation studies may be included in EBP research, but in the published literature, this is very rare. Still, evaluating the effectiveness of an intervention is an important part of good practice and should always be undertaken. Yet, single-case studies are simply different in research design and purpose than is the core focus of EBP research as applied in the practice decision-making process. We will discuss practice evaluation further in Chap. 10.

The six steps of EBP define the EBP practice decision-making process. Each step has a slightly different focus, but all demand specific—and different—kinds of professional expertise. Client input from assessment serves to start and later to refine the EBP process. Research results substantiate the likely impact of intervention options. Active collaboration with the client allows expression of concerns and interests. This helps build a therapeutic alliance and ensures that the client is an active player in treatment planning. Integrating all these elements is the professional expertise of the clinical social worker. To more fully explore the EBP process, it is worth looking at each of its several steps in greater depth. Each step will also be further examined in later chapters of this book.

## Step 1: Drawing on Practice Questions, Identify Research Information Needs in a Thorough Assessment

To begin the EBP process, the clinical social worker must identify key practice concerns in interaction with the client. Note carefully that the EBP model is silent on just how these practice concerns are identified (Grady & Drisko, 2014). Typically, such concerns are identified through the intake and assessment process. What constitutes a good enough client assessment, however, is not stated. It is simply assumed that professional practitioners will be able to make such an initial assessment. Indeed, good assessment is the foundation of the optimal use of EBP (Goodheart, Kazdin, & Sternberg, 2006; Grady & Drisko, 2014). The pivotal role of a good assessment—the foundation of using EBP in practice—is left to the professional knowledge and expertise of the clinical social worker.

The clinical social worker must carefully and thoughtfully determine what problems and needs are the priorities for a specific client in a specific set of social circumstances. The EBP model assumes that the clinical social worker can make such assessments and has an institutional support system that allows careful and thorough assessment to be completed. In contemporary practice, many agency and funding influences may make a thorough assessment difficult to complete. Financial and time pressures may limit assessment to a single session with no other corroborating input. Still, making a good choice about the client's priority needs is vital to applying the EBP model successfully. Professional expertise is very important to its proper and successful application in practice.

One area in which clinical social workers may take a different stance than do other mental health professionals is the importance of social context. While clinical social workers often draw on the American Psychiatric Association's (2013) *Diagnostic and Statistical Manual* [DSM] as a resource for defining mental health problems, we social workers also pay considerable attention to contextual factors (Kutchins & Kirk, 1988; Turner, 2002). These may include whether basic concrete needs for food, housing, and medical care are available, if neighborhood and social supports for education and employment are adequate, and whether family and community supports are sufficient to encourage and sustain change. While clinical intervention may not be able to alter large-scale social circumstances, it strongly shapes the context in which personal changes occur.

Another area of particular attention for clinical social workers is human diversity. Racial, cultural, and ethnic factors may shape what kinds of intervention are acceptable to some clients. Religious beliefs and values may also shape the kinds of interventions that are acceptable to some clients (Betancourt, 2003). Socially structured oppression through racism, sexism, ableism, homophobia, and transphobia may influence how many actions and symptoms are understood as well as what kinds of interventions may be most effective in addressing them. However, the impact of socially structured oppressions is rarely assessed in psychotherapy and social services outcome research studies.

A thorough assessment will identify a number of factors that are considered concerns and challenges along with a number of factors that represent strengths and sources of active or potential support. Immediate risks to safety or of harm to others must be identified quickly. Assessment is a demanding process that requires professional expertise of several kinds. We will review assessments more completely in Chap. 4.

## *Information Needs May Not Always Be About Selecting Treatments*

The research information needs identified in the first step of the EBP practice decision-making process are not only about selecting treatment options (Oxford Centre for Evidence-based Medicine, 2009, 2016, 2018; Rubin, 2008). It may be that further differential diagnosis is needed. If so, research information about such differential diagnosis would be sought. In other cases, information about prognosis might be needed, or about the likely course (progression) of a disorder. In some cases, policy planners and administrators use the EBP process to examine the cost-effectiveness of diagnostic procedures and treatments. The kinds of research information that arise during assessment may be widely varied and do not all center on treatment planning.

## *A Model for Framing Clinical Questions: The PICOT Model*

Sackett, Richardson, Rosenberg, and Haynes (1997) developed a specific model for framing EBM questions. It is called the PICOT, or PICO, model. To focus clinicians' practice information needs, they suggest five steps. Each step is intended to help clarify a specific piece of the client's needs as it relates to EBM and EBP (Richardson, Wilson, Nishikawa, & Hayward, 1995). The full model is detailed in Table 3.1. "P" stands for patient or problem, the "who" you need to know about. The goal is to describe the key characteristics of your client and clinical situation. "I" stands for intervention. Based on the client and clinical satiation, what are the key treatment and service needs? Do you wish to know about what works for a specific diagnosis or what preventative measures might avoid development of a full-blown problem? The goal is to be clear regarding the kinds of interventions you wish to learn about. "C" stands for comparison. Is there more than one approach to treatment? If there are multiple approaches to intervening, do you want to learn if one is more likely to be effective than another specific alternative? "O" stands for

**Table 3.1** The PICOT Model

| Clinical question model | |
|---|---|
| **P**atient, problem, or population | What are the characteristics of a group of clients very similar to my client/patient? |
| **I**ntervention | What intervention do I wish to learn about? |
| **C**omparison | What are the main alternatives to this intervention? |
| **O**utcomes | What outcomes do I and the client hope for? (How exactly will outcome be determined?) |
| **T**ype | What type of intervention question am I asking? (treatment? diagnosis? prevention? etiology? prognosis?) |

After Sackett et al. (1997)

outcomes. To be clearer still, what specific kinds of outcome do you and your client seek? Is the goal reduction in certain symptoms or perhaps remission of the disorder as a whole? Are certain symptoms more important to achieve than other, at least at the beginning of treatment? Are there issues on social circumstances to consider? Finally, "T" stands for type of problem. Remember that EBM and EBP can address diagnostic issues, choice of treatments, choice of preventive interventions, and even the etiology and course of a disorder. What type of question do you have for which you need research information?

To illustrate the use of the PICOT model, let us look at the case of a specific client in brief. The client (P), Laticia, is an employed 26-year-old African-American woman in good physical health with no history of major depression but recurrent concerns about lack of energy and sleeping difficulties beginning in the fall. She reports similar feelings a year ago in the fall and that the problems seemed to go away in the spring. These symptoms are aspects of seasonal affective disorder [SAD]. Laticia does not meet standards for major depressive disorder. Bright light exposure has been reported to be one way to treat SAD. A useful clinical question might be (I) is light exposure therapy be more effective than (C) medication or melatonin (C) or (C) psychotherapy in (O) increasing energy and hours of sleep per night? Note that there are very specific symptoms that are the client's desired treatment outcomes. This is an example of an (T) treatment question since the symptoms are currently evident. A key goal is to identify several potentially effective treatment alternatives to address Laticia's needs. Assuming this summary includes all the key information that is currently relevant, the PICOT model both clarifies and focuses our information needs for treatment planning. Of course, it is always necessary to do a complete assessment. What might appear as SAD symptoms could alternately be a reaction to the anniversary of the death of a loved one or some other life event. Understanding the problem fully and accurately is the foundation for identifying useful treatments options.

Remember that practice information needs are not always about the selection of treatments. In mental health, initial practice questions often center on (1) a need to develop a more productive relationship with the client, (2) a need for a more definitive diagnosis, or (3) the selection of the best treatment options. Less commonly used, but no less appropriate, is (4) the selection of preventive interventions. Rubin (2008) also suggests (5) understanding the etiology of a problem or (6) understanding how a client experiences a difficulty may also be an initial information needs in EBP. However, these last two information needs, while fully valid, have not been widely addressed in the mental health EBP practice literature. Similarly, questions about (7) the etiology and (8) the course of disorders are less commonly the focus of mental health practice information needs. In medicine, economic and even ethical decision-making has become part of the evidence-based model (Snyder & Gauthier, 2008). While these are important questions, it is not always clear how each of the four parts of the EBP process (client's needs and situation, the best available research evidence, client's values and preferences, and clinical expertise) are determined and implemented in these more macro-level applications of EBP. Specifically, just who represents the "client's interests" and a "clinician's expertise" are often omitted in the macro-level applications of EBP. Yet, for micro-level applications of EBP, the PICOT model is a useful tool to clarify a specific client's needs. Let's next look further into some of these types of practice information needs.

## *Enhancing the Client-Practitioner Relationship*

A good deal of research and a lot of practice wisdom indicate that establishing a relationship or alliance is important to good treatment outcome (Marsh, Angell, Andrews, & Curry, 2012; Muran & Barber, 2010; Norcross, 2011; Zilcha-Mano et al., 2016). Establishing a positive working relationship is also the first order of business for all clinicians who meet new clients. Without a positive working relationship, clients may not return for a second session, making effective treatment impossible. Yet how to develop a more productive working relationship with has only recently become part of EBP. Castonguay and Beutler (2006), reporting the work of four expert groups, empirically identified several factors that impact on the quality of the client-therapist relationship. These "empirically based relationship" factors currently take the form of broad principles. For example, the group found that clients with greater levels of impairment or personality disorders are less likely to benefit from treatment than other clients who are less impaired or who do not have a personality disorder. The group also found that clinicians with secure attachments, who were able to tolerate intense affect and who could be open, informed, and tolerant about the client's religious views, were generally more effective. While fitting this work into the EBP framework is only at an early stage of development, it may be possible to identify more specific approaches to intervention that guide specific interventions.

## *Improving Diagnostic Assessment*

In medicine, identifying the necessary diagnostic procedures often is the first step of EBM (Ebell, 2001). This emphasis on diagnostic procedures exists because specific kinds of information may be needed to be sure the diagnosis is thorough and accurate. Specific tests or procedures may be needed to ensure the correct diagnosis, and in EBM, there is often a direct link between a diagnosis and a treatment. In mental health practice, the link between diagnosis and treatment is often less specific and certain. This is in part because social work clients present with multiple needs and often fit criteria for multiple psychiatric diagnoses. There are few valid diagnostic tools available for differential diagnosis and the affirmation of possible diagnoses that fit social work client's needs. Still, diagnostic and assessment tools social workers might utilize in EBP include neurological testing, learning disabilities testing, or psychological testing. At the level of risk assessment, protocols for substance misuse, suicide, and self-harm risk potential are very common, as are assessments of homicide potential where indicated. Clinical social workers also routinely look for child or elderly abuse and domestic violence. Specific assessment for fire-setters may be required by some states as well as to complete referrals to certain services. Using the EBP process to sharpen or improve diagnostic assessment is a fully legitimate, and underused, part of EBP in mental health.

One complication in the use of diagnostic tests in EBP is that the lack of valid and reliable instruments often limits their utility in practice. Most tests and assessment protocols in mental health add useful information but ultimately also require interpretation and judgment by the clinician. "Certain" answers and conclusions are very rare. Simply transferring the EBM diagnostic process to mental health practice and EBP may give greater authority to the results of assessment tools than is warranted. Assessment and diagnosis based on invalid or unreliable instruments is not benefit and does not fit with the premises of EBP or ethical clinical social work practice.

Assessment in today's mental health practice tends to be very brief and very focused. Assessing symptoms and risk takes priority over getting to know the whole person. Single-session or very brief "diagnostics" are commonplace in community mental health practice due to financial and other pressures. The merit of such focused sessions is that acute concerns and risks are systematically identified, such as suicide risk and substance use. The limitation of such an approach is that it may prematurely foreclose gaining and weighing other important diagnostic information. For example, as noted above, clients may not immediately share painful material such as histories of abuse. In other cases, obtaining accurate information about substance use or even housing may be difficult due to client anxiety or shame, despite direct requests for information. Without all of the information to consider, social workers can miss a critical factor influencing the diagnostic picture and in turn may begin the EBP process considering only part of the client's needs. Clinical social workers need to be sure they have a sound and complete assessment before moving on to selecting treatment options.

## *Selecting the Optimal Treatment*

The focus of EBP in clinical social work practice is most often on the identification of potentially effective treatments for the client's concerns. Indeed, this question is the sole focus in many illustrations of the EBP process in mental health. It is very important but is not the only appropriate question for EBP. While funding and other supports make preventive services less common, identifying risk factors to get clients preventive supports may be clinically effective and cost-effective. Prevention may often be more desirable than treatment seeking to address long-standing and complex problems.

Where thorough and credible information allows sound assessment, the first step of the EBP process is often to identify and prioritize the primary treatment needs of the client. This step involves several decisions. The key concern or diagnosis must be determined. Both psychological and social factors are often evident and important in client's presentations. Determining the priority concern may require the use of professional judgment to select one target concern from among several interrelated issues. Ideally, this priority concern will help the client make some meaningful changes quickly while also helping to enhance the alliance with the practitioner and, as necessary, making effective treatment of other concerns more possible. For example, a client with an anxiety disorder, substance abuse issues, relationship issues, and work-related issues may benefit from first addressing the co-occurring substance abuse. Yet alternatively, some clients may find help with anxiety decreases substance abuse. Professional judgment is crucial to establishing treatment priorities in collaboration with the client. In some instances, clients are mandated for treatment of specific issues that may not appear to be the optimal starting point. Professional judgment is necessary to help the client work toward mandated changes while setting the stage for later efforts that more fully address their felt concerns.

The cases in the later chapters of this book detail how priority practice information is converted into one or more answerable questions. The case examples also provide information on how professional judgment is used to prioritize and direct assessment and treatment choices. While EBP emphasizes the use of research knowledge to guide treatment planning, there is very little research on how mental health practitioners make these expert choices. There are also no experimental studies of this process for ethical reasons. The use of supervision and consultation is always encouraged.

Once practice information needs are fully defined, the next step of the EBP practice decision-making model is to locate the best research knowledge to guide decision-making.

## Step 2: Efficiently Locate Relevant Research Knowledge

Since a key part of EBP is to use research results to guide and affirm assessment and treatment choices, the second step is to find relevant research results to answer your practice question. This step requires a very different form of professional expertise than does identifying the practice question that begins the EBP process. Here the key expertise is more like that of reference librarians and information technologists than that of most mental health clinicians. Yet learning to do a literature search is part of professional social work training and is familiar to most clinical social workers. This area of expertise may be off-putting to clinicians who are less comfortable with electronic technologies, but the necessary skills can be updated and refined with a little practice. Turning to professional librarians for help and training may also be efficient, especially for beginners. In addition, there are also many print and online resources to help guide the location of useful research results.

It is important to note that the EBP process presupposes adequate and efficient access to current research results by mental health clinicians. This requirement often poses a new financial burden on mental health agencies and a new time burden on individual professionals. Many sources of very useful research information for mental health practice are compiled and made available by for-profit publishers and online data compliers. These publishers and online data providers have substantial costs to operate their services. In turn, access to current materials can represent a substantial new cost to clinics and clinical social workers engaged in the EBP process.

Still another important issue is "information overload" (Greenhalgh, Howick, & Maskrey, 2014). There has been a rapid increase in the number of sources of clinical information, such a journals and books, as well as a proliferation of technologies for accessing these materials. Some professionals find the number of materials they need to examine so vast that they quickly become discouraged. Searches in multiple databases with different search methods can be challenging. Even simple searches using Wikis and Google can reveal staggering amounts of information (i.e., 486,000,000 "hits" for depression on Google). This information may prove to be irrelevant, inadequate, commercial, or based on dubious sources. Finding useful, high-quality materials can be difficult.

## *Print Resources*

In response to the growth of EBM and EBP, a number of organizations, both professional and for profit, have begun to develop summaries of research results. Books, such as Weisz and Kazdin's (2017) *Evidence-Based Psychotherapies for Children and Adolescents*, Carr's (2009) *What Works with Children, Adolescents, and Adults?*, Roth and Fonagy's (2005) *What Works for Whom? A Critical Review of Psychotherapy*, and Fonagy et al.'s (2015) *What Works for Whom? A Critical Review of Treatments for Children and Adolescents* (2nd ed.), provide overviews of EBP and a summary of relevant research. These books are good starting points and also provide a background understanding for clinicians. Another useful volume is the *British Medical Journal*'s (or *BMJ*) (2009/2010) "Clinical Evidence Handbook" (archival editions are online at https://www.ncbi.nlm.nih.gov/pmc/journals/520/). This work is organized like an encyclopedia, offering detailed information about psychological and psychopharmacological treatments for several common mental health disorders. It is a very practical resource for mental health practitioners. (More clinical practice information sources will be detailed in Chap. 5.)

## *Online Resources*

Online resources are mainly "foreground" resources that report summaries of research findings on a single specific disorder or problem. They frequently assume that the user has substantial background knowledge about clinical assessment, treatment models, information searches, research design, research methods, and statistics. This may be intimidating to many clinicians who attempt to read and understand research methods and results. Online resources tend to be easier to access from multiple locations than are books and print resources. They do require some infrastructure such as computers, smartphones, and Internet connections to use. In addition to ease of access, online resources can be easily updated frequently, unlike print resources and books. Many paid, subscription-based, EBP resources are updated monthly or even more often. Thus, they offer practitioners the latest research information. Beyond subscription options, there are also many excellent free online EBP resources.

The most rigorous online compilation of research evidence for clinical social work practice is the Cochrane Collaboration's Library of Systematic Reviews. Named after Scottish physician Archie Cochrane, who is widely acknowledged as the founder of the current EBP movement, the Cochrane Library (www.cochranelibrary.com/) offers thoroughly reviewed summaries of research organized by diagnosis. Medical and mental health issues are addressed, and clinicians can find a concise summary or abstract of the relevant available research concerning the diagnosis they are searching. For social service, criminal justice, and educational programs, the Campbell Collaboration (www.campbellcollaboration.org) offers similar high-quality research summaries. In contrast to the Cochrane Collaboration, the Campbell Collaboration targets social problems and does not use a medical model orientation. The Campbell Collaboration Online Library (https://campbellcollaboration.org/library.html) offers a wide, but somewhat spotty, collection of detailed reviews of research on social service interventions and programs. Both the Campbell Collaboration and the Cochrane Collaboration apply the same high standards to systematic reviews of research.

## *Online Practice Guidelines*

A different starting point is offered through online practice guidelines. Clinical practice guidelines are statements intended to improve practice including specific practice recommendations. They are informed by systematic reviews of research evidence that assess both the benefits and harms of different care options. Most are medically oriented and defined by diagnosis. Well-crafted guidelines provide a summary of research results for a specific disorder as well as a set of steps or principles of treatment for practitioners to follow or avoid. That is, not only a summary of the research but an interpretation of the research by expert panels is offered. However, the standards used for establishing practice guidelines vary widely, as does the transparency of the guidelines statements. Guidelines may not be as clear or as rigorous as systemic review summaries from the Cochrane and Campbell Collaborations. In contrast to the principles of EBM/EBP, expert opinion may heavily shape practice guidelines in some instances.

The American Psychiatric Association's *practice guidelines* (https://psychiatryonline.org/guidelines) provide research-supported recommendations for the assessment and treatment of several common psychiatric disorders. The American Psychological Association (https://www.apa.org/practice/guidelines/index.aspx) also offers practice guidelines, but their purpose is more to sensitize and guide practitioners than to summarize research on treatment outcomes. The American Psychological Association's guidelines address many issues of human diversity, such as a guideline for working with transgender and gender nonconforming individuals, which may be vital to doing good contemporary practice. The American Medical Association sponsors *Guideline Central*, a free online resource and app. Under the specialties tab (https://www.guidelinecentral.com/summaries/), clinicians may find guidelines from a wide range of sources on psychiatric, psychological, and medical issues. For example, clinicians will find guidelines for assessing dementia and for assessing suicide risk through Guideline Central. Guideline Central is working to improve the transparency and research base of their practice guidelines. Guideline Central is part of an effort to replace the sudden defunding and closing, in July 2018, of the US government's National Guideline Clearinghouse. The National Guideline Clearinghouse provided the most extensive collection of practice guidelines and drew on international research sources. Mental health professionals widely criticized its demise.

Many high-quality research summaries and practice guidelines on single practice topics are readily available to those doing EBP. High prevalence disorders are often the focus of such summaries and guidelines. The research knowledge made available in such summaries and guidelines can be a very valuable way to ensure practice decisions are informed and guided by quality research. Online options make many resources efficiently available to practitioners as well as consumers. (URLs for additional online resources are detailed in Chap. 5.)

Both summaries of research and practice guidelines have two limitations. First, they include only a limited range of the many DSM or International Code of Diagnoses (ICD) defined diagnoses or potential client problems. They also address only a single diagnosis or practice issue, where many clients have multiple, comorbid (or co-occurring), clinical concerns and social needs. Second, available guidelines may not offer clear conclusions about what treatments or specific interventions are effective. Many summaries note that rigorous research is simply unavailable, making it premature to draw conclusions about the effectiveness of any treatment for the target disorder. This lack of evidence may be very frustrating to the practitioner seeking to engage in the EBP practice decision-making process.

A treatment that has not been researched is not necessarily ineffective. The lack of research exists because researchers have not studied all disorders in depth due to lack of funding, lack of agreement on the conceptualization of the disorder or on just what constitutes a "successful" outcome, or lack of participants for studies. In addition, there are many practitioners who are using effective treatment approaches, but do not have the expertise or interest in publishing their findings. The large number of disorders and their variations included in the DSM would make it impossible to fund and undertake large-scale experimental studies on all the disorders in any reasonable period of time. Still, seeking out available research evidence can help guide intervention planning in many cases where research is available and rigorous.

## *What the Literature Shows About "Light Therapy"*

Drawing on the concerns of Laticia, the 26-year-old African-American woman described above, the clinical social worker wants to answer the practice question "Is bright light therapy as effective or more effective for treating seasonal affective disorder symptoms than are medication, melatonin, or psychotherapy?". A Cochrane Library search for the term "light therapy" yielded four systematic reviews completed between 2011 and 2015. However, the focus was on *preventing* occurrences of SAD symptoms, rather than treating present SAD, though symptomatic improvement was examined.

Forneris et al. (2015) studied psychological therapies for *preventing* SAD. Yet their reports do include information on symptomatic improvement in adults with a history of SAD. After reviewing 2986 publications and assessing 91 for full review, the authors "found no controlled studies on use of psychological therapy to prevent SAD and improve patient-centred outcomes in adults with a history of SAD" (Abstract, main results). They conclude that "Presently, there is no methodologically sound evidence available to indicate whether psychological therapy is or is not an effective intervention for prevention of SAD and improvement of patient-centred outcomes among adults with a history of SAD" (Abstract, author's conclusions). Forneris et al. (2015) argue that it is uncertain, without experimental research, if psychotherapy can be an effective treatment for SAD.

A second Cochrane systematic review on light therapy for preventing SAD by Nussbaumer et al. (2015) reports that:

> Bright light therapy reduced the risk of SAD incidence [occurrence] by 36%; however, the 95% confidence interval (CI) was very broad and included both possible effect sizes in favour of bright light therapy and those in favour of no light therapy (risk ratio (RR) 0.64, 95% CI 0.30 to 1.38). Infrared light reduced the risk of SAD by 50% compared with no light therapy, but in this case also the CI was too broad to allow precise estimations of effect size (RR 0.50, 95% CI 0.21 to 1.17). Comparison of both forms of preventive light therapy versus each other yielded similar rates of incidence of depressive episodes in both groups (RR 1.29, 95% CI 0.50 to 3.28). The quality of evidence for all outcomes was very low. Reasons for downgrading evidence quality included high risk of bias of the included study, imprecision and other limitations, such as self rating of outcomes, lack of checking of compliance throughout the study duration and insufficient reporting of participant characteristics. Investigators provided no information on adverse events. (Abstract, main results)

(We will thoroughly review statistics and their interpretation in Chap. 7.) Light therapy may *prevent* SAD in adults, but it is not clear that it is an effective treatment for existing SAD symptoms.

Looking at melatonin as another possible treatment option, another systematic review by Kaminski-Hartenthaler et al. (2015) states that "No available methodologically sound evidence indicates that melatonin or agomelatine is or is not an effective intervention for prevention of SAD and improvement of patient-centred outcomes among adults with a history of SAD" (Abstract, author's conclusions).

A third Cochrane systematic review by Thaler et al. (2011) studied the effectiveness of second-generation antidepressant [SGA] medications for treating SAD. They found three randomized controlled trials of these medications over 5- to 8-week long treatments. The three studies include 204 participants, with an average age of approximately 40 years, 70% of whom were female. They state that:

> Results from one trial with 68 participants showed that fluoxetine was not significantly more effective than placebo in achieving clinical response (risk ratio (RR) 1.62, 95% confidence interval (CI) 0.92 to 2.83). The number of adverse effects was similar between the two groups. We located two trials that contained a total of 136 participants for the comparison fluoxetine versus light therapy. Our meta-analysis of the results of the two trials showed fluoxetine and light therapy to be approximately equal in treating seasonal depression: RR of response 0.98 (95% CI 0.77 to 1.24), RR of remission 0.81 (95% CI 0.39 to 1.71). The number of adverse effects was similar in both groups. (Abstract, main results)

The authors also note that adverse effects from the SGA medications were notable: "Between 22% and 100% of participants who received a SGA suffered an adverse effect and between 15% and 27% of participants withdrew from the studies because of adverse effects" (Abstract, main results). Given the potential for side effects, light therapy appears to generate similar results with lesser adverse effects, including discontinuation of the therapy.

A Google Scholar search reveals a published meta-analysis by Golden et al. (2005) reports that "bright light therapy" using specific lights in the morning was significantly more effective at the $p < 0.0001$ criterion level than was placebo intervention across eight randomized controlled trials (RCTs) including 360 people who had SAD. The effect size for the bright light therapy was large (Cohen's $d = 0.84$; 95% confidence interval 0.60 to 1.08). This indicates a large and beneficial difference in outcomes for people who received treatment versus those who did not. (We will review these statistics and their interpretation in Chap. 7.) Four studies showed remission [ending] of SAD symptoms was three times more likely when using bright light therapy than by placebo alone. Another bright light therapy using a "gradual dawn" method was also significantly more effective at the $p < 0.0001$ level than was use of red lights or a "rapid dawn" intervention (Cohen's $d = 0.73$; 95% confidence interval 0.37 to 1.08). This result aggregated five studies, including 69 patients with SAD. Light therapy seems to have some experimental research support and moderate to large effect size or impact.

However, looking a bit deeper, commentary by Terman (2006) indicates several studies on bright light therapy were mainly done by just one research team at a single university and that the best designed study did not show a significant difference. Similarly, the same research team completed all the gradual dawn therapy research. The Cochrane Library systematic reviews also questioned the quality of the available research on treatments for SAD. This would suggest some caution in relying on the research conclusions due to possible bias. Nonetheless, the research supports the view that bright light therapy appears beneficial in reducing SAD symptoms.

Comparison to psychotherapy alone was not found, so it appears psychotherapy was not studied as a treatment for SAD. This may mean simply that it has not been researched, but it does mean there is no strong empirical support for psychotherapy as a treatment for SAD. No information on racial or ethnic variation was included or mentioned in any of the reviews. Antidepressant mediations were reported to produce adverse side effects for some patients (as is often the case). No harms or side effects were reported for bright light therapy. However, no practice guidelines for treating SAD were located.

In discussion with the client, the answer to the question "What treatments have documented effectiveness for SAD?" appears to be that light therapy has considerable research support (the I and C of the PICOT model). Bright light therapy alone has the most consistent, though limited, research support and little apparent risk. The clinical social worker would next discuss and explore these options with the client to determine if either bright light therapy or medication is consistent with her personal values and preferences.

Many systematic reviews include "plain language" summaries of research results. These are available in the abstracts of Cochrane Collaboration and Campbell Collaboration reviews without cost to end users. (Full reviews from the Cochrane Collaboration do have fees for US users. Vogel (2018) notes that the Cochrane Collaboration has been challenged for using this paid review model as some board members and others believe such reviews should be available free as a public good.) Abstracts of systematic reviews are often available in several different languages. They may be lengthy. Plain language summaries may be used to share research results directly with clients, though sometimes even plain language can be confusing or may include technical terms—though statistics are generally not included. The summary as a whole provides a useful perspective on the focal concern and details about the studies included or excluded. A Cochrane Library systematic review by Thaler et al. (2011) on the use of antidepressants for treating SAD includes this plain language summary:

> Seasonal affective disorder (winter depression) is a type of depression that recurs in the autumn and lasts until the spring. It is similar to regular depression except sufferers are usually very tired and have an increase in their appetite. It is more common in countries with few daylight hours in winter. One of the mainstays of treatment for all depression, including winter depression, are second-generation antidepressants (SGAs) such as selective serotonin reuptake inhibitors (SSRIs), and serotonin and norepinephrine reuptake inhibitors (SNRIs). It is not clear how well these drugs work for winter depression and how they compare to each other or to other types of therapy such as light therapy.
>
> We found three trials with a total of 204 participants that looked at one SGA (fluoxetine) compared with placebo or light therapy. We did not find any trials on other SGAs. One trial (68 participants) compared fluoxetine with placebo. Fluoxetine appears to work better than placebo for winter depression, but we cannot say this with certainty due to the small numbers involved in the trial. Approximately the same number of participants in both groups experienced a side effect. We found two trials (with 136 participants in total) that compared fluoxetine with light therapy. When we combined the results of these two trials, we found that there was no difference between the two groups: approximately 66 people out of 100 improved in both the fluoxetine and light therapy groups. We are unsure whether this summary result is correct because the trials are small and have some problems with their design as well as a high dropout rate (many participants did not finish the trials)… (plain language summary).

This summary states that fluoxetine appears to be more effective than placebo in treating SAD and both treatments had similar side effects. On the other hand, there was no difference in effectiveness between fluoxetine and light therapy treatments. Yet confidence in these results is limited as the samples were small and the research designs used had some limitations. Such summaries might be stated by the clinician to the client later in the EBP process.

It is worth noting that this literature search took a well-trained clinician about 3 hours to complete. This included preliminary searches to identify relevant articles and reviews, locate copies of the full text articles, and review their content. As we will examine later in this book, doing the EBP process takes expertise and time. Institutional supports and access to research materials are necessary to practice EBP.

Today's electronic search engines can yield huge amounts of complex and detailed information on a selected topic. This is often (but not always) the case in searches for mental health topics. The quality of this information may vary widely, as does the quality of the sources. Different perspectives may be available, often framed by specific points of view on the topic. For example, the views of consumers or clients, professional practitioners, and professional researchers may lead to different questions, study methods, and results (Petr, 2009). Researchers may also differ in their appraisal of the quality of results of findings of research studies. Thus, once you have located information about your practice problem, the next step is to appraise its quality and its relevance to your practice situation.

## Step 3: Critically Appraise the Quality and Applicability of Found Knowledge to the Client's Needs and Situation

Scholars and practitioners with backgrounds in quantitative, epidemiological research originally organized and promoted the EBM and EBP movements. Dr. Cochrane studied populations with pulmonary diseases from a strong quantitative perspective. Dr. Sackett, Rosenberg, Muir Gray, Haynes, and Richardson (1996) also promote determination of "quality" from a quantitative, statistical perspective. The EBM and EBP literatures clearly place the greatest value on research evidence derived from quantitative, experimental research designs. As discussed in Chap. 2, this type of research design has strong interval validity allowing cause-effect relationships to be established. In reports of RCTs, overall, less attention is directed to the conceptualization of problems and measures, or to comorbid disorders and social circumstances, than to research design and statistical analysis.

### *The Hierarchy of Research Evidence in EBM/EBP*

Researchers using the standard EBP model, drawing on EBM, generally endorse a specific hierarchy of quality in research evidence. This hierarchy of "evidence categories" is meant to help clinicians and researchers quickly appraise the quality of research knowledge. The recently updated hierarchy of research evidence developed by the Oxford University Centre for Evidence-based Medicine (2009, 2018) is presented in Table 3.2. An almost identical hierarchy is offered by the GRADE (undated) organization. The Oxford evidence hierarchy has several clear elements. Evidence obtained from comparisons across an untreated control group and a treated group is prioritized. Such comparisons help identify if a given treatment or intervention produces better results than no treatment at all. Since some mental health conditions appear to improve over time without treatment, these research designs help demonstrate that the treatment yields better results than does time alone. Further, by prioritizing random assignment of clients to the treated or untreated group, bias across the groups is limited. Random assignment minimizes any systematic bias in the assignment of clients to treated or untreated groups and is another asset of carefully done experimental research (RCTs).

Of course, even experimental research may have limitations. The lack of adequate criteria for including or excluding people in the sample selection process, overly narrow inclusion criteria, small sample size, missing data, and lack the

**Table 3.2** The hierarchy of EBM/EBP evidence (for treatment outcomes)

| |
|---|
| Level 1a: Evidence obtained from a "systematic review" evaluating and integrating the results of several experimental research studies (or RCTs) showing homogeneity (consistency) of results |
| Level 1b: Evidence obtained from a single experimental study (RCT) with a narrow confidence interval (showing high precision of results that are better than no treatment) |
| Level 2a: Evidence from a systematic review of several quasi-experimental or "cohort" studies (with no control groups or retrospective control groups) showing homogeneity of results |
| Level 2b: Evidence obtained from a single-cohort study or low-quality experimental study |
| Level 2c: Evidence obtained from "outcomes research" or observational studies of treatment results based on a retrospective or "after the fact" matching of clients, lacking random assignment |
| Level 3a: Evidence obtained from a systematic review of "case-control" studies (not experiments) showing homogeneity of results |
| Level 3b: Evidence obtained from a single of "case-control" study (not experiments) showing homogeneity of results |
| Level 4: Evidence obtained from a "case series" of observations made on clients with no control group or random assignment and poor-quality case-control or cohort studies (results of multiple single subject design studies would be level 4 in this model) |
| Level 5: Expert opinion, "bench research," or first principles |

The results of multiple studies of any type are considered as higher-quality evidence than are the results of any single study of the same type. Note that it is assumed that the measures used to determine effectiveness are fully adequate (valid), reliable, and comprehensive. The populations studied are also assumed to be adequate in numbers and in relevant social characteristics. Further, it is assumed that treatments or interventions are fully specified and that, in experiments, no other factors influence treatment outcomes. Where reviewers have concerns about the quality of a study of a given type, the next lower grade may be assigned. That is, an RCT of questionable quality may be rated as a "2" given concerns about its rigor

This table is adapted from the Oxford Centre for Evidence-based Medicine's Levels of Evidence (2009)

The authors also point out that levels do not provide you with a definitive judgment nor do they automatically create a recommendation for treatment (Oxford CEBM, 2018) "statistical power" necessary to detect differences may be limitations of experimental research. These limitations can undermine the ability of an experiment to detect differences in outcome or to allow generalization of results to larger client populations. (We will explore these issues of determining research quality in greater depth in Chaps. 6, 7, and 8.)

Note that the EBM/EBP hierarchy of research designs is intended to help practitioners quickly identify some key differences that impact on the quality of results. If no systematic review of experimental research (also called an RCT or randomized controlled trail) or single experimental study is located, it is appropriate to look at the best available evidence based on other research designs. These lower levels of evidence are also determined by the specific research methods used. Comparisons that do not use random assignment of participants comparing treated versus "control" conditions but do include a control or comparison group constitute level 2 and lower-rated studies. Researchers often call these "quasi-experimental" or, in the medical literature, "observational" research designs. Comparisons that do not use random assignment, and lack a comparison group, are level 2 (or lower)-rated studies.

This distinction is very important. Many observational program evaluations use only pre- and post-assessments of a single group of treated clients and do not include a formal comparison with untreated controls. This provides no basis for comparing gains due to treatment from gains due to other unidentified sources. Campbell and Stanley (1963) list several types of threats to interval validity, such as maturation or history, which are not accounted for in observational studies. Further, many program evaluations compare similar programs because random assignment may not be feasible due to legal or funding obligations. It may be unlawful and/or unethical to randomly assign clients to mental health programs or untreated control groups. In turn, level 2 studies have lesser internal validity than do level 1 studies that do use comparison groups. That is, they do not definitively show that the treatment alone causes better outcomes than does no treatment.

The distinction between the lack of a comparison group versus the lack of random assignment of research participants to the treated or to the control group may take some careful study. Outcome studies of treatment programs, such as those that are used for substance abuse treatment or severe mental illnesses, often do not use random assignment of clients to either treated or control groups. They usually do have a comparison group, though it may not be an untreated control group.

Level 3 and level 4 evidence are derived from all other *planned* research designs and methods. These include studies such as surveys or "case-control studies" in which people who have a disorder are retrospectively (after treatment) compared with people who did not have the disorder in order to see what risk factors may distinguish the two groups as time goes by. Level 3 and 4 research designs are often called "descriptive" or "exploratory" research designs. These designs are not intended to show cause-effect relationships as are true experimental designs or RCTs but are often used to identify and describe patterns or new concepts. Such patterns may serve as the foundation for future research projects aimed at exploring causal relationships among various factors.

Finally, level 5 knowledge is derived from expert "opinions." Opinion and practice wisdom are not based on any planned research design. Note that all practiced wisdom is put into level 5, as are summaries developed by expert practitioners or researchers that are not specifically tied to research evidence as defined by the EBM/EBP model.

The levels of research evidence are a shorthand device meant to help practitioners and others appraise the quality of available knowledge on a topic quickly. In EBP, mental health clinicians are directed to look for level 1 systematic review or experimental results first and to give priority to this knowledge over the other types. Thus, an early step in an EBP appraisal of research is to determine which are derived from rigorous experimental research. In many situations experimental research will be located. However, for other disorders or concerns, no experimental research may be found. This is not necessarily a matter of an inadequate or incorrect search; it may simply reflect the lack of experimental outcome research on the chosen topic. In such cases, the EBP model directs practitioners to level 2, then level 3, and then level 4 results. All these levels of evidence are parts of the EBM/EBP model, but the confidence one has in the quality of knowledge is higher when the optimal research designs and evidence are available. Level 5 is appropriate to use when no other research evidence is found. The EBP process calls for practitioners to use “the best available evidence” in making decisions, which means to use the best at whatever level of design quality is available.

Only level 1 results allow cause and effect to be determined; all other levels are suggestive but do not demonstrate that the treatment/interventions led to the change found (because they are not based on experimental research designs). It may then appear that use of level 3 and level 4 results is only a poor approximation of the kind of research-guided decision-making the EBP model promotes. However, research is developed incrementally, usually beginning with exploratory stages that clarify what constitutes a disorder and what constitutes a treatment. Case studies and personal stories can be of great value. Descriptive and correlational studies help clarify what other attributes may exacerbate or diminish the impact of a disorder or mask it altogether. They may add to diagnostic profiles and to identifying risk factors. Such studies are also of great value.

While levels of evidence are an efficient way to determine the likely quality of research designs, other aspects of research are also important to judging its quality. For example, who is included in the study sample, and who may be excluded or not specified, may also matter in clinical decision-making. (These issues are explored in Chap. 7.) Many research summaries fail to detail important aspects of human diversity beyond age and gender. Critical thinking about research quality, and applicability to a specific client, is vital to doing EBP well.

## *Practice Guidelines: Research Support for Specific Techniques*

In practice guidelines, groups of clinical and research experts go beyond apprising research results to rating specific practice interventions. That is, they establish a list of good practices, sometimes called practice parameters, and rank each component based upon the research support for it. Specific practice recommendations are then assigned a letter grade from "A" to "D" (see Table 3.3). The grade assigned to each recommendation is based upon the quality of the available research evidence to support it. "A" level grades are based on evidence from experimental research or RCTs. "B" level grades are based on research that does not use random assignment (i.e., quasi-experiments). "C" level grades are based on observational studies (no random assignment nor comparison groups). "D" level grades are based on "expert opinion." Clinical social workers are reminded that the professional groups assigning such grades, while themselves experts, are creating recommendations that might, ironically, appear to be "expert opinion." Clinical expertise is always required in EBP to determine how appropriate treatment recommendations are and how well they fit with each specific clinical situation and client.

As an example, in the Michigan Quality Improvement Consortium's (2010) practice guidelines for major depression in adults, one major practice standard is to "initiate antidepressant medication following manufacturer's recommended dose." This practice standard is given an "A" grade. An "A" grade means that this recommendation is based upon evidence derived from RCTs or level 1 research designs. The next recommendation "referral to, and coordination with, behavioral health specialist when [there is an] identified or suspected risk of suicide, or a complex social situation" is given a "D" grade. A "D" grade indicates the recommendation lacks research support and is based solely on expert opinion or level 5 practice wisdom. Of course, if primary care physicians had concerns about suicide risk, it is plausible that they might follow and manage this concern on their own or make such a referral. The grade alone is not a sufficient basis for making a clinical practice recommendation as there may be other factors to consider, such as whether the sub-

**Table 3.3** Recommendation grades (for recommendations in practice guidelines)

| |
|---|
| Grade A—assigned to specific treatment recommendations where at least one randomized controlled trial is found as part of a body of literature of overall good quality and consistency addressing the specific recommendation |
| Grade B—assigned to specific treatment recommendations where at least one well-conducted clinical study without random assignments (a quasi-experiment) is found on the topic of recommendation |
| Grade C—assigned to specific treatment recommendations where at least one observational studies that does not use either random assignment nor comparison groups are found on the topic of recommendation |
| Grade D—assigned to specific treatment recommendations where only expert committee reports or opinions and/or clinical experiences of respected authorities are found on the topic of recommendation |

Consistent research results over multiple studies of any type (experiment, quasi-experiment, observation, case study series) are viewed as more persuasive than is a single study of the same type. Where reviewers have concerns about the quality of a study of a given type, the next lower grade may be assigned. That is, an RCT of questionable quality may be graded as a "B" given concerns about its rigor. A "D" grade is assigned where no formal research has been completed on the issue. Adapted from the US Department of Health and Human Services' Agency for Healthcare Research and Quality National Guidelines Clearance Center. Retrieved from http://guidelines.gov/content.aspx?id=15647&search=major+depression (Not all grading rubrics use the same standards) jects who were included are similar to the specific client. The grade does, however, indicate whether or not, and to what extent, each standard is supported by research evidence. As always, expert professional expertise is required to determine the best course of treatment for any particular client and circumstances.

It is quite likely that there are no experimental studies comparing the outcomes for patients with major depression and suicide risk as treated by primary care physicians alone versus primary care physicians and behavioral health specialists jointly. This is why the "D" grade is applied. It is important to bear in mind that the recommendation does not mean physicians should not make such referrals, only that there is no strong research evidence that it leads to better outcomes for such clients. Yet, ethical and legal guidelines regarding the safety of clients are paramount in such a clinical situation, whether there is research to support such action or not. Professional expertise and critical thinking are vital in all clinical practice.

## *Is This Research Applicable to My Client's Needs and Situation?*

Once studies based on strong research designs are found, the issue of their relevance to your particular client also arises. Experimental studies are planned to examine the impact of just one variable—usually the treatment—and its effect. This often means that clients with just one disorder are included and all others excluded from the research. The yield of the research may, or may not, be informative about clients with multiple, comorbid disorders. Your client may also have medical conditions or other life circumstances that make the use of an otherwise effective treatment inappropriate. While the ability of experiments to demonstrate treatments cause a change is a real strength, experimental results may be only narrowly applicable.

Some scholars state that experiments may show effectiveness only in the "laboratory" (meaning tightly controlled circumstances, not use of a real lab) (Glasgow, Lichtenstein, & Marcus, 2003; Hunsley, Elliott, & Therrien, 2013; Signal, Higgins, & Waljee, 2014). They draw a distinction between "efficacy studies" based on laboratory conditions and "effectiveness studies" that are based in real-world clinical conditions. Effectiveness studies include people with comorbid conditions and varied circumstances, which reduce their internal validity (i.e., the ability to demonstrate that the treatment causes the change). The strength of effectiveness studies is that they can show a treatment produces change in real-world conditions. In this way effectiveness studies have a practical advantage over the more tightly controlled efficacy studies. However, interpreting their results, and to whom the results best apply, can be unclear.

It is always important to examine if the samples on which research is completed are similar to your specific client. Studies focusing on adults may have not automatic relevance to studies of children (though they sometimes do). Studies of adults may also yield different results than a study of elders (though not always). In addition, elders tend to be disproportionately omitted from clinical trials in medicine (Zulman et al., 2011). Most efficacy studies address just one diagnosis, such as major depression, and carefully exclude people with comorbid conditions. Such studies *do* show that a treatment is effective for a specific disorder (or not) but may not show effectiveness for persons with this disorder and other comorbid disorders. Comorbid social circumstances, despite being somewhat assessed under the now deleted axes IV and V of the DSM-IV-TR (American Psychiatric Association, 2000), may also impact upon a client's ability to undertake and complete a specific treatment or program. Research results may be generally or broadly applicable, but other factors may influence the outcome for any single client.

Another concern about the applicability of research results centers on ethnic (Sue & Zane, 2005; Zayas, Drake, & Jonson-Reid, 2011), gender (Levant & Silverstein, 2005), gay and lesbian bisexual and transgendered individuals (Brown, 2005), and disabilities (Olkin & Taliferro, 2005). Many otherwise well-planned studies do not fully specify the composition of their sample beyond addressing the disorder under study. It is often very hard to assess from publications if people from diverse backgrounds and with varied belief systems were included in the available research. If the client you serve is a recent immigrant from a different culture, it may remain unclear if the research results fit the belief systems and responses of such clients. Other diverse populations may simply be rendered invisible due to lack of clear details about study samples.

It may also be unclear if the measures used to assess the mental health disorder are designed to reveal disorders in non-majority populations. Most measures of mental health disorders are "normed" or rated in comparison to middle class white populations. They may not adequately capture symptoms and behaviors that may be expressed somewhat differently in populations of color (Benuto, 2013; Benuto & Leany, 2015; Benuto, Thaler, & Leany, 2014; Drisko, Corbin, & Begay, 2019; Jones, 1996; Williams, Yu, & Jackson, 1997). These measures may not even include items related to disabilities or other sources of social difference. The mental health clinician must decide if the available research fits the ethnicity, social characteristics, and belief systems of each unique client. One important step in making this decision is to talk directly with the client about what the research shows.

In our example of Laticia, the 26-year-old African-American woman seeking help with her lack of energy and difficulties sleeping in the fall, two systematic reviews offered summaries of the results of multiple experiments. She reports no other disorders, so looking at research on SAD alone is appropriate. However, no information about the ethnic background of participants was included in the systematic reviews. There might be ethnic values, or other personal characteristics and needs of the client, that make bright light exposure an unacceptable treatment. Differences in sexual orientation might also matter, along with different abilities as appropriate. The clinical social worker and the client need to discuss how the client thinks and feels about the relevance of the research evidence to her specific needs and situation in the context of her culture and values.

## Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture

Once the best available research is identified and appraised for quality and relevance to the client, the fourth step in EBP is to collaboratively discuss the research results with the client. This step obligates the practitioner to synthesize and summarize the research results succinctly and clearly in plain language. This step also helps the clinical social worker clarify what is known about the treatment options. This act of synthesis requires many forms of clinical expertise and solid professional judgment.

Drisko (2017) argues that there are several reasons why a collaborative discussion and not simply "telling" the client about treatment options is important. One key reason is based on professional ethics and values. Direct discussion allows the client to learn about, compare, and evaluate the various treatment options. Gambrill (2001) argues that this is an ethical imperative for social workers. Indeed, the US National Association of Social Workers *Code of Ethics* (2017) states that:

> Social workers should use clear and understandable language to inform clients of the purpose of the services, risks related to the services, limits to services because of the requirements of a third party payer, relevant costs, reasonable alternatives, clients' right to refuse or withdraw consent, and the time frame covered by the consent. Social workers should provide clients with an opportunity to ask questions. (1.03)

Fully informing clients is important to supporting their self-determination and cooperative decision-making. In today's practice world, clients have often done their own searches of treatment options or may have learned a great deal through discussion with others who have the same concern. Of course, these views may be very well informed or may simply be horror stories from others who have had bad treatment experiences. Active, collaborative discussion allows the client to share their views and interests and allows the practitioner to help clarify any misunderstandings. Collaborative discussion enhances client understanding of their situation and options in the context of learning about what the best available research shows. It is also very helpful to developing a clear treatment contract.

Drisko's (2017) second reason for collaborative discussion is to allow for a culturally competent treatment planning process. To overcome disparities in health care, culturally competent care has been proposed to address these concerns in practice (Smedley, Stith, & Nelson, 2002). Romana (2006) defines culturally competent practice as "the delivery of health services that acknowledges and understands cultural diversity in the clinical setting and respects individuals' health beliefs, values, and behaviors" (p. 1). This is inherently an individualized and interactive process. Cultural competence requires that clinicians have knowledge of diverse social groups but also that they actively learn about the personal views and meanings made by each client. It involves practicing cultural humility, personal authenticity and openness, and curiosity about each individual patient (Huey, Tilley, Jones, & Smith, 2014; Ortega & Coulborn Faller, 2011; Romana, 2006; Tervalon &

Murray-Garcia, 1998). Interactive collaborative discussion about the meaning of various treatment options also diminishes power dynamics in health care. It may help empower clients as well. There is preliminary evidence that cultural humility and co-learning do impact outcomes. Beach et al. (2005, p. 256), in their systematic review of 34 relevant studies, report that there is "excellent evidence that cultural competence training improves the knowledge of health professionals… good evidence that it improves patient satisfaction…and limited evidence it improves adherence and outcome." Such discussions also allow for addressing multiple forms of human diversity (e.g., age, sexual orientation, different abilities, gender variance) and how they shape a client's comfort with research-supported treatment options.

Drisko's (2017) third reason to include active collaboration is that it can enhance the working or therapeutic relationship between the practitioner and client(s). Indeed, psychotherapy research has demonstrated that "if a client is not attuned to the approach being offered and shows resistance to the treatment, persistently and insistently offering the same approach is not therapeutically helpful and probably is harmful" (Wampold, 2010, p. 54). To collaboratively explore treatment options builds client motivation and enhances the therapeutic alliance between client and clinician.

Part of this discussion should always focus on how the research-based options fit with the client's belief system and expectations. For example, Castonguay and Beutler (2006) report that there is empirical evidence that openness to the religious beliefs of clients can both strengthen the client-practitioner relationship and improve overall outcomes. The practitioner need not share personal beliefs with the client but must show openness and support for the client's beliefs. Direct discussion of treatment options, and exploration of the client's views, facilitates understanding of the client's perspective. Research continues to demonstrate that successful treatment is heavily dependent on the client's agreement with both the explanation for the problem and proposed treatment approach (Wampold, 2010). The explanation for why the problem exists and what to do about it must be aligned with the client's values and belief systems.

Clients may sometimes refuse treatment options that have good research support. Clients may find research-supported options to be contrary to their cultural expectations and belief systems, or they may identify practical concerns like transportation and missing work. In such cases, alternatives should be offered when available. In no instance should clients be forced to participate in treatments that they find unacceptable. The EBP process provides a forum for increasing client participation in treatment planning. This participation can increase motivation and help solidify the treatment alliance. To pressure clients into undertaking treatments they find unacceptable may undermine important elements that promote improvement. Such pressuring also contradicts the National Association of Social Worker's *Code of Ethics* (2017), undermining client dignity and self-determination.

There are situations in which courts or other authorities mandate treatment and require client participation in programs. It is fully appropriate to help clients understand the merits of programs supported by research evidence. It is also appropriate to help clients articulate their concerns about such treatments based on feelings of coercion or lack of motivation. Similarly, where publicly funded insurance programs or other payment-based limitations push clients to accept treatments they find unacceptable for any reason, direct discussion with the client must be undertaken. This should support the treatment alliance while helping the client state their concerns to the parties pushing specific treatment options they find objectionable. The clinical social worker may need to work with the client to advocate for alternate treatments.

Clients most often find discussion of treatment options a helpful way to increase their participation and sense of involvement in treatment planning. This process can aid understanding, can be empowering, and can demonstrate the openness of the clinician to the client's culture, views, and beliefs. In addition, it is consistent with ethical social work practice principles of transparency and allowing clients to be partners in the treatment process.

## Step 5: Synthesizing Client Needs and Views with Relevant Research and Professional Expertise, Develop a Plan of Intervention

Once the client's views regarding the treatment options are understood, a final treatment or intervention plan is developed. This plan will usually take the form of an oral and/or written contract with the client and a written note in the client's record. The written record should briefly reference the research information supporting the choice of treatment. Such a record would also document the use of the EBP model. Any concerns raised by the client regarding the treatment should also be formally documented.

Treatment goals should also be clearly defined and stated. Treatment models differ in their intended outcomes and in how they are assessed for effectiveness. Therefore the PICOT model emphasizes specifically identifying the outcomes for treatment and looking carefully at the outcomes used by research studies. Before you and your client begin treatment, it is essential that there is agreement on the goals of treatment and the specific outcomes being sought. Different treatment approaches may emphasize different outcomes, and these various outcomes may alter what treatment approach you and your client ultimately chose to use. For example, cognitive-behavioral models will typically specify problem symptoms to be treated using a somewhat standard protocol. In contrast, solution-focused treatments will make use of individualized treatment goals based on the specific strengths and capacities of the client. Psychodynamic models may look for repetitive dilemmas in relationships, and specific behavioral changes may be understood in the context of improved self-awareness and self-understanding. Some family therapy approaches seek to alter the typical style of interaction or equilibrium of the family rather than to change specific behaviors. Many other examples of different practice models exist. What is essential to consider with each approach is how does it fit with the needs and wishes of this client and how is it supported in the literature to address the specific goals identified by this client given her or his unique circumstances and characteristics.

## Step 6: Implement the Intervention

The final step of the EBP process is to start the intervention. Documentation of session content and any evidence of intended changes should be included in the client's written record. Such documentation helps demonstrate that the intended intervention was properly and fully delivered. It also provides a running record of the client's participation and progress or regression. Again, any concerns the client's notes about the treatment should also be documented in the client's record. Monitoring and evaluation of practice are, of course, vital parts of all good clinical work.

## How Practice Evaluation is Different from EBP

As we pointed out earlier, some authors include the formal evaluation of the intervention as a step of the EBP process (Gibbs, 2002). We take a different view. We think that evaluation of an intervention is an important and necessary part of any professional intervention. Ongoing evaluation of change, in addition to evaluation of improvement from the beginning to the end of treatment, is an integral part of a good clinical practice. However, evaluation of a single case is based on a very different research model than is the EBP. Single-subject or single-system research designs target changes in a specific client system treated by a specific clinician in a specific manner. They are very useful for demonstrating and documenting change. The EBP model, however, is usually based on large numbers of clients with very carefully defined problems who are randomly assigned to treatment or control or comparison groups. Evidence derived from unique single cases is not highly valued in most EBP research models. Nor is it highly valued in the systematic reviews of treatment outcomes that identify level 1 and level 2 treatments. For this reason, we encourage evaluation of each client's progress as a regular part of good professional treatment, but do not include it as a part of the EBP model per se. (We will explore this issue further in Chap. 10.)

## Summary

These six steps make up the EBP practice decision-making model. In many respects the EBP model adds to professional practice the clear obligation to review and incorporate the best research evidence as part of the treatment planning process. The EBP model also adds to professional practice the clear obligation to engage the client in active collaboration about the merits and limitations of a proposed treatment plan. Helping the client make a fully informed choice about treatment is a clear part of the EBP process. This last requirement is very fitting in today's increasingly diverse world. Note that several different forms of professional expertise are required to undertake the EBP model. At no point does evidence alone dictate a course of treatment. At no point is the client excluded from treatment planning model. In our view, EBP is not a simply "top-down" or expert practice model.

The EBP model can be used with any form of treatment, though currently much more research information is available to support cognitive-behavioral models than is available for most other treatments. Unfortunately, many treatment models have not yet been researched in a manner that fits with the EBP model. It is important to bear in mind that these treatment models have simply not been appropriately tested: lack of evidence does not mean that they are automatically ineffective.

The next chapter of this book explores the assessment models used in clinical social work practice. A good and thorough assessment is the foundation for applying the steps of the EBP practice decision-making model. The EBP model does not directly address assessment. Yet assessment starts and shapes EBP in practice and in research.

## References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.; DSM-5). Washington, D.C.: American Psychiatric Publishing.

Beach, M., Price, E., Gary, T., Robinson, K. A., Gozu, A., Palacio, A., et al. (2005). Cultural competence: A systematic review of health care provider educational interventions. *Medical Care, 43*, 356–368.

Benuto, L. (2013). *Guide to psychological assessment with Hispanics*. New York: Springer Science+Business Media.

Benuto, L., & Leany, B. D. (Eds.). (2015). *Guide to psychological assessment with African Americans*. New York: Springer Science+Business Media.

Benuto, L., Thaler, N., & Leany, B. D. (Eds.). (2014). *Guide to psychological assessment with Asians*. New York: Springer Science+Business Media.

Betancourt, J. (2003). Cross-cultural medical education: Conceptual approaches and frameworks for evaluation. *Academic Medicine, 78*(6), 560–569.

Brown, L. (2005). The neglect of lesbian, gay, bisexual and transgendered clients. In J. Norcross, L. Beutler, & R. Levant (Eds.), *Evidence-based practices in mental health* (pp. 346–352). Washington, DC: American Psychological Association.

Campbell, D., & Stanley, J. (1963). *Experimental and quasi-experimental designs for research*. New York: Wadsworth.

Carr, A. (2009). *What works with children, adolescents and adults?* New York: Routledge.

Castonguay, L., & Beutler, L. (Eds.). (2006). *Principles of therapeutic change that work*. New York/Oxford: University Press.

Drisko, J. (2017). Active collaboration with clients: An under-emphasized but vital part of evidence-based practice. *Social Work, 62*(2), 114–121.

Drisko, J., Corbin, J., & Begay, P. (2019). Multiple ways of knowing: Teaching research under EPAS 2015. *Journal of Ethnic & Cultural Diversity in Social Work*. https://doi.org/10.1080/15313204.2019.1590887.

Ebell, M. (2001). *Evidence-based diagnosis: A handbook of clinical prediction rules*. New York: Springer.

Fonagy, P., Cottrell, D., Phillips, J., Bevington, D., Glaser, D., & Allison, E. (2015). *What works for whom? A critical review of treatments for children and adolescents* (2nd ed.). New York: Guilford Press.

Forneris, C., Nussbaumer, B., Kaminski-Hartenthaler, A., Morgan, L., Gaynes, B., Sonis, J. H., et al. (2015). Psychological therapies for preventing seasonal affective disorder. *Cochrane Database of Systematic Reviews, 2015*(11). https://doi.org/10.1002/14651858.CD011270.pub2

Gambrill, E. (2001). Social work: An authority-based profession. *Research on Social Work Practice, 11*, 166–175.

Gibbs, L. (2002). *Evidence-based practice for the helping professions: A practical guide*. New York: Brooks-Cole.

Glasgow, R., Lichtenstein, E., & Marcus, A. (2003). Why don't we see more translation of health promotion research to practice? Rethinking the efficacy-to-effectiveness transition. *American Journal of Public Health, 93*(8), 1261–1267.

Golden, R., Gaynes, B., Ekstrom, R., Hamer, R., Jacobsen, F., Sippes, T., et al. (2005). The efficacy of light therapy in the treatment of mood disorders: A review and meta-analysis of the evidence. *American Journal of Psychiatry, 162*(4), 656–662.

Goodheart, C., Kazdin, A., & Sternberg, R. (Eds.). (2006). *Evidence-based psychotherapy: Where research and practice meet*. Washington, D.C.: American Psychological Association.

Grady, M. D., & Drisko, J. (2014). Thorough clinical assessment: The hidden foundation of evidence-based practice. *Families in Society, 95*(1), 5–14.

Greenhalgh, T., Howick, J., & Maskrey, N. (2014). Evidence-based medicine: A movement in crisis? *British Medical Journal [BMJ], 348*, g3725. Retrieved from https://www.bmj.com/content/348/bmj.g3725

Huey, S., Tilley, J., Jones, E., & Smith, C. (2014). The contribution of cultural competency to evidence-based care for ethnically diverse populations. *Annual Review of Clinical Psychology, 10*, 305–338.

Hunsley, J., Elliott, K., & Therrien, Z. (2013). *The efficacy and effectiveness of psychological treatments*. Ottawa, ON: Canadian Psychological Association.

Jones, R. (1996). *Handbook of test and measurements for black populations*. (2 vols.). Hampton, VA: Cobb & Henry.

Kaminski-Hartenthaler, A., Nussbaumer, B., Forneris, C. A., Morgan, L. C., Gaynes, B. N., Sonis, J. H., et al. (2015, 2015). Melatonin and agomelatine for preventing seasonal affective disorder. *Cochrane Database of Systematic Reviews*, (11), CD011271.

Kutchins, H., & Kirk, S. (1988). The business of diagnosis: DSM-III and clinical social work. *Social Work, 33*(3), 215–220.

Levant, R., & Silverstein, L. (2005). Gender is neglected by both evidence-based practices and treatment as usual. In J. Norcross, L. Beutler, & R. Levant (Eds.), *Evidence-based practices in mental health* (pp. 338–345). Washington, D.C.: American Psychological Association.

Marsh, J., Angell, B., Andrews, C., & Curry, A. (2012). Client-provider relationship and treatment outcome: A systematic review of substance abuse, child welfare, and mental health services research. *Journal of the Society for Social Work and Research, 3*(4), 233–267.

Michigan Quality Improvement Consortium. (2010, January). *Primary care diagnosis and management of adults with depression*. Southfield, MI: Michigan Quality Improvement Consortium. Retrieved from http://guidelines.gov/content.aspx?id=15647&search=major+depression

Muran, J.C., & Barber, J. (Eds.). (2010). *The therapeutic alliance: An evidence-based guide to practice*. New York: Guilford Press.

National Association of Social Workers (NASW). (2017). *Code of ethics*. Washington, D.C.: NASW Press.

Norcross, J. (Ed.). (2011). *Psychotherapy relationships that work: Evidence-based responsiveness* (2nd ed.). New York: Oxford.

Nussbaumer, B., Kaminski-Hartenthaler, A., Forneris, C. A., Morgan, L. C., Sonis, J. H., Gaynes, B., et al. (2015). Light therapy for preventing seasonal affective disorder. *Cochrane Database of Systematic Reviews, 2015*(11), CD011269.

Olkin, R., & Taliferro, G. (2005). Evidence-based practices have ignored people with disabilities. In J. Norcross, L. Beutler, & R. Levant (Eds.), *Evidence-based practices in mental health* (pp. 3352–3358). Washington, D.C.: American Psychological Association.

Ortega, R., & Coulborn Faller, K. (2011). Training child welfare workers from an intersectional cultural humility perspective: A paradigm shift. *Child Welfare, 90*(5), 27–49.

Oxford Centre for Evidence-based Medicine. (2009, March). Levels of evidence. Retrieved from http://www.cebm.net/index.aspx?o=1025

Oxford University Centre for Evidence-based Medicine. (2016, May). *The Oxford levels of evidence 2.1*. Retrieved from https://www.cebm.net/2016/05/ocebm-levels-of-evidence/

Oxford University Centre for Evidence-based Medicine. (2018). *Levels of evidence: Introductory document*. Retrieved from https://www.cebm.net/2011/06/2011-oxford-cebm-levels-evidence-introductory-document/

Petr, C. (Ed.). (2009). *Multidimensional evidence-based practice: Synthesizing knowledge, research*, and values. New York: Routledge.

Richardson, W., Wilson, M., Nishikawa, J., & Hayward, R. (1995). The well-built clinical question: A key to evidence-based decisions [Editorial]. *American College of Physicians Journal Club, 123*, A12–A13.

Romana, H.-W. (2006). Is evidence-based medicine patient-centered and is patient-centered care evidence-based? *Health Services Research, 41*(1), 1–8.

Roth, A., & Fonagy, P. (2005). *What works for whom? A critical review of psychotherapy research* (2nd ed.). New York: Guilford.

Rubin, A. (2008). *Practitioner's guide to using research for evidence-based practice*. Hoboken, NJ: Wiley.

Sackett, D., Richardson, W., Rosenberg, W., & Haynes, R. (1997). *Evidence-based medicine: How to practice and teach EBM*. New York: Churchill Livingston.

Sackett, D., Rosenberg, W., Muir Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Editorial: Evidence-based medicine: What it is and what it isn't. *British Medical Journal, 312*, 71–72.

Signal, A., Higgins, P., & Waljee, A. (2014). A primer on effectiveness and efficacy trials. *Clinical and Translational Gastroenterology, 5*(1), e45. [online document]. https://doi.org/10.1038/ctg.2013.13

Smedley, B., Stith, A., & Nelson, R. (Eds.). (2002). *Unequal treatment: Confronting racial and ethnic disparities in care*. Washington, D.C.: The National Academies Press.

Sue, S., & Zane, N. (2005). Ethnic minority populations have been neglected by evidence-based practice. In J. Norcross, L. Beutler, & R. Levant (Eds.), *Evidence-based practices in mental health* (pp. 329–337). Washington, D.C.: American Psychological Association.

Terman, M. (2006). Review: Light therapy is an effective treatment for seasonal affective disorder. *Evidence-Based Mental Health, 9*, 21.

Tervalon, M., & Murray-Garcia, J. (1998). Cultural humility versus cultural competence: A critical distinction in defining physician training outcomes in multicultural education. *Journal of Health Care for the Poor and Underserved, 9*(2), 117–125.

Thaler, K., Delivuk, M., Chapman, A., Gaynes, B. N., Kaminski, A., & Gartlehner, G. (2011). Second-generation antidepressants for seasonal affective disorder. *Cochrane Database of Systematic Reviews, 2011*(12), CD008591.

Turner, F. (2002). *Diagnosis in social work: New imperatives*. Binghamton, NY: Haworth.

Vogel, G. (2018). Fresh fights roil evidence-based medicine group. *Science, 362*(6416), 735.

Wampold, B. (2010). *The basics of psychotherapy: An introduction to theory and practice*. Washington, D.C.: American Psychological Association.

Weisz, J., & Kazdin, A. (Eds.). (2017). *Evidence-based psychotherapies for children and adolescents* (3rd ed.). New York: Guilford Press.

Williams, D., Yu, Y., & Jackson, J. (1997). Racial differences in physical and mental health. *Journal of Health Psychology, 2*(3), 335–351.

Zayas, L., Drake, B., & Jonson-Reid, M. (2011). Overrating or dismissing the value of evidence-based practice: Consequences for clinical practice. *Clinical Social Work Journal, 39*(4), 400–405.

Zilcha-Mano, S., Muran, J. C., Hungr, C., Eubanks, C., Safran, J., & Winston, A. (2016). The relationship between alliance and outcome: Analysis of a two-person perspective on alliance and session outcome. *Journal of Consulting and Clinical Psychology, 84*(6), 484–496.

Zulman, D., Sussman, J., Chen, X., Cigolle, C., Blaum, C., & Hayward, R. (2011, February 1). Examining the evidence: A systematic review of the inclusion and analysis of older adults in randomized controlled trials. *Journal of General Internal Medicine, 26*, 783. https://doi.org/10.1007/s11606-010-1629-x

# Chapter 4

# Step 1 of Evidence-Based Practice: Assessment in Clinical Social Work and Identifying Practice Information Needs

To know where to start using the EBP practice decision-making model, you must first know what you are looking for. As discussed in the previous chapter, the assessment conducted by the clinician is the starting point and foundation of the EBP process. Although the utilization of research findings is one key part of EBP, the lynchpin of EBP rests with client's needs and situation, synthesized into the practice question the clinician will seek to answer. The development of the searchable question is based on the assessment the practitioner conducts with the client(s). As such, an accurate assessment of the needs, situation, strengths, limitations, context, diagnosis, and much more is necessary to begin the steps of the EBP practice model outlined in the previous chapter. Listening, careful observation, and discussion with the client are always the starting point for good clinical social work.

Given the critical role of assessment in EBP, this chapter will be devoted to exploring how to conduct a thorough assessment through which a searchable question can be developed to commence the EBP process. However, as noted in the previous chapter, there is very little empirical research evidence on what makes a strong assessment. There is much more research regarding the psychometric properties of standardized assessment measures for specific problems than there is regarding psychosocial assessment done interpersonally. Therefore, this chapter is based on the authors' own experiences with clinical practice, training, and teaching social work students and practitioners. This chapter offers perspectives on assessment but is not intended as a "how to" primer. We assume readers are familiar with several assessment models and related theories and have some exposure to completing clinical assessments.

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_4

## Defining Assessment

While most social workers have an image of what an assessment is in practice, the image or definition of an assessment varies a great deal depending on the role the social worker has with the client and with the agency, the skill set of the practitioner, and listening to the needs of the client. What actually takes place during the "assessment phase" of an intervention can vary as much as an intervention. It can be very standardized and follow a set procedure if the setting in which the assessment takes place promotes a stringent protocol. Some forms of EBM research specifically address how to make a diagnosis or an assessment, though this appears to be an infrequent focus in EBP mental health practice (Baik et al., 2010). Such diagnostic questions often center on the quality of tests and procedures that are part of the overall assessment process. During the initial phases of working with a client, an assessment can involve making a diagnosis, conducting a triage process where a client is assessed quickly and referred to a specific service, creating a working hypothesis or formulation that evolves into a treatment plan, and/or writing a formal document containing all of the above information and more. In general, the scope of the assessment and the focus of any written documentation associated with the process will vary depending on three critical factors: "the role of the social worker, the setting in which he or she works, and the needs presented by the client" (Hepworth, Rooney, Strom-Gottfried, & Larsen, 2010, p. 181). Therefore, clinical social workers must be clear about each of these aspects of their work when conducting an assessment to ensure that ultimately the needs of the client are met within the context of the setting and role that the social work has with the client.

Although the "assessment phase" is often associated with the beginning of treatment, in reality, good clinical practice involves an ongoing assessment throughout whatever length of time the clinician is involved with the client. As such, "assessment is a fluid and dynamic process that involves receiving, analyzing, and synthesizing new information as it emerges during the entire course of a given case" (Hepworth et al., 2010, p. 181). Assessment should be an ongoing process for social workers as they work with their clients. However, the aim of this chapter is to aid clinical social workers in how to conduct assessments in order to begin the EBP process. To this end, the discussion of assessments from this point forward will focus on the initial stages of work with clients to help guide practitioners toward identifying relevant practice questions as they embark on the EBP process.

### *Components of an Assessment*

The components included in an assessment are dependent on many factors. However, there are some common elements included in most clinical assessments. Obviously, individuals working on a macro- or policy level would consider different factors in their assessments, such as organizational or neighborhood structures or policy influences. While these are also important for clinical social workers to consider, the focus of this book is on making clinically based practice decisions, and we will therefore limit our discussion to components that most clinical social workers would need to consider in conducting an assessment.

There are several methods and guidelines to which social workers can turn to several methods and guidelines to help organize the assessment process. We will limit our discussion to five assessment methods used by clinical social workers. These are (1) the Person-in-Environment Classification System, (2) the risk and resiliency model, (3) family systems models, (4) psychodynamic models, and (5) the descriptive diagnostic model based on the American Psychiatric Association's (2013b) widely used *Diagnostic and Statistical Manual* (DSM-5). We will introduce each model briefly and describe how each model may be used in the EBP practice decision-making process. We view many behavioral and cognitive behavioral models as defining specific target problems, rather than as wide-ranging assessment models. Such behaviorally focused models have great value and precision but must follow a more comprehensive assessment of client and situation as a whole. At the end of this discussion, a case example will be used to illustrate how the assessment method chosen influences what clinical questions are asked to begin the EBP process. A synthetic social work biopsychosocial assessment outline is included later in this book as Appendix A.

## *The Person-in-Environment Classification System [PIE]*

Social work has one unique assessment model, the Person-in-Environment Classification System, or the PIE (Karls & Wandrei, 2008). Developed by social workers, the PIE incorporates the person-in-environment perspective into the assessment process. The PIE model includes four domains or factors: Factor I is social role functioning and coping; Factor II is the influence of the social environment including institutions and access to resources; Factor III is mental health; and Factor IV is physical health and medical issues (see Table 4.1).

Using the PIE classification system, social workers develop a holistic view of the individual and determine where within the client's system intervention needs to take place. Several domains of functioning and environment can be the focus of intervention, separately or in combination. If mental health problems are primary, then the initial focus of the treatment plan may target that domain. If social functioning problems are viewed as primary, however, the social worker may focus more on an occupational issue that is creating the stress or difficulties reported by the client. Resource issues might lead to a concrete, environmental intervention. Similarly, environmental or policy-related problems might lead to a focus on advocacy or concrete, resource-finding interventions. The decision about where and how to intervene is based on a wide-ranging assessment of multiple domains or aspects of the client's situation. The clinician must use professional judgment to determine which domain requires what level of attention.

**Table 4.1** Factors of the Karls and Wandrei PIE assessment model

| | | |
|---|---|---|
| **Factor I: Social functioning problems** | | |
| A. Social role in which each problem is identified | | |
| 1. Family (parent, spouse, child, sibling, significant other) | | |
| 2. Other interpersonal role (lover, friend, neighbor) | | |
| 3. Occupational (worker/paid, worker/home, worker/volunteer, student) | | |
| B. Type of problem in social role | | |
| 1. Power | 5. Loss | |
| 2. Ambivalence | 6. Isolation | |
| 3. Responsibility | 7. Victimization | |
| 4. Dependency | 8. Mixed | 9. Other |
| C. Severity of problem | | |
| 1. No problem | 4. High severity | |
| 2. Low severity | 5. Very high severity | |
| 3. Moderate severity | 6. Catastrophic | |
| D. Duration of problem | | |
| 1. More than 5 years | 4. 2 to 4 weeks | |
| 2. 1 to 5 years | 5. 2 weeks or less | |
| 3. 6 months to 1 year | | |
| E. Ability of the client to cope with problem(s) | | |
| 1. Outstanding | 4. Somewhat inadequate | |
| 2. Above average | 5. Inadequate | |
| 3. Adequate | 6. No coping skills | |
| **Factor II: Environmental problems** | | |
| A. Social system where problem is identified | | |
| 1. Economic/basic needs | 4. Health/safety/social services | |
| 2. Education/training | 5. Voluntary association | |
| 3. Judicial/legal | 6. Affectional support | |
| B. Specific type of problem within each social system | | |
| C. Severity of problem | | |
| D. Duration of problem | | |
| **Factor III: Mental health problems** | | |
| A. Clinical syndromes (Axis I of DSM IV) | | |
| B. Personality and developmental disorders (Axis II of DSM IV) | | |
| **Factor IV: Physical health problems** | | |
| A. Disease diagnosed by a physician (Axis III of DSM) | | |
| B. Other health problem reported by client or by others | | |

Adapted from Corcoran and Walsh (2006, p. 29), Karls and Wandrei (2008)

There do not appear to be empirical research studies providing evidence for use of the PIE assessment model. There has been conceptual and value-based support for the scope and utility of the PIE model within social work, but it has not been widely used—in full—in many clinical social work practice settings. Still, many parts of the PIE model are used in practice and have support from expert opinion within social work (Kondrat, 2013; Simmons, 2012).

The domain that the clinical social worker views as most critical to the cause and resolution of the presenting problem will lead to the questions necessary to begin the EBP assessment. For example, after preliminary assessment, it might appear that the source of a client's depressive symptoms is driven primarily by the level of isolation and lack of power within the context of the family system (Factor I: Social Functioning Problems) rather than a mental health problem (Factor III: Mental Health Problem). In turn, the question to begin the EBP process might then be "What are effective family therapy interventions that are aligned with the family context and cultural background of my client?" However, if the clinician thought that based on the client's family history of depression and the severity of the depressive symptoms that there was a potential biological or genetic component to the depression, the clinician's question might focus more on searching for interventions related to Factor III. As the social worker would not be the one to prescribe medication, the question for this clinician might shift from finding effective interventions for a biologically based depression to understanding when to make a referral to a medical professional. Therefore, the searchable question might be "What clients are appropriate for a medication consultation/referral?" Again, the social worker must be clear as to what role is taken on with the client and what the needs of the client are. The clinician's assessment using the PIE will determine where to focus the search for likely effective treatments.

The PIE model is very comprehensive but is very rarely used in practice or as a required assessment for funding services (Kondrat, 2013). A PIE assessment is very time intensive. Further, the time required to complete a PIE assessment may not be acceptable to clients in some practice settings. The PIE model has not been used often for service outcome research. It has also not been updated to address changes to approaches to mental health diagnosis, such as the DSM-5. The main strength of the PIE model is its comprehensiveness and its clear fit with social work's defining person-in-environment perspective. It allows social workers to identify and address social, environmental, mental health, and physical health problems separately or in complex combinations. The comprehensive PIE assessment provides a solid basis for a wide range of potential interventions. It can point to multiple potential locations for intervention. Note that other forms of mental health and physical health assessment are components of a PIE assessment, so multiple assessment models may be used within the PIE assessment framework.

## *The Risk and Resilience Framework*

Another framework that social workers use in assessment is the risk and resilience framework. This framework considers "the balance of risk and protective factors that interact to determine an individual's propensity toward *resilience*, or the ability to function adaptively despite stressful life events" (Corcoran & Walsh, 2006, p. 4). *Risks* are the stressors or hazards either within the individual or in the environment that increase the likelihood of a problem occurring (Corcoran & Walsh, 2006). *Protective factors* may provide a buffer against risk factors and act as a counterbalance to the risk factors facing an individual (Fraser, Richman, & Galinsky, 1999). An assessment using the risk and resilience framework evaluates the risk and protective factors surrounding an individual, and treatment planning is based on both factors. The model may be used with children and families, as well as with adults, including active duty service personnel (Fraser, 2004). The social worker must decide to focus on the reduction of risk factors, such as poverty or access to medical care, or alternately to focus on creating or strengthening of protective factors, or to do both simultaneously. As such, the assessment process involves identifying what risk and/or protective factors need to be targeted to reduce the problem as presented by the client.

In the context of EBP, the clinician must determine what interventions target the factor viewed as most critical to the resolution of the client's concerns. This may be the removal or reduction of a risk factor, or to increase or develop a protective factor, or both jointly. Determining where the focus of the treatment (risk or resiliency or both) will help to develop the searchable question in the EBP process. For example, in the case of the individual with depressive symptoms, a clinician working from a risk and resilience framework might determine that a primary risk factor is the client's social isolation. According to the theory, an intervention plan would be to reduce or eliminate this risk factor to alleviate the depression. A searchable question for the EBP process might be, "What are effective interventions to reduce social isolation among similar clients?" Group therapy interventions may be one useful alternative or other interventions focused on social skill development. If the same clinician determines in the assessment process that the lack of protective factors, such as the presence of an involved parent, is missing and the primary cause of the depressive symptoms, the clinician will have a different question to search. In thinking about how to increase the protective factor of an involved parent, the clinician might pose the question, "what parent education programs successfully increase parent involvement?"

The risk and resiliency model potentially covers a wide range of social and environmental factors influencing the client's situation. It attends to both strengths and challenges. It can point to multiple potential locations of intervention. In addition, the model does not include a traditional medical model diagnosis, so it provides a framework for working with clients who have concerns about the medical model based on their beliefs or cultural concerns. Although the model may be time intensive, preliminary determination of a focus on risk reduction or resiliency enhancement can help focus the assessment. This may reduce the time it takes to complete. Further, since the risk and resiliency model does not include a traditional medical/psychiatric diagnosis, it may fit well with some social work agencies and organizations but alternately may limit funding options in other work settings.

There is considerable research support that the number of serious risks, also called adverse childhood experiences (ACEs), experienced by an individual early in life can have profound impact on child development (Masten, 2018) and on life success as an adult (Graeber, Helitzer, La Noue, & Fawcett, 2013). On the other hand, there is little empirical research support for the benefits of using a risk and resilience assessment process. The risk and resilience approach is intended to support client strengths, which has practical and values merit. It fits well with social work values and purposes yet much more research on the assessment process is needed.

### *Family Systems Models*

Family systems theory is an umbrella term for several different specific family therapy models used by social workers, such as Family Emotional Systems Theory (Bowen, 1978), Structural Family Theory (Minuchin, 1974), Strategic Family Therapy (Haley, 1971), and Narrative Therapy (White & Epston, 1990). While each of these models other than narrative therapy has a distinctive focus and techniques, they follow generally similar principles derived from systems theory (Hepworth et al., 2010; Walsh, 2010). Systems theory is central to social work as a profession, as it challenged the idea held in science that complex, interactive phenomena could be simplified to a linear cause and effect equation (Walsh, 2010). Rather, systems theory argued that there is an interactive, circular pattern of causation, "in which all elements of a system simultaneously are influenced by, and influence, each other" (Walsh, 2010, p. 92). Systems are assessed holistically.

While there are many variations of systems theory, including family therapy models that use a systems perspective, there are several common principles that are shared by these models, as outlined by Walsh (2010):

1. Connectedness: all parts of a system are interconnected, and changes in one part will influence functioning of all other parts.
2. Wholeness: any phenomenon can be understood only by viewing the entire system.
3. Feedback principle: a system's behavior affects its external environment, and that environment affects the system (p. 93).

Given these principles, the assessment process using a family systems framework involves assessing for factors that include "communication styles, culture, and family interactions and dynamics" (Hepworth et al., 2010, p. 244). In order to complete this task, there are many assessment tools designed to help practitioners determine the family structure, such as genograms (Carter & McGoldrick, 2004); others to understand the family's relationships with external resources and entities, such as the ecomap (Hartman & Laird, 1983); and others to help assess cultural considerations with a family, such as the culturalgram (Congress, 1994). Each of these tools is aimed at looking at families as a unit rather than as a collection of individuals. Each tool seeks to better understand how the family system functions as a discrete unit, both internally and externally with outside phenomena.

The focus in a systems framework is to identify where the family is struggling, either internally as a unit and/or in their interactions with external groups or structures. For example, a family may be interacting well with other systems, but within the family, there is a lack of structure. In this case, the children may appear to make the rules, and while the parents effectively communicate the rules, there is little structure to enforce or regulate these rules. As a result, the parents seek treatment because they are tired and frustrated and feel that they repeat themselves to their children to no avail. In such a family, an EBP-based question may be, "What are effective interventions to help families enforce rules and consequences to increase compliance in the home?"

Family systems models are widely used in mental health and in a variety of settings in which social workers practice. Unlike individually orient theories, family systems approaches do not focus on an "identified client." Instead systems theories bring several components of the family system into the assessment and treatment process, considering the family as a unit rather than as a set of individuals. Changing repetitive patterns of interaction is a key target of attention. Family systems models may require an additional medical model diagnosis for funding purposes, though such a diagnosis is not always vital to family systems treatment planning. These approaches may attend to both risk factors and sources resiliency, but not all do so systematically. Family systems approaches may fit well with racial/ethnic groups who are more communal than individualistic in orientation.

Family systems models address the family as a unit and examine patterns of interaction among the family members. Such repetitive patterns, such as enmeshment, disengagement, multigenerational connections, or triangles, are the focus of therapeutic change. Nonetheless, Patterson, Williams, Edwards, Chamow, and Graugh-Grounds (2018, p. 44) note that family therapy begins with a general assessment of presenting problems and prior efforts at solving them, assessment of potential for harm to self and other, substance misuse, biological problems, followed by a general psychological assessment. The authors note this may take several sessions to complete. "Social assessment" includes specific attention to the family system and may differ in focus based on the clinician's chosen family theory. Family structure, multigenerational issues, life cycle issues, and family functioning should be assessed in detail. The couple, parental, and sib subsystems should be assessed. Becvar and Becvar (2018) state that "assessment of a family is somewhat problematic from the systems perspective…[as] the definition of what is dysfunctional depends on criteria from outside the context of the system" (p. 83). Specific empirical research support for family assessment models is not provided; yet these recommendations appear to have considerable expert opinion for support (Lebow & Gurman, 1995; Sexton & Lebow, 2015). Family systems models fit well with social work values and purposes, but more research on the content of family systems assessment is needed.

## *Psychodynamic Models*

Psychodynamic models of assessment and treatment draw on several related but distinctive theories, as do the family systems models. All psychodynamic models assume that some psychological processes may be unconscious or unavailable to the purposeful awareness to the individual. Psychodynamic models also assume multiple determination; understanding human motives requires attention to many sources rather than just a single source. All these models also emphasize the importance of emotion (affect), the importance of repetitive patterns and themes, and the importance of the relationship between the client and the clinician as vital parts of assessment and treatment.

Early psychodynamic models focused on conflicts among drives, subjective processes, and the internal structures that constitute personality (Gabbard, 2010). Later psychodynamic models shifted focus to assessing psychic structures and capacities. These include the ego functions and defenses that individuals bring to bear to manage internal experiences as well as to interact with others (Freud, 1923; Goldstein, 1995); and object relations or how interpersonal interactions become internalized into expectations of others and repetitive patterns of interaction (Berzoff, Flanagan, & Hertz, 2016; Goldstein, 2001; Mahler, Pine, & Bergman, 2000; Winnicott, 1992). Still more recent models such as self-psychology focus on how people interactively make use of others to make up for internal deficits (Kohut, 2009; Palombo, 1985) and to intersubjective models that examine meaning-making as a function of interaction (Atwood & Stolorow, 2014; Benjamin, 1988; Stern, 1985). As with family systems models, each variant may be optimally revealing and informative for specific client difficulties.

Psychodynamic assessment focuses on determining the capacities of the individual to tolerate anxiety and manage it in socially effective ways, to self-regulate affect and cognition, to understand and to interact with others, to flexibly support others, and to noncoercively depend on others. Such an assessment includes components of identifying historical and enduring patterns of interactions with significant others and their meanings, along with description of interaction with currently significant people in the client's life, including the interactions with the clinician. The focus is both historical and current, with an emphasis on psychological factors. Medical conditions and other organic issues have long been viewed as potentially significant influences on psychological and social function within psychodynamic models (Gabbard, 2010). Many social work authors point out that contemporary psychodynamic assessment models and theories consider the social environment as a shaping influence on personal capacities (Berzoff et al., 2016).

There are several models of psychodynamic assessment, from the child-oriented Hampstead Index (Sandler, 1962) to the Blanck's developmental psychological profiles (Blanck & Blanck, 1979, 1994). There is also a *Psychodynamic Diagnostic Manual* (PDM-2) (Lingiardi & McWilliams, 2017). The PDM-2 organizes different personality structures and mental health challenges into a classification system consistent with psychodynamic theories. Generally, assessment involves a wide-ranging examination of internal conflicts, ego functions, object relations, and/or disorders of the self as expressed through internal experiences and in interactions with others. Attention to these features, or lines of development, separately and in combination, will point broadly to ego supportive or ego-modifying treatments (Goldstein, 1995). The specific form and content of the client's dilemma will lead to additional assessment of areas of strength and challenge. Psychodynamic assessment may point to questions of differential diagnosis but most often yields answerable clinical questions centering on "What kind of treatments are most effective for people with a longstanding character problem?" or "What kinds of treatments are most effective with mixed disorders?"

Psychodynamic assessment is sometimes called deficit oriented, though psychodynamic practitioners instead view it as appraising capacities that represent both the client's relative strengths and relative limitations (Berzoff et al., 2016; Goldstein, 1995). Areas of strength must be known as they become assets useful for coming to understand and address areas of limitation. Psychodynamic assessment can be lengthy and may not be completed in single or a few sessions. Critics argue it is too heavily weighted to the individual and pays too little attention to contextual factors. Its strengths are focus on internalized conflicts, on self-regulation, and on how the individual makes meaning in life, including the meaning of emotions and relationships.

There appears to be little empirical research examining assessment in psychodynamic psychotherapy. Petit and Midgley (2008) did a phenomenological study of assessment in psychodynamic child therapy. They report that "there was a certain shared understanding of the psychoanalytic approach to assessment, although with significant differences in regard to process, technique (e.g. use of interpretation, the role of countertransference) and the reporting of assessments. Petit and Midgley also suggest tensions between the role of the assessor as an "expert" and as a "therapist" (Abstract). While there is a large and growing body of quantitative, experimental outcome research on psychodynamic therapies for several disorders (Abbass, Hancock, Henderson, & Kisely, 2006; Drisko & Simmons, 2012; Leichsenring, 2010), these appear to assume effective assessment has been completed and that both a therapeutic alliance and an agreed-upon treatment plan have been developed. There is considerable psychodynamic research addressing the importance of the client-therapist relationship, or therapeutic alliance, as a vital part of effective treatment (Imel & Wampold, 2008). More research specific to the role and impact of assessment in psychodynamic psychotherapy is needed.

## American Psychiatric Association Guidelines: The Medical Model

The American Psychiatric Association's (APA) *Guidelines for the Psychiatric Evaluation of Adults* (2016) offers another approach with which most clinical social workers are familiar (see Table 4.2). The format proposed by the APA is widely used in many medical and more traditional psychiatric settings. It is also the underlying format for parts of the PIE assessment model and of some psychodynamic

**Table 4.2** Components of the American Psychiatric Association's (2016) *Practice Guidelines for the Psychiatric Evaluation of Adults*

| |
|---|
| **I. History of the present illness** |
| The reason that the patient is presenting for evaluation |
| **II. Psychiatric history** |
| Any past or current diagnoses, psychotic ideas, aggressive ideas or acts, suicidal ideas and plans, or self-injury without suicidal intent ideas and plans; history of psychiatric services and treatments as well as responses to these services |
| **III. Substance use history** |
| Use of substances, including tobacco, alcohol, or other substances; current or recent changes in use of alcohol/substances; all medications currently or recently taken |
| **IV. Medical history** |
| Allergies and drug sensitivities, all medications currently or recently taken including nonprescription supplements, past treatments including surgeries and alternative or herbal treatments, past or current neurological disorders or symptoms, physical trauma including head trauma, and sexual/reproductive history |
| **V. Review of systems** (psychiatric and cardiovascular, neurological, endocrine, etc.) |
| **VI. Family history** |
| For patients with current suicidal ideation, history of suicidal behaviors in biological relatives; for patients with current aggrieve ideas, history of violent behaviors in biological relatives |
| **VII. Personal and social history** |
| Presence of psychosocial stressors including financial, housing, legal, work or occupational, lack of social support, exposure to violence; review of trauma history; exposure to violence and/or aggression in childhood or combat; legal consequences of past aggressive behaviors, cultural factors related to the patient's environment; need for interpreter services |
| **VIII. Examination, including a mental status examination** |
| General appearance and nutritional state; coordination and gait; involuntary movements or unusual motor tone; speech fluency and articulation; problems of sight and hearing; mood, thought processes and content, perception, and cognition; hopelessness. Current suicidal ideation and plans; if present including assessment of the patient's intended course of action, access to firearms (and other means of self-harm), motivations of suicide, reasons for living, and quality and strength of the therapeutic alliance. Current aggressive or psychotic ideas; if present including assessment of specific individuals or groups to whom the homicidal or aggressive ideas have been directed in the past or present, impulsivity and anger management issues, and access to firearms (or other stated means of harming others) |
| **IX. Impression and plan** |
| Documentation of the patient's estimated suicide risk, including factors influencing risk; documentation of the rationale for treatment selection, including discussion of the specific factors that influenced the treatment choice; asking the patient about treatment-related preferences. An explanation to the patient of the following: the differential diagnosis, risks of untreated illness, treatment options, and benefits and risks of treatment. Collaboration between the clinician and the patient about decisions pertinent to treatment |

assessment models. This medically oriented model seeks to define disorders centering on individuals through a diagnostic assessment process. Diagnosis may involve interviews as well as lab or psychological tests. Diagnoses are then used for intervention planning as well as for payment purposes. The APA evaluation guidelines are available online for free for personal use on the APA's Web site https://psychiatryonline.org/doi/pdf/10.1176/appi.books.9780890426760

Consistent with the objectives of EBM and EBP, the APA's (2016) *Guidelines* for the first time include a review of the available research evidence supporting these recommendations for assessment. It is surprisingly limited. For Guideline I, review of psychiatric symptoms and history, they state that "there is no supporting research evidence that specifically addresses the clinical question above" (p. 46). However, there is strong expert opinion in favor of these recommendations (pp. 47–48). For Guideline II, substance use assessment, several cross-sectional studies (without randomization or a control/comparison group) were found but with moderate to high risk for bias. There was consistent support for the use of standardized assessment measures that directly assess substance use, including information from collaterals.

For Guideline III, suicide risk, very few studies were found that examined the benefits of assessing suicide risk. One prospective, 4–6 long year observational study of 4800 veterans in VA services found that "because of the low sensitivity and specificity of the instruments, and the low base rate of suicide itself, predicting which persons would later commit suicide would not be feasible" (p. 58). Still, expert opinion strongly (89.6–99.7% of over 600 experts) supports careful suicide risk assessment despite the lack of research evidence to support these recommendations. There are, of course, legal and ethical reasons to support such suicide risk assessments.

For Guideline IV on aggressive behaviors, two experimental (or RCT) studies in European inpatient wards found that structured risk assessment early in treatment "may contribute to reduced violence and coercion in acute psychiatric wards" (p. 66). Here again, over two-thirds of more than 600 experts endorsed careful assessment of risk for aggressive behaviors as part of psychiatric assessment. Studies of varying methodological quality were found for the other APA Guidelines, showing there is need for more study of the various components of assessment.

The APA's (2016) *Guidelines* additionally offer specific guidance addressing assessment of substance use, suicide risk, and risk for aggressive behaviors. There are also specific APA guidelines for the assessment of cultural factors, medical health, quantitative assessment, involvement of the patient in treatment decision-making and documenting the psychiatric evaluation. Each guideline includes a statement of the research supporting the guideline content.

While this format appears to be quite comprehensive, it was developed by medical professionals and consequently has both strengths and limitations for social workers. The first limitation is that social workers cannot and should not perform physical examinations. As such, social workers who use this guide will need to include information obtained by a qualified medical professional. A second limitation is that these guidelines do not include a section on the strengths of the individual, either internal or external strengths. Social work is a strengths-based profession, meaning that we believe it is essential to identify, utilize, and empower our clients' strengths. The above guidelines do not include a section where the assessment of strengths can be specifically identified.

An additional limitation of the medical model is the lack of emphasis on the social or cultural context. APA Guideline VII does state that a sociocultural history should be obtained, though its focus remains on the individual. There is some emphasis placed in the expanded description on assessing the values, beliefs, and cultural influences of the individual. However, there is no consideration of the larger contextual issues that influence the presentation of the individual during an assessment, such as discrimination or homophobia. Social workers who use this guideline should therefore be conscious of this limitation and include the contextual issues into their assessment, along with the strengths of the client.

As a supplement, the APA (2013a) offers the Cultural Formulation Interview for use with persons who are not acculturated to Western cultures. There are both interview and interviewee forms of this assessment protocol. It is designed to identify the client's concerns in their own words and from their own point of view. Sections of the interview address cultural identification of the problem; cultural perceptions of the causes, contexts, and supports; specific stressors and supports; the role of cultural identity in the client's life; factors in self-coping and past support seeking; and cultural factors in current support seeking.

Overall, the APA assessment model has a key strength in its primary focus on one individual's mental health diagnosis. Using the guidelines, its ultimate goal is to determine the diagnosis of a mental health condition and to create the treatment plan based on this diagnosis. There has been a long-standing effort within the medical community to develop accurate diagnoses and link them with effective treatments. Since the APA format was developed by physicians, this goal is consistent with the medical format of the assessment. Related medical/organic conditions are also given strong attention in this model. However, limited attention is directed to social context and to the potential situational and environmental conditions surrounding the individual. In the following section, a more in-depth discussion of diagnosis process will be provided. In considering how this framework fits with EBP, the searchable questions surround primarily a diagnosis and the associated symptoms with this diagnosis. Most often the concern is related to effective interventions; however, depending on the role of the social worker or the needs of the client, the questions could center on prognostic predictors or how the presentation of a disorder might manifest differently among different cultural groups.

In thinking about the client with depressive symptoms, a searchable question might be "What are effective treatments for depression?" If the client is from another culture, or multicultural, the clinician might want to determine that she or he is not making assumptions about how depression manifests among individuals from this background. Therefore, the EBP question might be, "What does depression look like among Chinese-Americans?" in an effort to make sure that the clinician has an accurate diagnosis. Although the APA's focus on a diagnosis may ultimately seem simpler in terms of finding a searchable question, the clinician must still think through what it is that she or he wants to know about this client with attention to this client's situation and cultural context. The clinician must also consider the professional roles she or he plays with this client, in order to develop a relevant EBP question. Zayas, Drake, and Jonson-Reid (2011) point out that the diagnostic model may miss culturally specific disorders or inappropriately force them into pre-existing Western disorders. Clinicians must be careful to talk with their clients to be sure they have fully and correctly understood the client's needs in the appropriate contexts.

## *Assessment of Mental Health Disorders*

The APA guidelines, as well as the PIE and psychodynamic models, include as part of assessment the development of a mental health diagnosis. This phase helps narrow the clinical social worker's focus and may help develop an intervention plan. However, a focus on pathology or illness is historically associated with the medical profession and the medical model (Corcoran & Walsh, 2016). Some social workers see a long-standing tension between social work's person-in-environment perspective and the medical focus on diagnosis (Corcoran & Walsh, 2016). The primary definition used to define a mental health disorder comes from the APA (2000), which states that a mental disorder is a:

> significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (e.g., impairment in one or more important areas of functioning) or with significantly increased risk of suffering death, pain, disability or an important loss of freedom. (p. xxxi)

Regardless of the cause of the disorder, "*it must currently be considered a manifestation of behavioral, psychological, or biological dysfunction in the individual*" (p. xxxi). Given this definition, social causes or other factors outside of the individual are not to be considered mental health disorders, locating all of the pathology within the individual.

This medical, psychiatric model with its focus on the source of the pathology within the individual is often times at odds with the social work. Therefore, for some social workers, using the *Diagnostic and Statistical Manual (*DSM-5*;* APA, 2013b) to diagnose clients with a disorder appears counter to social work values. Yet, the insurance industry, on which many social workers rely for their paychecks, largely bases its reimbursement system on a "billable diagnosis." This requires clinical social workers to diagnose clients as "ill" with a mental disorder, in order to obtain insurance reimbursement for their services. As a result, social workers must often diagnose their clients, even if it is at odds with their professional values in order to support themselves and obtain services for their clients.

In addition, as discussed in Chaps. 1 and 3, much of the research that is conducted on effective interventions is tied to an individual diagnosis. Therefore, for clinical social workers who are starting the EBP process, it is helpful to have a diagnostic label to use in searching the research. Many outcome studies are tied to specific diagnostic categories.

While social workers may feel a great deal of tension between the values of the medical model and their social work values, learning to accurately diagnose using the DSM is an essential skill that all clinical social workers must know (Probst, 2011). This is required by state licensure laws, by the realities of making a living given the current reimbursement and making use of many sources of EBP research knowledge. It is beyond the scope of this book to provide clinicians with all of the tools necessary to learn how to make an accurate diagnosis or to discuss the other various debates surrounding diagnosing individuals. For a thorough review of the debates surrounding the use of the *DSM* and social work, readers are referred to

Corcoran and Walsh (2016) and the work of Kirk and Kutchins (1992). Therefore, we will limit the discussion to the essential components of the *DSM*, some general guidelines, and provide the readers with a list of resources that will provide a more extensive review of the process of making a diagnosis.

### *The Diagnostic and Statistical Manual of Mental Disorders*

The *Diagnostic and Statistical Manual of Mental Disorders* (APA, 2013b) is now in its fifth edition and is referred to as the DSM-5. It is the primary tool used in the United States to classify and diagnose individuals with a mental health disorder (Andreason & Black, 2006; Corcoran & Walsh, 2016; Grey & Zide, 2008). The DSM classifies different psychiatric disorders based on symptom profiles. For example, the category of anxiety disorders includes different disorders that are related to feelings of anxiety, such as generalized anxiety disorder or a specific phobia. For each diagnostic category, the APA offers in the DSM a variety of different facts about each disorder, such as prevalence rates, a list of disorders that often co-occur or are referred to as comorbid, prognosis statistics, and other related facts, such as typical age of onset.

Social workers and other mental health professionals determine what symptoms the client is experiencing and how those correspond to one of the diagnostic categories listed within the DSM. Frequently, clients present with symptoms that could fall into more than one diagnostic category. Practitioners must then determine whether the client has more than one diagnosis or if some of the symptoms are just a different manifestation of the main psychiatric disorder. In some circumstances where information is incomplete or unclear, tentative diagnoses on any axis may also be listed as rule outs (R/O). Rule outs draw attention to areas lacking clarity and help clinicians bear in mind that other factors may also influence the client's situation. These other circumstances may also be important factors in treatment planning. The EBP model, however, assumes a complete and clear diagnosis and does not allow (in most cases) for comorbid or unclear assessments. This may make it difficult to apply the EBP practice decision-making method when some potentially important information is unknown or unclear. Again, the clinician's professional expertise must be applied in completing an assessment and in making judgments about what disorder or problem is the priority concern.

## Guidelines and Cautions Regarding Assessment and Diagnosis

As stated previously, it is beyond the scope of this book to train clinical social workers to diagnose using the DSM-5 or any other assessment system. Our aim has only been to provide an overview of the essential components of each assessment system and the (limited) empirical research that supports them. We strongly encourage recent graduate and clinicians still in training to obtain formalized instruction in conducting mental health assessment and in making diagnoses. (Some resources for assessment and diagnosis are presented in Table 4.3.) Such trainings are generally offered as part of the educational process in schools of social work, as well as reinforced as part of clinical internships and continuing education. Individuals who did not receive such training are encouraged to obtain clinical supervision along with other formal training programs to ensure that they have been well educated in the language, process, and ethical challenges associated with diagnosing. A mental health diagnosis label can have significant ramifications for individuals, including denial of benefits or discrimination. Therefore, it is essential that social workers understand and take seriously the process of diagnosing before taking on this role with a client.

## *Diagnostic Tests and Measures*

Another issue to consider regarding assessment and diagnosis is the use of standardized instruments. Many diagnostic tests and measures are widely used for research purposes. These tests and measures may also be very helpful in making differential diagnoses of disorders. On face value, standardized instruments are an efficient way to streamline the diagnosis process and can "represent useful and expedient methods of quantifying data and behaviors" (Hepworth et al., 2010, p. 211). They are designed to allow the client to answer a set number of questions regarding a list of symptoms. Based on how the client answers each question or item, the client will receive a score placing them in a diagnostic category or range within a diagnostic category. Such tests and measures may either be specific to a single disorder or more

**Table 4.3** Some resources for social work assessment and diagnosis

| |
|---|
| American Psychiatric Association. (2013b). *Diagnostic and statistical manual (DSM-5).* Washington, D.C.: Author. |
| American Psychiatric Association. (2013a). *Cultural formulation interview*. Retrieved from https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM5_Cultural-Formulation-Interview.pdf |
| Black, D., & Andreason, N. (2014). *Introductory textbook of psychiatry* (6th ed.). Washington, D.C.: American Psychiatric Association. |
| Berzoff, J., Flanagan, L., & Hertz, P. (2016). *Inside out and outside in: Psychodynamic clinical theory and psychopathology in contemporary multicultural contexts* (4th ed.). Northvale, NJ: Jason Aronson. |
| Corcoran, J., & Walsh, J. (2016). *Clinical assessment and diagnosis in social work practice* (3rd ed.). New York: Oxford University Press. |
| Grady, M.D., & Dombo, E.A. (2016). *Moving beyond assessment: A practical guide for beginning helping professionals*. New York: Oxford University Press. |
| Grey, S. (2016). *Psychopathology: A competency-based assessment model for social workers* (4th ed.). Belmont, CA: Thompson/Brooks Cole. |
| Karls, J., & Wandrei, K. (Eds.). (2008). *Person-in-Environment system: The PIE classification system for social functioning problems* (2nd ed.). Washington, D.C.: NASW Press. |

comprehensive, including information about several disorders as separate subscales.

While there are many benefits to using assessment instruments, it is essential that clinicians understand both what the instrument is designed to measure and what it is not designed to measure. For example, some instruments may be designed to emphasize measurement of the cognitive changes associated with depression but place less emphasis on the emotional, social, or physical changes that are also associated with depression. Individuals whose depression manifests mainly in a physical/somatic manner may score as only minimally or even not depressed on cognitive items. In turn their depression may not be accurately assessed by such an instrument. Similarly, self-appraisal of cognition may not provide a full or accurate sense of an individual's interpersonal functioning.

An additional concern is the population on which the instrument was normed or standardized (DeVellis, 2003). This means that an instrument that was created based on a specific population may, or may not, be representative for other groups including different ethnicities, gender expressions, ages, sexual orientations, or diagnoses. Many instruments are developed based on samples or groups of people that may not match up with the demographic characteristics of the client you are trying to assess. Many are normed on relatively advantaged white populations (often on college students). As a result, the questions may not fit the cultural norms of the individual in front of you. Using the example of depression again, there are many researchers who study depression who believe that men and women present differently when depressed (Nolen-Hoeksema, 2001). An instrument that was standardized using men may not accurately capture the diagnostic picture of a woman being assessed for depression. Therefore, while standardized instruments can play a valuable role in assessment, it is essential for social workers to understand what the instrument is designed to measure, on which populations has it been normed, what role will it play in the assessment process being conducted, and how does the social worker plan to use the results in the context of the assessment.

There are a number of useful resources social workers can reference regarding the use of standardized measures, such as Corcoran and Fischer's (2014) *Measures for Clinical Practice and Research: A Sourcebook* (5th ed.) published by Oxford University Press. Measures for populations of color are less easily obtained. Additional resources for standardized assessment measures, including several of populations of color, are offered in Chap. 7.

## A Social Work Assessment Format

An example of a traditional, wide-ranging, social work assessment outline can be found in Appendix A (Drisko & DuBois, 2018). We believe that this outline includes many of the content areas included in the assessment models described above. It is an attempt to incorporate a social work perspective in its attention to environmental and social factors, as well as intrapsychic factors and family dynamics. As with all guidelines, it is meant to be a tool to help organize the material gathered in an assessment and provide a structure to the assessment process. However, the role of the social worker, the theoretical orientation of the clinician, the purpose of the assessment, as well as other factors will influence which factors are most salient for the worker to focus on during the assessment process. Additional content not included in an assessment outline may be needed for treatment planning with each unique client.

## Issues in Step 1 of EBP: Drawing on Practice Questions, Identify Research Information Needs in a Thorough Assessment

Within this chapter we have provided some guiding principles around assessment and some examples of formats used to complete a clinical social work assessment. We have also described how these formats can lead to the searchable question used to begin the EBP practice decision-making process. Formulating a practice question through careful assessment leads to identification of your research information needs. This is the Step 1 in the formal EBP practice decision-making process. We have emphasized the importance of thorough assessment. Now we will turn to using the results of the assessment to start the EBP process. In other words, now that you have gathered the necessary information, how do you create a good question using this information?

As we have emphasized throughout the book, the clinician's professional expertise is the glue that integrates the various pieces of information gathered during the EBP process. Gathering relevant information about a client, their wishes, and the context of the client's situation begins with the assessment and diagnostic processes. Possible interventions will also be shaped by the clinician's agency context, his or her designated role within the agency, and the client's preferences and views. Agency context may also shape the extent and type of assessment process. The conclusions that the clinician makes based on this information is where his or her professional expertise comes into play. The clinician must be able to take the information and put it into a funnel of sorts to come out with a succinct question that can be utilized in the EBP process. It is the role of the clinician to act as the funnel and prioritize what information is most relevant to the client's clinical needs.

Recalling an earlier quote in the chapter, Hepworth et al. (2010) remind us that the scope and purpose of an assessment are dependent on "the role of the social worker, the setting in which he or she works, and the needs presented by the client" (p. 181). One way to begin the EBP process is to try to identify the priorities within each of these factors and work collaboratively with your client to develop the question. None of these tasks takes priority over any other. Each factor acts interactively, each playing an essential role in creating a solid base for an assessment.

Understanding the setting and contextual issues is also essential to being able to prioritize what research questions are most relevant to any search. Does your practice setting provide the needed services? If so, what are they? Are you limited by the agency's mandate or can you bring in others that are not currently offered? If you can bring in other services, what is the process to do so? What steps need to be taken? Is your agency a referral-based setting only? Does it serve clients matching the demographic characteristics of the client in front of you (e.g., children or Spanish-speaking clients)? Answering these questions regarding the practice setting will help you determine whether you need to be searching for treatment options that you can provide directly to the client in that practice setting or whether you need to be exploring other options in the community by referral. Further, you may realize that you need to be trained in a new model that will better meet the needs of this client and others with similar needs.

A key part of assessment is learning the client's needs and preferences. As discussed in Chaps. 1 and 3, understanding the needs and wishes of the client is paramount to EBP. A clinician must be able to leave an assessment with a clear picture of what it is that the client needs and wishes. What are the expectations that the client has for this meeting and their interactions with the agency? What are the hopes the client has for what you will do or say at the end of the assessment process? What are the priorities that the client has for their care? Do they want to address their housing conditions first or address their depressive symptoms first? Do they want to work with someone individually or as a family unit? Do they want to receive services from a clinician who is of a specific ethnicity, gender expression, or sexual orientation? Understanding the answers to these questions will help the practitioner begin to understand how to place the needs of the client in the context of the other areas of the assessment.

An important caveat to consider is that sometimes the wishes or needs identified by the client do not align with the assessment of the social worker. For example, it may be that the client identifies that their primary goal is to have the department of social services out of their life, but are not interested in following the plan that the child protective case worker has developed around safe discipline. Or a client wants to cut back on their drinking so that they do not get another DUI conviction, but is not interested in stopping their drinking, even though they have a serious health condition that is directly affected by it. In these cases, the clinician must work with the client to develop goals that are consistent with the agency and social work values and also meet the client where they are. This process is not always an easy task. This part of the goal-setting process takes patience and must be negotiated carefully in the context of a relationship that may not have had time to develop a solid rapport. It is imperative that clinicians and clients have open conversations throughout the assessment and goal-setting phase of an intervention. There are many situations where obtaining information from the client regarding his or her wishes is complicated further by the age of the client or the capacities of the client. For example, for clinicians who work with children, it is often a dilemma regarding whether to honor the parents' wishes or the child's. Another example might be a client who is in currently actively psychotic and does not clearly have the ability to make an informed decision about treatment. A further complication is whether the clinician believes the client is an accurate reporter of their situation or the facts surrounding why a referral for treatment was made. These situations add to the complexity of the goal-setting process, and it is during these times when seeking out supervision may be important for the social worker to help identify a clinically sound and ethical course of action.

Social workers who are unsure about whether the priorities that have been set by the client and the worker are compatible with social work ethical standards or the agency should seek consultation with a supervisor based within the agency or consult the local chapter of the NASW. Many NASW chapters have an ethics consult available to members. Using the answers to these questions, the clinical social worker begins to funnel the information gathered in an assessment and determine how to prioritize the information to begin the EBP process. A case example follows to help illustrate this process more completely. The reader is also referred to the more extensive cases later in the book where the process is set forth more completely.

## Case of Samir: Identifying Practice Information Needs Through Assessment

Samir is a 16-year-old first-generation male whose family is from India. He was born in the United States, but his parents are still very connected to India, as most of his extended family still lives there. He has an older sister who is in college in the United States. You work as a school social worker at a high school, and Samir was referred to you by one of his teachers due to concerns about recent changes in his academic performance at school. There were also some changes in his social behavior.

Before deciding which type of assessment model you will use to assess Samir, it is essential to first review the factors discussed previously. First, in your role as a school social worker in this institution, it turns out that you are not able to provide any ongoing treatment to students. The role of the social worker is to provide crisis intervention or help the student and family find an outside provider. Outside referrals are made if the student needs ongoing services of any kind that are not related to academic services, such as therapy, medication, or ongoing supportive counseling. Further, the context of the setting is that the school is not equipped to provide ongoing therapy services to students. You work in multiple schools and do not have a consistent office each week where you would meet with students, even if this was an option. As such, the setting does not afford you with a consistent, private, location to meet with students during your time at their school. Finally, it is important to note before the meeting that Samir did not volunteer to come to meet with you. Although he may have agreed, he did not independently seek out services with the school social worker. It will be important to determine what his concerns and wishes are in regard to meeting with you in order to understand how to begin the EBP process. This is also consistent with the EBP emphasis on honoring client values and preferences.

By reviewing the factors discussed previously, the assessment process is already somewhat streamlined, as it is clearer what your role is with Samir, the limitations of the setting, and noting his role in the referral process. Based on this information, you determine that your role with Samir will be to first determine if crisis intervention services need to be offered and if not, what ongoing services might be useful to him in the community. Secondly, you will need to combine this information with his wishes and needs in order to find what type of service will best align with his goals and needs. There is also the issue of what resources are available in the community.

In meeting with Samir, you learn from him that while he did not ask to come to see you on his own, he was “fine” with the referral. As you were trained using the PIE system, your assessment questions are derived primarily from that format. You ask several questions regarding the changes noted by his teachers, the changes he has experienced in himself, his own observations, and what he hopes to gain from coming to see you. What you learn is that Samir has been a very strong student since starting high school. However, his grades have begun to drop within the past 3 months, and he is starting to have panic attacks in association with big tests or exams. These panic attacks are increasing, and he feels like he is in a “vicious cycle” of worrying about his grades and then having a panic attack which leads to poor work output, more worry, and more panic attacks.

In thinking through the PIE classification, you begin to ask questions about the four domains to better understand the potential source of these symptoms and stress he is experiencing. In speaking with Samir, you learn that recently his sister has had difficulties in college and has withdrawn from school and returned home for the semester. According to Samir, she was “partying too much and not paying attention to her school work.” Their parents decided to withdraw her from school until she could “get her priorities in order.” Samir reports that since she has been home, there is more conflict between his sister and his parents. Further there is more conflict between his parents, who are now making more comments about his school work. They say that he will “not act like his sister and blow his educational opportunities.” Using the PIE system, it appears that the main source of the difficulties falls within Factor I: Social Functioning Problems, specifically that much of the tension comes from the current family situation.

In speaking with Samir about what he thinks would be helpful, he states that he would like help with finding better ways to “cope with the panic attacks” and “get back on track with my school work.” When asked to elaborate, he states that he wanted someone who would work with him one on one to help him learn to “deal the panic” and give him some additional skills for managing stress. His stated goals and wishes were not in alignment with your assessment of where the origins of the problem lay. He placed the resolution of the problem with himself, and not within the context of his family. This also seems a culturally appropriate role for Samir to take.

Carefully, you explore with him whether he thought it would be useful to also involve his parents and sister in the meetings with such a person, since it sounds like life at home has become more stressful. Samir replied adamantly that he did not want to involve his family in this process, other than to have them see that he is seeking help to work on his academic performance. When asked if he could explain further why he preferred this course, he stated that his family was very private and that they were also very "stubborn." "You do not talk to people outside of the family about your problems, especially not non-Indians." However, he felt that if he saw someone and it was couched as an "academic coach," it would be acceptable and could relieve the pressures he experiences. This was because his family would see that he was actively seeking help around his academics, unlike what his parents perceive his sister is doing.

From this conversation, you learn that Samir is experiencing a great deal of stress due to changes in his family status. Due to this stress, his school performance has declined, and he is experiencing panic attacks. His preferences are to meet with someone outside of the school individually to help him develop additional tools to manage his anxiety and stress, while helping boost his school performance. Although his wishes do not align with your assessment of the source of the problem, you defer to his wishes to get help individually at this time, rather than to involve his family. He states that their involvement would be a "dead end" as they would not engage in treatment surrounding a family issue due to their cultural beliefs about privacy. Keeping in mind your role and practice setting, the priorities outlined by Samir are consistent with your role as a school social worker and the limitations of the setting in which you practice. Your role now is to help Samir find an appropriate professional who can provide an effective intervention for his anxiety, while keeping in mind the family context and the recent changes within his family. Note that Samir's values and preferences are a key part of this decision-making process.

While you know many providers in the community, you want to make sure that you find a provider who is trained in an appropriate intervention that will most benefit Samir. As such, the research question that you develop to orient your EBP search is: What are effective individual interventions for addressing panic disorder and school performance anxiety in high school students? While ultimately you will not be conducting the final step of the EBP process of applying the intervention, it will be essential for you to follow the other steps outlined in Chap. 3 to determine the best match for Samir with a provider in the community. In addition, being informed of the available research, the intervention options, and being able to explain them and talk through them with Samir fits very much with your role as a school social worker. This information may also be essential in helping Samir's parents support his desire to receive services.

## Summary

It is through a careful assessment that social workers actually begin the EBP process. It is through the integration of the information they gather about the client, the context, the clients' wishes, the role they play in their agency, and the context of the practice settings that clinical social workers use their professional expertise to organize the information into a searchable practice question. Step 1 of the EBP practice decision-making process begins based squarely on how the clinical social worker interprets and synthesizes all of the available information. The assessment model used to gather that information will shape what questions are asked and what information is prioritized. It is essential, therefore, for social workers to understand the limitations of each assessment format and any tests or measures used. Social workers must also be aware of the power that they hold when making an assessment, as these assessments determine the pathway taken by clients, practitioners, families, and payers. They shape the EBP process but simultaneously shape other processes and actions.

The next several chapters of this book explore each of the later steps of the EBP model in greater depth and detail. The next chapter shifts to a very different set of professional skills used in locating practice research, Step 2 of the EBP practice decision-making process.

## References

Abbass, A., Hancock, J., Henderson, J., & Kisely, S. (2006). Short-term psychodynamic psychotherapies for common mental disorders. *Cochrane Database of Systematic Reviews*, (4):CD004687. https://doi.org/10.1002/14651858.CD004687.pub3

American Psychiatric Association. (2000). *Desk reference to the diagnostic criteria from DSM-IV-TR*. Washington, D.C.: Author.

American Psychiatric Association. (2013a). *Cultural formulation interview*. Retrieved from https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM5_Cultural-Formulation-Interview.pdf

American Psychiatric Association. (2013b). *Diagnostic and statistical manual (DSM-5)*. Washington, D.C.: Author.

American Psychiatric Association. (2016). *Practice guidelines for the psychiatric evaluation of adults* (3rd ed.). Arlington, VA: Author.

Andreason, N. C., & Black, D. W. (2006). *Introductory textbook of psychiatry* (4th ed.). Washington, D.C.: American Psychiatric Association.

Atwood, G., & Stolorow, R. (2014). *Structures of subjectivity: Explorations in psychoanalytic phenomenology* (2nd ed.). New York: Routledge.

Baik, S., Gonzales, J., Bowers, B., Anthony, J., Tidjani, B., & Susman, J. (2010). Reinvention of depression instruments by primary care clinicians. *Annals of Family Medicine, 8*(3), 224–230.

Becvar, R., & Becvar, D. S. (2018). *Systems theory and family therapy: A primer*. Lanham, MD: Hamilton Books.

Benjamin, J. (1988). *The bonds of love: Psychoanalysis, feminism and the problem of domination*. New York: Pantheon Books.

Berzoff, J., Flanagan, L., & Hertz, P. (2016). *Inside out and outside in: Psychodynamic clinical theory and psychopathology in contemporary multicultural contexts* (4th ed.). Northvale, NJ: Jason Aronson.

Black, D., & Andreason, N. (2014). *Introductory textbook of psychiatry* (6th ed.). Washington, D.C.: American Psychiatric Association.

Blanck, G., & Blanck, R. (1979). *Ego psychology II*. New York: Columbia University Press.

Blanck, G., & Blanck, R. (1994). *Ego psychology* (2nd ed.). New York: Columbia University Press.

Bowen, M. (1978). *Family therapy in clinical practice*. Northvale, NJ: Jason Aronson.

Carter, B., & McGoldrick, M. (Eds.). (2004). *The expanded family life cycle: Individual, family, and social perspectives* (3rd ed.). Boston, MA: Allyn & Bacon.

Congress, E. P. (1994). The use of culturegrams to assess and empower culturally diverse families. *Families in Society, 75*, 531–540.

Corcoran and Fischer's. (2014). *Measures for clinical practice and research: A sourcebook* (5th ed.). New York: Oxford University Press.

Corcoran, J., & Walsh, J. (2006). *Clinical assessment and diagnosis in social work practice* (2nd ed.). New York: Oxford University Press.

Corcoran, J., & Walsh, J. (2016). *Clinical assessment and diagnosis in social work practice* (3rd ed.). New York: Oxford University Press.

DeVellis, R. F. (2003). *Scale development: Theory and applications* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Drisko, J., & DuBois, C. (2018). Social work assessment format. *Unpublished manuscript used in classes at the Smith College School for Social Work*, Northampton, MA. Available from the authors.

Drisko, J., & Simmons, B. (2012). The evidence base for psychodynamic psychotherapy. *Smith College Studies in Social Work, 82*(4), 374–400.

Fraser, M. (2004). *Risk and resilience in childhood: An ecological perspective* (2nd ed.). Washington, D.C.: NASW Press.

Fraser, M., Richman, J., & Galinsky, M. (1999). Risk, protection, and resilience: Toward a conceptual framework for social work practice. *Social Work Research, 23*(3), 131–143.

Freud, S. (1923). The libido theory. In *General psychological theory: Papers on metapsychology* (pp. 180–184). New York: Touchstone Press.

Gabbard, G. (2010). *Long-term psychodynamic psychotherapy: A basic text*. Arlington, VA: American Psychiatric Publishing.

Goldstein, E. (1995). *Ego psychology and social work practice* (2nd ed.). New York: Free Press.

Goldstein, E. (2001). *Object relations theory and self psychology in social work practice*. New York: Free Press.

Grady, M. D., & Dombo, E. A. (2016). *Moving beyond assessment: A practical guide for beginning helping professionals*. New York: Oxford University Press.

Graeber, D., Helitzer, D., La Noue, M., & Fawcett, J. (2013). The relationship between self-reported adult impact of adverse childhood events and health-related quality of life. *Journal of Community Medicine & Health Education, 4*, 267. Retrieved from https://www.omicsonline.org/the-relationship-between-selfreported-adult-impact-of-adverse-childhood-events-and-healthrelated-quality-of-life-2161-0711.1000267.php?aid=21892

Grey, S. (2016). *Psychopathology: A competency-based assessment model for social workers* (4th ed.). Belmont, CA: Thompson/Brooks Cole.

Grey, S., & Zide, M. (2008). *Psychopathology: A competency-based assessment model for social workers* (2nd ed.). Belmont, CA: Thompson/Brooks Cole.

Haley, J. (1971). *Changing families: A family therapy reader*. New York: Grune & Stratton.

Hartman, A., & Laird, J. (1983). *Family centered social work practice*. New York: The Free Press.

Hepworth, D., Rooney, G., Strom-Gottfried, K., & Larsen, J. (2010). *Direct social work practice: Theory and skills*. Belmont, CA: Brooks-Cole.

Imel, Z., & Wampold, B. (2008). The importance of treatment and the science of common factors in psychotherapy. In S. Brown & R. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 249–262). New York: Wiley.

Karls, J., & Wandrei, K. (Eds.). (2008). *Person-in-Environment system: The PIE classification system for social functioning problems* (2nd ed.). Washington, D.C.: NASW Press.

Kirk, S., & Kutchins, H. (1992). *The selling of the DSM: The rhetoric of science in psychiatry*. Hawthorne, NY: Aldine de Gruyter.

Kohut, H. (2009). *The analysis of the self* (11th ed.). Chicago: University of Chicago Press.

Kondrat, M. E. (2013). Person-in-environment. *Encyclopedia of Social Work* [online]. doi: https://doi.org/10.1093/acrefore/9780199975839.013.

Lebow, J., & Gurman, A. (1995). Research assessing couple and family therapy. *Annual Review of Psychology, 46*, 27–57.

Leichsenring, F. (2010). Psychodynamic psychotherapy: A review of efficacy and effectiveness studies. In R. Levy & J. S. Ablon (Eds.), *Handbook of evidence-based psychodynamic psychotherapy* (pp. 3–27). New York: Humana Press.

Lingiardi, V., & McWilliams, N. (2017). *Psychodynamic diagnostic manual* (2nd ed.). New York: Guilford Press.

Mahler, M., Pine, F., & Bergman, A. (2000). *The psychological birth of the human infant: Symbiosis and individuation*. New York: Basic Books.

Masten, A. (2018). Adult resilience after child abuse. *Nature Human Behaviour, 2*(4), 244–245.

Minuchin, S. (1974). *Families and family therapy*. Cambridge, MA: Harvard University Press.

Nolen-Hoeksema, S. (2001). Ruminative coping and adjustment to bereavement. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 545–562). Washington, D.C.: American Psychological Association.

Palombo, J. (1985). The treatment of borderline neurocognitively impaired children: A perspective from self psychology. *Clinical Social Work Journal, 13*, 117–128.

Patterson, J., Williams, L., Edwards, T. M., Chamow, L., & Graugh-Grounds, C. (2018). *Essential skills in family therapy* (3rd ed.). New York: Guilford Press.

Petit, C., & Midgley, N. (2008). Psychoanalytic psychotherapy assessment in a child and adolescent mental health setting: An exploratory study. *Clinical Child Psychology and Psychiatry, 13*(1), 139–155.

Probst, B. (2011). *Walking the tightrope: Using diagnostic and environmental perspectives in clinical practice*. Unpublished doctoral dissertation, Fordham University School of Social Work.

Sandler, J. (1962). Hampstead index as an instrument of psychoanalytic research. *International Journal of Psychoanalysis, 43*, 287–291.

Sexton, T., & Lebow, J. (2015). *Handbook of family therapy*. New York: Routledge.

Simmons, B. (2012). Evidence-based practice, person-in-environment, and clinical social work: Issues of practical concern. *Smith College Studies in Social Work, 82*(1), 3–18.

Stern, D. (1985). *The interpersonal world of the infant*. New York: Basic Books.

Walsh, J. (2010). *Theories for direct social work practice* (2nd ed.). Belmont, CA: Thompson Brooks/Cole.

White, M., & Epston, D. (1990). *Narrative means to therapeutic ends*. New York: W. W. Norton.

Winnicott, D. (1992). *The child, the family and the outside world*. New York: Perseus Books.

Zayas, L., Drake, B., & Jonson-Reid, M. (2011). Overrating or dismissing the value of evidence-based practice: Consequences for clinical practice. *Clinical Social Work Journal, 39*(4), 400–405.

# Chapter 5
# Step 2 of Evidence-Based Practice: Locating Practice Research

Once assessment is completed and client-related research information needs are determined, the second step of EBP is to efficiently locate the best available research evidence. In this chapter, we will identify and critically examine several types of research resources related to clinical social work practice. We will also introduce methods for effectively searching online practice research resources.

## Starting Points

After completing a thorough assessment and defining an orienting question, the second step of the EBP process is to locate the best available research relevant to your client's needs and specific clinical circumstances. There are many ways to begin locating useful research and practice information. The first choice may be between background information versus very specific information. If you are already familiar with a disorder, its diagnosis, and its treatments, a good starting point is to look for specific research information. On the other hand, if the issue is unfamiliar, or if you have reason to think your knowledge may be old or limited, starting with background information may be a better choice. Reviewing background materials will take longer but will also prepare you for other clients with similar needs and offers a learning opportunity.

An initial choice will be between using print or online resources. Both have assets and liabilities. Both also have significant infrastructure costs. The professional user often bears these costs. Books are expensive, often very specialized, and must be updated as new editions are printed. In addition, print material may be already outdated by the time it is published or at the time it is needed for practice use. Computers and Internet access also have significant costs for individuals and agencies (Drisko, 2010; Kreuger & Stretch, 2000). On the plus side, agencies and practices with electronic record systems may have much of the needed infrastructure on-site.

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_5

The next choice will often be determined for users: between free and paid access to research materials. If your agency or an affiliated college or university has access to some of the many paid, password-protected research databases, you can access many more resources and gain much greater information. Free sites often offer just abstracts or summaries of full research studies. This means that if you need to explore research results in great detail, you may need to search paid sites. The good news is that a great deal of practice research is available online through free sources. For many practice information needs, these free sources are adequate.

## Print Resources

Several books offer summaries of research supporting the effectiveness of specific therapies (see Table 5.1). They may not, however, be comprehensive enough if you need to search for information specific to elders or to disorders that appear infrequently in most practice settings (such as reactive attachment disorder or

**Table 5.1** Some print resources for finding mental health research results

| |
|---|
| Anthony Roth and Peter Fonagy's (2005) *What works for whom? A critical review of psychotherapy research* (2nd ed.) offers a useful, but now dated, summary of psychosocial treatments for adults. Its strength is that it both extensively studies treatments and also discusses treatments that are widely used but not yet well researched. Emphasizes common DSM disorders. |
| David Winter, Chris Metcalfe, and Brin Felix Swain Grenyer's (2014) *Effective psychotherapies: What else works for whom?* also examines effective psychotherapies. |
| Richard Summers and Jacques Barber's (2010) *Psychodynamic therapy: A guide to evidence-based practice* examines research support and practice implications for doing psychodynamic therapy. |
| Daniel David, Steven Jay Lynn, and Guy H. Montgomery's (2018) *Evidence-based psychotherapy: The state of the science and practice* explores psychotherapy outcome research and identifies several research support therapies. |
| *BMJ Clinical Evidence in Mental Health.* The *British Medical Journal (BMJ)* offers very detailed summaries of outcome research in both print and online versions. It is organized by disorder and has extensive information on medications. It is updated semiannually, though recently has evolved into a mainly online format. |
| John Weisz and Alan Kazdin's (2017) *Evidence-based psychotherapies for children and adolescents* explores *therapies* that have research support in a diagnostically oriented book. |
| Peter Fonagy et al.'s (2015) *What works for whom? A Critical review of treatments for children and adolescents* (2nd ed.) also addresses therapies with research support for specific childhood and adolescent disorders. Its strength is that it reports on both extensively studied treatments and also discusses treatments that are widely used but not yet well researched. |
| Alan Carr's (2009) *What works with children, adolescents and adults?* offers a useful summary of psychosocial treatments for all age groups. Its strength and main limitation is that it addresses common ICD/DSM disorders and few less common ones. |
| Alan Carr's (2002) *Prevention: What Works with Children and Adolescents?* examines outcome research on select prevention programs for children, adolescents, and families. |

Note carefully, print resources can become dated very quickly!

narcissistic personality dsisorder). Note that many books in mental health are organized by diagnosis. They are likely to follow a medical model approach to problem definition, with relatively little focus on the interpersonal and social aspects of client's situations. Alternative approaches to assessment, such as the Karls and Wandrei's (1994) *Person-in-Environment System or the Psychodynamic Diagnostic Manual* (Lingiardi & McWilliams, 2017), are very rarely mentioned despite their important and useful efforts to expand the scope of mental health practice.

Ethnically and racially diverse populations may also be inadequately addressed. For example, the very different diagnostic system of other cultures is also very rarely mentioned. One such system, the *Chinese Classification of Mental Disorders* (Chinese Society of Psychiatry, 2001), may help practitioners understand the unique needs and forms of expression used by populations who may appear in Western practice settings (Chen, 2002). Disorders are also addressed "one at a time," with little recognition that clients often present with comorbid disorders or combinations of psychological and social challenges. This adds to clarity and validity for research purposes but may decontextualize research findings as guides to practice decision-making. Bearing this in mind, these books are still valuable orienting resources for clinical social work practice.

Print materials can be very valuable "background" resources. They can provide an excellent way for clinical social workers to understand the conceptual and practical issues in practice research. They can also introduce clinicians into the complex world of evaluating research results and design. Print materials can provide immediately useful "foreground" knowledge so long as they are recently published. Still, in many cases, online materials may provide more specific information and can help ensure examination of the most current knowledge.

## Online Resources

Due to the time constraints of clinical practice, online resources have great appeal. Information on a wide range of topics may be found quickly. Overviews of mental health disorders and practices are increasingly common online, though the quality of these resources varies widely. Be sure to examine the credentials and institutional affiliations of online resources. In general, look for well-known institutions and authors, ample use of citations, and detailed results. Online resources with such detailed results, descriptions of the methods by which conclusions were drawn, and with ample and specific citations are likely to be better information sources for EBP. Still, be sure to apply critical thinking at all times. Use of Wikis is discouraged. Though Wikis may include quality information and may be a useful but preliminary source, their information is of variable quality.

*A general word of caution regarding URLs or web addresses:* The web addresses of databases change and evolve very rapidly. This is largely due to consolidation among online publishing companies and among government agencies. If a web address listed below does not work, search the name of the resource and a current address is likely to be found.

## Disorder- or Diagnosis-Specific Online Resources

Electronic access to research materials and practice guidelines is increasingly assumed by funders, program managers, publishers, and authors. This is because electronic resources can be accessed immediately, in a wide range of locations, and can provide very focused summaries of relevant research to practitioners. For the ideal of EBP to be met, clinical practitioners need the best research information at all times to guide decision-making. Up-to-date information provided electronically can be a major step toward including the best available research results in clinical practice.

Challenges to realizing this goal are found in infrastructure, funding, and training. Clinical social workers and other clinical practitioners would need technology to make use of online resources. Adequate access to computers, smartphones, or personal data assistants (PDAs) is expensive and not currently in place. In some agencies, funding for such infrastructure might compete with funding for direct clinical services. Funding for the research resources needed to expand and update the practice knowledge base in mental health would also be challenging. Finally, if good access to technology was widely available, clinical practitioners will still need to be trained in its optimal use and to be updated as new technologies emerge.

Note that for psychiatric and mental health disorders, the Cochrane Collaboration Library is widely acknowledged as providing the highest-quality systematic reviews of research. Many other sites link to the Cochrane Library, but many also offer systematic reviews using different (and often less rigorous) standards, as well as abstracts (free) and full text reports of individual studies (at cost). These sites are generally organized by DSM or ICD diagnosis.

- *The Cochrane Library*. This is a database of very high-quality systematic reviews (syntheses of available research) on single topics. The Cochrane Library is organized by disorder and medical model in orientation. Abstracts are available without cost. Cochrane reviews are widely considered to be the best sources of EBP research knowledge. This is because the Cochrane Collaboration includes working group that sets the most rigorous and transparent standards for systematical reviews of clinical research in medicine and psychiatry. Cochrane reviews also tend to be conservative and may find less clear support for treatments than do other reviewing organizations (https://www.cochranelibrary.com/).
- American Psychiatric Association's *Clinical Practice Guidelines*. "APA practice guidelines provide evidence-based recommendations for the assessment and treatment of psychiatric disorders and are intended to assist in clinical decision making by presenting systematically developed patient care strategies in a standardized format" (https://www.psychiatry.org/psychiatrists/practice/clinical-practice-guidelines, para. 1). These guidelines address a wide range of clinical issues, including eating disorders, suicidality, and delirium. They are designed to help clinicians organize their treatment approaches. However, they are written from a medical perspective. Therefore, they may not address wider social issues, such as homelessness, or issues not listed in the DSM, such as poor communica-

tion or weak parenting skills (https://www.psychiatry.org/psychiatrists/practice/clinical-practice-guidelines).

- The United Kingdom's National Health Service sponsors *Health Information Online* (HILO). HILO is a resource for locating a wide range of mental health resources—some originally published on other web sites. The results are numerous but point users both to a mix of free publications and to sites that require subscriptions or payment for access to original documents (www.library.nhs.uk/).
- The *Centre for Reviews and Dissemination Databases* at the University of York includes the *Database of Abstracts of Reviews of Effects (DARE).* DARE complies over 15,000 systematic reviews, including those of the Cochrane Collaboration cited above. The Center also provides access to papers examining the economic aspects of practice (through the UK's National Health Service Economic Evaluation Database or NHS EED) and papers on health-care technologies (Health Technology Assessment or HTA) (www.crd.york.ac.uk/crdweb/).
- *Evidence-Based Mental Health* is a monthly print and online journal that "surveys a wide range of international medical journals applying strict criteria for the quality and validity of research." Relevance is determined by "practicing clinicians" who select studies to be included. Print subscriptions are $193 per year and include online access. Online subscriptions are $108 per year (http://ebmh.bmj.com/).
- *BMJ Best Practices* is another subscription-based resource for medically oriented mental health results through the *British Medical Journal* group. Searches yield results organized by age group or other relevant factors that delimit and focus results, a helpful feature. Reports are posted to PubMed 2 years after publication but are fee based until this time (http://clinicalevidence.bmj.com).
- *Effective Child Therapy* is sponsored by the Society of Clinical Child and Adolescent Psychology. The site summarizes several forms of CBT and a few other treatments meeting American Psychological Association's definition of empirically supported treatments used to treat a range of childhood disorders. Oriented as much to families/end consumers as much as to clinical practitioners, the site is very clear and well organized (www.effectivechildtherapy.com/)

## Program-Oriented Online Resources

While most medical model resources are organized diagnostically, by disorder, resources related to treatment programs are organized more generally by concern or problem type. That is, you can find information about programs for runaway teens or substance abuse treatment as a social need, not in terms of medical diagnosis. Some program-oriented reviews include information on specific psychosocial treatments (such as multisystemic therapy or solution-focused therapy).

- *The Campbell Collaboration Library.* This is a database of very high-quality program reviews focusing on social welfare, education, and criminal justice. It is organized by general topic area. Full reviews are available without cost. The Campbell Collaboration Library is widely considered to be the best source for research knowledge about the effectiveness of programs. The Campbell Collaboration's systematic reviews follow the rigorous guidelines set by the Cochrane Collaboration. Campbell reviews tend to be conservative and thorough. The database is growing but may prove to be limited for any specific social need (https://campbellcollaboration.org/campbell-library.html).
- The US Substance Abuse and Mental Health Services Administration (SAMHSA) sponsors the Evidence-Based Practices Resource Center. Organized by topic and populations, the Resource Center aims to provide communities, clinicians, policy-makers, and others in the field with the information and tools they need to incorporate evidence-based practices into their communities or clinical settings. The Resource Center contains a collection of scientifically based resources for a broad range of audiences, including "Treatment Improvement Protocols, toolkits, resource guides, clinical practice guidelines, and other science-based resources" ((para 2) https://www.samhsa.gov/ebp-resource-center).

## General Online Resources Addressing Clinical Practice

Several aggregators of materials related to evidence-based practice have closed over the past 5 years. It is a difficult task to create and update such web sites and materials. One online resource still offers a wide range of materials, including summaries and articles directly related to clinical practice as well as materials on other topics.

- *Information for Practice* offers a free overview of new scholarship relevant to social work including journal articles, gray literature, infographics, and more. It is developed and maintained by Dr. Gary Holden and others at the NYU Silver School of Social Work and is updated frequently. The sites also provide multiple RSS feed possibilities (http://ifp.nyu.edu/).

When using any online resources, be sure to look for the dates when they were last updated. The research studies included in systematic reviews often span several years. However, the systematic reviews are completed and/or updated from time to time as new results become available. Most reviews show the date of the last update in a very prominent location. When reviews are more than 5 years old, it is wise to look for additional, more current information as an additional resource.

If systematic reviews of research on any given issue are not found, the next step is to look for individual research articles on the topic. Many research articles are published commercially and will require subscriptions or payment for access.

Bear in mind that reviewing individual research articles takes a strong background in research methods to be done successfully. (More about evaluating research findings follows in Chaps. 6, 7, and 8.) The sheer number of choices that must be made to decide if the research is rigorous and relevant to your specific practice situation is demanding. The work done by professional reviewers in research compilations noted above now becomes the task of the clinical social worker. The strength of doing a review with a specific practice situation in mind is that you can weed out research that is not relevant much more accurately. You may also learn about issues that matter a great deal in your situation but were not so critical or widespread enough to be mentioned in the research summaries.

## Databases of Individual Research Articles

Where systematic reviews of research on a topic are not available, the next step for clinical social workers is to look directly at individual research articles. Individual articles may also complement and extend the knowledge available in systematic reviews. The challenges in this task include locating the most relevant articles in the large volume of articles found on many topics (such as anxiety or depression), evaluating the relevance of the articles to your specific client and clinical circumstances, and evaluating the quality of the research articles located. The good news is that online resources make a vast array of materials available to clinicians. A wide range of articles are available for free (though some will require payment or subscriptions).

- *PubMed* is a useful interface to *MEDLINE*, the vast online database of medical research articles maintained by the US National Library of Medicine (part of the National Institutes of Health). Many, but not all, PubMed citations include links to full text articles for free. This is a major asset for clinicians. PubMed also includes prominent and easy to use search features that allow users to shift from a specific topic, say borderline personality disorder, to a higher-order topic such as personality disorders in general (www.pubmed.govOR www.ncbi.nlm.nih.gov/pubmed/).

There is also an extensive online help guide to searching PubMed. PubMed Internet Help is found at https://www.ncbi.nlm.nih.gov/books/NBK3827/.

## The Advantages of Combining Results for Systematic Reviews and Individual Articles

Systematic reviews (SRs) typically include only articles about a single, specific, disorder or need. This is to ensure strong internal validity in the research studies they summarize. The details of other facets of people's lives are rarely detailed in SRs reports. Many people find this narrow approach, done purposefully to ensure research rigor, comes at the cost of failing to identify or of excluding socially diverse populations and co-occurring disorders. For example, a search for “What works to serve an Japanese-American trans individual who has a major depressive?” order may yield only information about treating major depression. Information about who was studied may be missing or generally summarized. Searches for all the client characteristics may yield no results or point only to research on individuals without information about their ethnicities or trans-status. Thus, it is unclear if the located results are truly applicable to the client since no similar persons are known to be included in the review as reported. In such situations—which are quite common—a combination of searches for systematic reviews and for individual articles addressing the specific client characteristics may be the best search approach. That is, the SRs may give useful information about treating depression in general, while individual articles may add information about the needs, interests, and concerns of specific groups. Clinical expertise is required to combine the information provided by both types of resources.

## Search Strategies

Searching online databases can be a complex task. Where possible, it is always a good idea to begin with some formal training from a research or reference librarian. Such training is routine for all levels of higher education. Introductory sessions can take an hour or two but are well worth the time. Librarians are familiar with the available database resources as well as knowledgeable in strategies for exploring them. They are also great at identifying search terms and keywords to use in searches. Even if you are a skilled and persistent searcher, asking for librarian support when you are stuck or frustrated is strongly recommended.

To search for individual research articles, it is very helpful to use a specific database search strategy. This involves selecting keywords and some tips on using search engines efficiently. While a full tutorial on using search engines is beyond the scope of this book, there are some strategies that fit well with EBP needs and purposes.

Search keywords for EBP database searches start with the client’s needs and situation. Very often the first keyword will simply be the name of the diagnosis, disorder, or problem that begins with the client’s clinical need. There may be alterative terms for this disorder. For example, “depression” might also be specified as “major depressive disorder” if the criteria are met. “Dysthymia” is a similar alternative, but is, of course, a different disorder and diagnosis. It is important to be as specific as possible when conducting searches, as your results will be much more targeted and directly related to your question. Use a thesaurus or a medical dictionary if you are unsure what alternate terms might be used. (Online thesauri and medical dictionaries are excellent for this.)

Commonly used medical search keywords are established by the National Library of Medicine’s Medical Subject Headings list (www.nlm.nih.gov/mesh/MBrowser.html). This list of over 26,000 terms (as of 2017) is used to frame searches in MEDLINE. MEDLINE includes over 20,000,000 citations and is one of the largest EBM/EBP article databases. The Medical Subject Headings (MeSH) list also provides sources of alternate search terms for clinicians and researchers. MeSH has a tree and branch format. Top-level "categories" include psychiatry and psychology, chemicals and drugs, and health care. These are followed by even more specific "descriptors," such as "mental disorders" or "behavioral mechanisms." Even more precise and narrow are "qualifiers" that create specific subsets within topics. Qualifiers include "CO" for co-occurring or associated disorders, "DI" for diagnostic issues, and "PS" for psychology. A search using the adverse effects qualifier "AE" can locate adverse effects of treatments. Searches on a top-level descriptor such as depression in MEDLINE, with the qualifiers DI and PS, would target both diagnostic issues and psychological issues. This can speed up searches and limit the number of extraneous sources included in the search results.

PubMed, a useful interface to access MEDLINE articles and citations, helps to organize your search. PubMed starting pages ask for a category or descriptor to begin the search. The result pages often include click box options with suggestions to help you narrow and target you search.

Bear in mind, too, that reference librarians are also excellent sources of information regarding alternate search terms. They are skilled at finding the list of keywords and headings that are used by major professional groups and publishers to organize their materials in print and online. Bronson and Davis (2012) also offer tips and techniques for doing EBP evidence searches.

A basic search tip is that any word placed in double quotation marks, such as "depression," will be searched for exactly as entered. This allows you to enter terms such as "generalized anxiety disorder" as a phrase and to have the full term used as the focus of your search. This is a simple way to enter multiple word phrases as search terms. Commonly used words, such as "a" or "the" will be ignored by most search engines if not entered into a phrase using quotations marks to require a search for the exact phrase. (Google allows use of the "+" sign as well as double quotation marks to identify exact search phrases. By typing +depression+, Google will search for this precise term. Note that there are no spaces immediately before or after the search term.)

It is often useful to combine search keywords. This is most often done using Boolean logical operators. While the name might sound difficult, Boolean operators simply link terms to combine them in different ways. They are the foundation of most everyday Internet searches. Let us start with a two-term search example. The Boolean "AND" operator gets all the information which includes both search terms. An "AND" search yields all materials that include the overlap of both terms but excludes materials with just one of the terms. For example, a search for "depression" AND "dysthymia" will locate materials including both terms, but not either one separately. Such results are generally large but focused. One might also search for "depression" AND "experiment" to get materials on depression that are only based on experimental research. By adding even more terms, a still more precise search results. A clinical social worker might search for "depression" AND "treatment outcomes" AND "experiment" to locate articles on the outcomes of experimental studies on treatments for depression. Such combined searches can narrow the many materials to just those that are most likely to be clinically useful.

Another strategy uses the Boolean "OR" search operator. The "OR" operator gets all materials including either search term or both at once. That is, such a search includes the results for an "AND" search as well as more materials about either term separately. A search for "depression" OR "dysthymia" would include all materials including either term or materials covering both terms. Such results can be overwhelming for common disorders. On the other hand, for less common disorders, the "OR" search operator may be a fine starting point. Searching for "pica" OR "eating non-food items" would yield a larger and wider set of results than a search for "pica" alone.

Finally, the Boolean "NOT" operator will allow you to limit searches. That is, one might search for "depression" not "seasonal affective disorder" to narrow the search to exclude materials about SAD. Using the "NOT" operator is a good way to limit searches to avoid materials on comorbid disorders (i.e., substance abuse, grief) when the other issues are not clinically relevant to the client's needs and situation. The "NOT" operator may also be used to limit the population the search will target. For example, one might search for "depression" NOT "elders" to focus a search about a middle-aged client.

Search operators may be identified either by symbols or words. That is, depending on the search engine, an "AND" search might be identified by a "+" (plus) sign or an "&" (ampersand) symbol. A "NOT" operator might be symbolized as a "-" (minus) sign. The "OR" search is often represented by "OR/" where the slash indicates usage as a search operator. In Google the "OR" operator must be typed in capital letters for the "OR" to be understood as a search term. Also in Google, the "+" can be used to set up an "AND" search by using spaces before and after the + sign. If the plus sign is used to surround a search term without spaces before and after, Google's search engine seeks the exact phrase. In effect, use of the "+" sign without spaces is the same as using double quotation marks to specifically identify a search term.

In the illustrations used above, several search operators can be combined into one phrase. One can also "nest" search operations to give one priority over others. For example, one might search for (depression AND overeating) NOT grief. By placing the parentheses around (depression AND overeating), the search engine first examines these terms and then next combines the results with the information for the remaining terms (not included in the parentheses).

The scope of thorough computerized searchers can be daunting. Lists of the Boolean search phrases used in some Cochrane Collaboration full reviews run to three full pages of single-spaced text. Keywords vary in subtle fashion, and combinations of search phrases may yield different results. Still, for practice decision-making purposes, a few search combinations may point to a major fraction of the available research. In other cases, limited returns from searches may reflect a lack of available research, not a flaw in search methods.

While computerized searches can be terrific resources for finding clinically useful information, it is common to find many results or "hits" that prove irrelevant. Search engines use very formal rules to find materials. They often include materials in which the search term is a very minor focus or where the material simply states that it is excluding the topic from discussion! In all cases, careful human vetting of results is needed to ensure relevance to the clinical situation. Critical thinking is also needed to determine whether results that are unusual nonetheless have potential relevance and utility for a specific case. Searches may expand our thinking and can help us generate new ways of looking at situations, but ultimately it comes down to how the clinician interprets located information. The goal is to find the best available research for the clinical need that guides the EBM/EBP search process.

## The Next Step in EBP: Critically Evaluating Located Research Knowledge

It is very important to keep in mind that many print and online sources will make claims about "best practices" and "evidence-based treatments" using a wide variety of standards or, at worst, little systematic evidence at all. The EBP practice model emphasizes including research knowledge as one vital part in the development of assessment and treatment plans. EBP equally emphasizes the client's clinical needs and situation, as well as the views and values of the client. Using the professional expertise of the clinical social worker, the best available research is collaboratively integrated into intervention planning with the client. The goal of EBP is to help make treatment (or diagnostic or preventive) decisions that are likely to be most effective with the least potential for ineffectiveness or harm. Clients need to participate in EBP treatment planning in order to fully meet their needs and ensure their active involvement in treatment processes. More than one treatment (or diagnostic test or prognosis) may be supported by strong research evidence or none at all.

One challenge for clinical practitioners is that many terms have developed around EBP. As we have pointed out in Chap. 1, books and articles claiming "best practices" or "empirically supported" treatments or interventions may use standards that are not the same as those promoted within the EBP movement. Keep in mind that "best practices" have no standard definition. It may be claimed by authors whose work has little or no solid research support. "Best practices" are also used by funders or working groups who develop lists of services they will fund or endorse. Further, as we noted in Chap. 1, some states have defined lists of treatments or services they will fund that are called "best practices." Such lists are often developed using standards quite different from those used more widely in the EBP movement. "Empirically supported" or "research-supported" treatments and programs usually have at least one outcome study, but this research may not be experimental or of high quality. Many authors use the term "empirically supported" when only a single study has been completed showing positive outcome, with or without a clear research design or a clear definition of the treatment used. "Empirically supported treatments" under the American Psychological Association model must have at least two experimental outcome studies or ten or more single-subject design studies to use this label.

Once suitable research information has been found on the clinical question, the third step in the EBP practice decision-making model is to evaluate this information for relevance and for quality. The focus shifts from finding information to critically evaluating it. Different kinds of professional knowledge and skill are applied in this appraisal process. The next three chapters will explore how to appraise and evaluate research reports and results. The first step is to identify the research design used by each study.

## References

Bronson, D., & Davis, T. (2012). *Finding and evaluating evidence*. New York: Oxford.

Carr, A. (2002). *Prevention: What works with children and adolescents? A critical review of psychological prevention programmes for children, adolescents and their families*. New York: Routledge.

Carr, A. (2009). *What works with children, adolescents and adults?* New York: Routledge.

Chen, Y. (2002). Chinese classification of mental disorders (CCMD-3): Towards integration in international classification. *Psychopathology, 35*(2/3), 171–175.

Chinese Society of Psychiatry. (2001). *Chinese classification of mental disorders*. Ginan, China: Chinese Society of Psychiatry, Committee on the Chinese Classification of Mental Disease.

David, D., Lynn, S. J., & Montgomery, G. (Eds.). (2018). *Evidence-based psychotherapy: The state of the science and practice*. New York: Wiley.

Drisko, J. (2010). Technology in teaching. In J. Anastas (Ed.), *Teaching in social work: An educator's guide to theory and practice* (pp. 115–150). New York: Columbia University Press.

Fonagy, P., Cottrell, D., Phillips, J., Bevington, D., Glaser, D., & Allison, E. (2015). *What works for whom? A Critical review of treatments for children and adolescents* (2nd ed.). New York: Guilford.

Karls, J., & Wandrei, K. (1994). *Person-in-Environment system: The PIE classification system for social functioning problems*. Washington, D.C.: NASW Press.

Kreuger, L., & Stretch, J. (2000). How hypermodern technology in social work bites back. *Journal of Social Work Education, 36*(1), 103–114.

Lingiardi, V., & McWilliams, N. (2017). *Psychodynamic diagnostic manual* (2nd ed.). New York: Guilford Press.

Roth, A., & Fonagy, P. (2005). *What works for whom? A critical review of psychotherapy research* (2nd ed.). New York: Guilford Press.

Summers, R., & Barber, J. (2010). *Psychodynamic therapy: A guide to evidence-based practice*. New York: Guilford Press.

Weisz, J., & Kazdin, A. (Eds.). (2017). *Evidence-based psychotherapies for children and adolescents* (3rd ed.). New York: Guilford Press.

Winter, D., Metcalfe, C., & Grenyer, B. (2014). *Effective psychotherapies: What else works for whom?* London: Wiley-Blackwell.

# Chapter 6
# Step 3 of Evidence-Based Practice: Part 1—Evaluating Research Designs

Once you have located some research that can help answer your practice question, Step 3 in the evidence-based medicine (EBM) and evidence-based practice (EBP) decision-making model is to appraise the quality of this research. An initial inspection of materials should help differentiate those that are generally relevant for your purposes from those that are not. Relevance may be initially determined by examining the research question that each study addresses. Studies should have clear and relevant research questions, fitting your practice needs. Once these "apparently relevant" studies are identified, the appraisal shifts to issues of research methodology. Even studies that appear quite relevant initially may later on prove to have important limitations as the details of their methods are explored.

Evaluating the quality of research reports can be a complex process. It involves several components. We will begin by reviewing research designs used in EBP. While many of these designs should be familiar to social workers, they may be described using different terminologies in EBM and EBP research reports (Drisko, 2011). Chapter 7 will review several other methodological steps in appraising research (sampling, defining the treatment or other intervention, test and measures, and statistics). These provide the basis for examining meta-analysis and systematic reviews, two widely used methods for aggregating research results in EBM and EBP, examined in Chap. 8.

Research design is the first methodological issue a clinical social worker must identify in appraising the quality of a research study. *A research design is the orienting plan that shapes and organizes a research project.* Different research designs are used for research projects with distinct goals and purposes. Sometimes this is a researcher-determined choice, and other times practical and ethical issues force the use of specific research designs. In EBM/EBP, research designs are one key part of appraising study quality.

While all clinical social workers are introduced to research methods as part of their required course work, most do not make much use of this knowledge after graduation. Doing EBP, however, will require that clinical social workers and

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_6

other mental health professionals make greater use of their knowledge about evaluating research for practice.

Research designs are so important to EBM/EBP that this chapter will focus on them exclusively. Other very important—and very closely related—aspects of research methods will be examined in the following chapter (sampling, measures, definitions of treatments, and analysis). Our goal is to provide a useful refresher and reference for clinical social workers. For readers who have a basic grasp of research designs and methods, this chapter can serve as a brief review and resource. Still, some terminology, drawn from medicine, will no doubt be unfamiliar. For others who need only an update, this chapter offers it. Many excellent follow-up resources are identified in each section of the chapter.

## Research Designs

This review of research designs has three main purposes. First, it will introduce the variety of terminology used in EBP research, which is often drawn from medical research. This terminology sometimes differs from the terminology used in most social work research texts that draw on social sciences research terminology. Second, the strengths and limitations of each research design are examined and compared. Third, the research designs are rank ordered from "strongest" to "weakest" following the EBM/EBP research hierarchy. This allows readers to quickly understand why some research designs are favored in the EBM/EBP literature.

Thyer (2011) states, quite accurately, that the EBP practice decision-making process does not include any hierarchy of research designs. This is indeed correct. The EBP practice decision-making process states that clinicians should use the "best available evidence." It does not state that only the results of research with certain types of research designs are to be valued. That is, it is entirely appropriate to use the results of case study research or even "practice wisdom" when no better evidence is available. Yet many organizations and institutions make quite explicit that there is a de facto hierarchy of evidence within EBP. This hierarchy is even clearly stated in the early writing of Dr. Archie Cochrane (1972), who promoted the use of experimental research knowledge to inform contemporary practice decision-making. Littell (2011) notes that the Cochrane Collaboration publishes "empty reviews" that report no research results deemed to be of sufficient design quality to guide practice decision-making. This practice contradicts the idea of identifying the best available evidence. In effect, the best available evidence is reduced to evidence generated by experimental research designs. This practice creates confusion about what constitutes the best available evidence for clinicians, policy planners, and researchers.

Some EBP/EBM authors do not report *all* the best available evidence, but instead report only the experimental evidence that they deem worthy of guiding practice. They make this choice because only well-designed experiments allow attribution of causal relationships to say that an intervention *caused* observed changes with minimal error. Still, this practice represents some academic and economic politics within EBP research summaries. As discussed in Chap. 2, there are good arguments for and against this position, but it is not entirely consistent with the stated EBM/EBP practice decision-making model. Clinical social workers should be aware that this difference in viewpoints about the importance of research design quality is not always clearly stated in the EBP literature. Critical, and well-informed, thinking by the clinician is always necessary.

Research designs differ markedly. They have different purposes, strengths, and limitations. Some seek to explore and clarify new disorders or concerns and to illustrate innovative practices. Others seek to describe the characteristics of client populations. Some track changes in clients over time. Still others seek to determine if a specific intervention caused a specific change. While we agree that the EBP practice decision-making process states that clinicians should use "the best available evidence" and not solely evidence derived from experimental results, we will present research designs in a widely used hierarchy drawn from the Oxford University's Centre for Evidence-Based Medicine (2009, 2016). This hierarchy does very clearly give greater weight to experimental, randomized controlled trial [RCT] research results. It should be seen as representing a specific point of view, applied for specific purposes. At the same time, such research designs do provide a strong basis for arguing that a treatment caused any changes found, so long as the measures are appropriate, valid, and reliable and the sample tested is of adequate size and variety. Due to the strong interval validity offered by experimental research designs, results based on RCTs design are often privileged in EBM/EBP reports. We will begin this listing with the experimental research designs that allow causal attribution. We will then progress from experiments to quasi-experiments, then move to observational or descriptive research, and end with case studies. The organization of this section follows the format of the research evidence hierarchy created by Oxford University's Centre for Evidence-Based Medicine (2009, 2100; 2016, 2018).

## Types of Clinical Studies

### *Part 1: Experimental Studies or RCTs*

EBP researchers view properly conceptualized and executed experimental studies. These are also called randomized controlled trials or RCTs. RCTs provide internally valid empirical evidence of treatment effectiveness. They are prospective in nature as they start at the beginning of treatment and follow changes over time (Anastas, 1999). Random assignment of participants symmetrically distributes potential confounding variables and sources of error to each group. Probability samples further provide a suitable foundation for most statistical analytic procedures.

The key benefit of an experimental research design is that they minimize threats to internal validity (Campbell & Stanley, 1963). This means the conclusions of well-done experiments allow researchers to say an intervention *caused* the observed changes. This is why experiments are highly regarded in the EBM/EBP model. The main limitations of experiments are their high cost in money, participation, effort, and time. They may be ethically inappropriate for some studies where random assignment is inappropriate. A final disadvantage is that volunteers willing to participate may not reflect clinical populations well. This may lead to bias in external validity or how well results from controlled experiments can be generalized to less controlled practice settings (Oxford Centre for Evidence-Based Medicine, 2019).

In the European medical literature, experiments and quasi-experiments may alternately be called *analytic studies*. This is to distinguish them from descriptive studies that, as the name implies, simply *describe* clinical populations. Analytic studies are those that quantify the relationship between identified variables. Such analytic studies fit well with the PICO or PICOT treatment decision-making model (Oxford Centre for Evidence-Based Medicine, 2019).

## The Randomized Controlled Trial (RCT) or Classic Experiment

It is a quantitative, prospective, group-based study based on primary data from the clinical environment (Solomon, Cavanaugh, & Draine, 2009). Researchers randomly assign individuals who have the same disorder or problem at the start to one of two (or more) groups. Later, the outcomes for each group are compared at the completion of treatment. Since researchers create the two groups by random assignment to generate two very similar groups, the RCT is sometimes called a *parallel group design*. Usually one group is treated and the other is used as an untreated control group. Researchers sometimes use placebo interventions with the control group. However, researchers may alternately design experiments comparing two or more different treatments where one has been previously demonstrated to produce significantly better results than does an untreated control group. Pre- to post-comparisons demonstrate the changes for each group. Comparison of post-scores across the treated groups allows for demonstration of any greater improvement due to the treatment. Follow-up comparisons may also be undertaken, but this is not a requirement of an experiment.

The experiment or RCT can be summarized graphically as:

$$\begin{array}{cccc} R & O_1 & X & O_2 \\ R & O_1 & & O_2 \end{array}$$

where R stands for random assignment of participants, $O_1$ stands from the pretest assessment (most often with a standardized measure), X represents the intervention given to just one group, and $O_2$ stands for the posttest, done after treatment, but using the same measure. There may also be additional follow-up posttests to document how results vary over time. These would be represented as $O_{3,}$ $O_{4,}$ etc. There may be two or more groups under comparison in an RCT. Further, more than one measure of outcome may be used in the same experiment.

In medical studies, particularly of medications or devices, it is possible to *blind* participants, clinicians, and even researchers to their experimental group assignments. The goal is to reduce differences in expectancies that might lead to different outcomes. In effect, either conscious or unconscious bias is limited to strengthen the internal validity of the study results. A *double blind* RCT design keeps even group assignments unknown to participants and to the treating clinicians. *Single blind* experiments keep only the participants unaware of group assignments. Blinding is more possible where placebo pills or devices can be used to hide the nature of the intervention. Blinding is much more difficult in mental health and social service research where interactions between clients and providers over time are common.

While blinding is common in EBM studies of medications and devices, it is rare in mental health research. There is, however, research that shows that clinical practitioners and researchers may act consciously or unconsciously to favor treatment theories and models that they support (Dana & Loewenstein, 2003). This phenomenon is known as *attribution bias*, in which people invested in a particular theory or treatment model view it more positively than do others. Attribution bias may work consciously or unconsciously to influence study implementation and results. In turn, it is stronger research evidence if clinicians and researchers who do outcome studies are not the originators or promoters of the treatment under study.

The American Psychological Association standards for empirically supported treatments (ESTs) require that persons other than the originators of a treatment do some of the outcome studies used to designate an EST. That is, at least one study not done by the originator of a treatment is required for the EST label. How clinician and researcher biases are assessed in the EBM/EBP model is less clear. However, most Cochrane and Campbell Collaboration systematic reviews do assess and evaluate the potential for bias when the originators of treatments are the only sources of outcome research on their treatments (Higgins & Green, 2018; Littell, Corcoran, & Pillai, 2008). In addition, all Cochrane and Campbell Collaboration systematic reviews must include a statement of potential conflicts of interest by each of the authors.

It is important to keep in mind that experiments may have serious limitations despite their use of a "strong" research design. Sample size is one such issue. Many clinical studies compare small groups (roughly under 20 people in a group). Studies using small samples may lack the statistical power to identify any differences across the groups correctly and fully. That is, for group differences to be identified, a specific sample size is required. The use of an experimental research design alone does not mean that the results will always be valid and meaningful. (We will examine issue beyond research design that impacts research quality later in the next two chapters.) Still, done carefully, the experimental research design or RCT has many merits in allowing cause-effect attribution.

The CONSORT Statement (2010) established standards for the reporting of RCTs. CONSORT is an acronym for "CONsolidated Standards of Reporting Trials." The people who make up the CONSORT group are an international organization of physicians, researchers, methodologists, and publishers. To aid in the reporting of RCTs, CONSORT provides a free 37-item checklist for reporting or assessing the quality of RCTs online at http://www.consort-statement.org/. The CONSORT Statement is available in many different languages. The CONSORT group also provides a free template for a flow chart of the RCT process and statement. These tools can be very helpful to the consumer of experimental research since they serve as guides for assessing the quality of RCTs. A CONSORT flow chart (also called a Quorum chart) is often found in published reports of recent RCTs.

## The Randomized Crossover Clinical Trial

It is a prospective, group-based, quantitative, experimental study based on primary data from the clinical environment. Individuals with the same disorder, most often of a chronic or long-term type, are randomly assigned to one of two groups, and treatment is begun for both groups. After a designated period of treatment (sufficient to show positive results), groups are assessed and a "washout" phase is begun in which all treatments are withheld. After the washout period is completed, the treatments for the groups are then switched so that each group receives both treatments. After the second treatment is completed, a second assessment is undertaken. Comparison of outcomes for each treatment at both end points allows for determination of treatment effectiveness on the same groups of patients/clients for both treatments. This strengthens the internal validity of the study. A comparison of active treatment outcomes for all patients is possible. However, if the washout period is not sufficient, there may be carry-over effects from the initial treatment that in turn undermines the validity of the second comparison. Used with medications, there are often lab tests that allow determination of effective washout periods. Secondary effects, such as learning or behavior changes that occur during the initial treatment, may not wash out. Similarly, it may not be possible to wash out learned or internalized cognitions, skills, attitudes, or behaviors. This is a limitation of crossover research designs in mental health and social services.

The merit of crossover designs is that each participant serves as his or her own control which reduces variance due to individual differences among participants. This may also allow use of smaller sample sizes while generating a large enough sample to demonstrate differences, known as statistical power. All participants receive both treatments, which benefits them. Random assignment provides a solid foundation for statistical tests. Disadvantage of crossover studies includes that all participants receive a placebo or less effective treatment at some point which may not benefit them immediately. Further, washout periods can be lengthy and curtail active treatment for the washout period. Finally, crossover designs cannot be used where the effects of treatment are permanent, such as in educational programs or surgeries.

Crossover trials may also be undertaken with single cases (rather than groups of participants). These are called *single-case crossover trials.* The basic plan of the single-case crossover trial mimics that used for groups but is used with just a single case. The crossover trial may be represented graphically as:

$$A_1 \quad B_1 \quad A_2 \quad B_2 \quad A_3$$

where $A_1$ stands for the initial assessment, $B_1$ represents the first intervention given, the second $A_2$ represents the next assessment which is made at the end of the first intervention after washout, and $B_2$ stands for second type of intervention or the crossover. Finally, $A_3$ represents the assessment of the second intervention done when it is completed. Note that a washout period is not specifically included in this design but may be if the researchers chose to do so. Comparison of treatment outcomes for each intervention with the initial baseline assessment allows determination of the intervention effects. More than one measure may be used in the same crossover study.

Since random assignment is not possible with single cases, the results of single-case crossover studies are often viewed as "weaker" than are group study results. However, each individual, each case, serves as its own control. Since the same person is studied, there is usually little reason to assume confounding variables arise due to physiologic changes, personal history, or social circumstances.

It is possible to aggregate the results of single-case designs. This is done by closely matching participants and replicating the single-case study over a number of different participants and settings. This model is known as *replication logic*, in which similar outcomes over many cases build confidence in the results (Anastas, 1999). It is in contrast to *sampling logic* used in group experimental designs in which potentially confounding variables are assumed to be equally distributed across the study groups through random assignment of participants. In replication logic, repetition over many cases is assumed to include and address potentially confounding variables. If treatment outcomes are positive over many cases, treatment effectiveness may be inferred. In EBM, single-case studies are not designated as providing strong research evidence, but consistent findings from more than ten single-case study outcomes are rated as strong evidence in the American Psychological Association's designation of empirically supported treatments (ESTs).

## The Randomized Controlled Laboratory Study

It is a prospective, group, quantitative, experimental study based on laboratory rather than direct clinical data. These are called *analog studies* since the lab situation is a good, but not necessarily perfect, replication of the clinical situation. Laboratory studies are widely used in "basic" research since all other variables of influences except the one under study can be controlled or identified. This allows testing of single variables but is unlike the inherent variation found in real-world clinical settings. Randomized controlled laboratory studies are often conducted on animals where genetics can be controlled or held constant. Ethical issues, of course, limit laboratory tests on humans. Applying the results of laboratory studies in clinical practice has some limitations, as single, "pure" forms of disorders or problems are infrequent and contextual factors can impact of treatment delivery and outcome.

## Effectiveness vs. Efficacy Studies: Experiments Done in Different Settings

In mental health research, a distinction is drawn between clinical research done in the real-world clinical settings and that done much more selectively for research purposes. Experimental studies done in everyday clinical practice setting are called *effectiveness studies.* Such studies have some potentially serious limitations in that they often include comorbid disorders and may not be able to ensure that treatments are provided fully and consistently. This reduces their interval validity for research purposes. On the other hand, using real-world settings enhances their external validity, meaning that the results are more likely to fit with actual practice with everyday clients and settings. In contrast, more carefully controlled studies that ensure experimental study of just a single disorder are known as *efficacy studies.* Efficacy studies carefully document that a fully applied treatment for a single, carefully screened disorder is effective (or are not effective).

One well-known example of a clinical efficacy study is the NIMH Cross-site Study of Depression (Elkin, Shea, Watkins, et al., 1989). This study rigorously compared medication and two forms of psychotherapy for depression. Strict exclusion criteria targeted only people with depression and no other comorbid disorders. Medication "washouts" were required of all participants. Such efficacy studies emphasize internal validity; they focus on showing that the treatment alone caused any change. The limitations of applying efficacy studies results are that real-world practice settings may not be able to take the time and effort needed to identify only clients with a single disorder. Such efforts might make treatment unavailable to people with comorbid disorders, which may not be practical or ethical in many clinical settings. Further, the careful monitoring of treatment fidelity required in efficacy studies may not be possible to provide in many clinical settings (often for reasons of funding and time).

Efficacy studies are somewhat like laboratory research, but the similarity is not quite exact since they are done in clinical settings, just with extra steps. Efficacy studies add an extra measure of rigor to clinical research. They do show with great precision that a treatment works for a specific disorder. However, results of efficacy studies may be very difficult to apply fully in everyday clinical practice (given its ethical, funding, and practical limitations).

## *Part 2: Quasi-experimental and Cohort Studies—Comparisons Without Random Participant Assignment*

Random assignment of participants to treated versus control groups is a way to strengthen internal validity and to limit bias in research results. Random assignment ideally generates (two or more) equivalent groups for the comparison of treatment effects versus an untreated control group. Quasi-experimental research designs lack random assignment but do seek to limit other threats to the interval validity of study results. They are often used where random assignment is unethical or is not feasible for practical reasons.

## The Quasi-experimental Study or Cohort Study

In studies of clinical practice in mental health, it is sometimes unethical or impractical to randomly assign participants to treated or control groups. For example, policy-makers may only fund a new type of therapy or a new prevention program for a single community or with payment by only certain types of insurance. In such situations, researchers use existing groups or available groups to examine the impact of interventions. The groups, settings, or communities to be compared are chosen to be as similar as possible in their key characteristics. The goal is to approximate the equivalent groups created by random assignment. Where pre- and post-comparisons are done on such similar groups, such a research design is called a quasi-experiment. The key difference from a true experiment is the lack of random assignment of participants to the treated or control groups.

The quasi-experiment can be summarized graphically as:

$$\begin{array}{ccc} O_1 & X & O_2 \\ O_1 & & O_2 \end{array}$$

Once again, $O_1$ stands from the pretest assessment (most often with a standardized measure), X represents the intervention given to just one group, and $O_2$ stands for the posttest, done after treatment, but using the same measure. More than two groups may be included in a quasi-experimental study. There may also be additional follow-up posttests to document how results vary over time. More than one measure may be used in the same quasi-experiment. Note carefully that the key difference from a true experiment is the lack of random assignment of participants.

The lack of random assignment in a quasi-experiment introduces some threats to the internal validity of the study. That is, it may introduce unknown differences across the groups that ultimately affect study outcomes. The purpose of random assignment is to distribute unknown variables or influences to each groups as equally as possible. Without random assignment, the studied groups may have important differences that are not equally distributed across the groups. Say, for example, that positive social supports interact with a treatment to enhance its outcome. Without random assignment, the treated group might be biased in that it includes more people with strong social supports than does the control group. The interaction of the treatment with the impact of social supports might make the results appear better than they might have been if random assignment was used. Thus in some EBM/EBP hierarchies of research evidence, quasi-experimental study results are rated as “weaker” than are results of true experiments or RCTs. That said, they are still useful sources of knowledge and are often the best available research evidence for some treatments and service programs. To reduce potential assignment bias, quasi-experimental studies use “matching” in which as many characteristics of participants in each group are matched as closely as possible. Of course, matching is only possible where the variables are fully known at the start of the study.

Advantages of quasi-experimental or cohort studies include their ethical appropriateness in that participants are not assigned to groups and can make their own personal treatment choices on an informed basis. Cohort studies are usually less expensive in cost than are true experiments, though they may both be financially costly. Disadvantages of cohort studies are potentially confounding variables may be operative but unknown. Further, comparison groups can be difficult to identify. For rare disorders, large samples are required which can be difficult to obtain and may take a long time to complete.

### The “All or None” Study

The Centre for Evidence-Based Medicine at Oxford University (2009, B13) includes in its rating of evidence the “All or None” research design. This is a research design in which, in very difficult circumstances, clinicians give an intervention to a group of people at high risk of serious harm or death. If essentially all the people who received the intervention improve or survive, while those who do not receive it continue to suffer or die, the inference is that the intervention caused the improvement. This is actually an observational research design, but given the nature of the groups compared, all or none results are viewed as strong evidence that the treatment caused the change. However, given their very important effects, such research results are highly valued so long as all or a large fraction of people who receive the intervention improve. Such designs fit crisis medical issues much better than most mental health issues, so all or none design is extremely rare in the mental health literature. They do have a valuable role in informing practice in some situations.

## *Part 3: Non-interventive Research Designs and Their Purposes*

Not all practice research is intended to show an intervention *causes* a change. While EBM/EBP hierarchies of research evidence rank most highly, those research designs that do show an intervention cause a change, even these studies stand on a foundation built from the results of other types of research. In the EBM/EBP hierarchy, clinicians are reminded that exploratory and descriptive research may not be the best evidence on which to make practice decisions. At the same time, exploratory and descriptive research designs are essential in setting the stage for rigorous and relevant experimental research. These types of studies may also be the “best available evidence” for EBP if experiments are lacking or are of poor quality. Critical thinking is crucial to determining just what constitutes “the best available evidence” in any clinical situation.

## The Observational Study

It is a prospective, longitudinal, usually quantitative, tracking study of groups or of individuals with a single disorder or problem (Kazdin, 2010). Researchers follow participants over time to assess the course (progression) of symptoms. Participants may be either untreated or treated with a specified treatment. People are not randomly assigned to treated or control groups. Because participants may differ on unknown or unidentified variables, observational studies have potential for bias due to the impact of these other variables. That is, certain variables such as genetic influences or nutrition or positive social support may lead to different outcomes for participants receiving the same treatment (or even no treatment). Some scholars view observational studies as a form of descriptive clinical research that is very helpful in preparing the way for more rigorous experimental studies.

## The Longitudinal Study

It is a prospective, quantitative and/or qualitative, observational study ideally based on primary data, tracking a group in which members have had, or will have, exposure or involvement with specific variables. For example, researchers might track the development of behavioral problems among people following a specific natural disaster or the development of children living in communities with high levels of street violence. In medicine, researchers might track people exposed to the SARs virus. Longitudinal studies help identify the probability of occurrence of a given condition or need within a population over a set time period. While such variables are often stressors, cohort studies may also be used to track responses to positive events, such as inoculation programs or depression screen programs.

Graphically a longitudinal study can be represented as:

$$X \quad O_1 \quad O_2 \quad O_3 \quad O_4 \quad O_5 \quad O_6 \qquad \text{OR}$$
$$O_1 \quad O_2 \quad O_3 \quad X \quad O_4 \quad O_5 \quad O_6$$

Here the X stands for exposure to a risk factor and O stands for each assessment. The exposure or event X may either mark the start of the study or may occur while assessments are ongoing. Participants are not randomly assigned which may introduce biases. Note, too, that there is no control or comparison group though studies of other people without the target exposure can serve as rough comparison groups.

In contrast to experimental studies with random assignment, participants in longitudinal studies may be selected with unknown strengths or challenges that, over time, affect the study results. Thus, confounding variables can influence longitudinal study results. Over time, loss of participants may also bias study results. For instance, if the more stressed participants dropout of a study, their loss may make the study results appear more positive than they would be if all participants continued to the study's conclusion. Because longitudinal studies are prospective in design, rather than retrospective, they are often viewed as stronger than are case-control studies. Longitudinal studies do not demonstrate cause and effect relationships but can provide strong correlational evidence.

### Case-Control Study

It is a retrospective, usually quantitative, observational study often based on secondary data (or data already collected, often for different initial purposes). Looking back in time, case-control studies compare the proportion of cases with a potential risk or resiliency factor against the proportion of controls that do not have the same factor. For example, people who have very poor treatment outcomes for their anxiety disorder may be compared with a closely matched group of people who had very positive outcomes. A careful look at their demographic characteristics, medical histories, and mental health histories might identify risk factors that distinguish most people in the two groups. Rare differences in risk or resiliency factors are often identified by such studies. Case-control studies are relatively inexpensive but are subject to multiple sources of bias if used to attribute "cause" to the risk or resiliency factors they identify.

### Cross-Sectional Study or Incidence Study

These are descriptive, usually quantitative, studies of the relationship between disorders or problems and other factors at a single point in time. Incidence designs are used descriptively in epidemiology. They can be useful for learning baseline information on the incidence of disorders in specific areas. Cross-sectional studies are very valuable in a descriptive manner to policy planning, but do not demonstrate cause and effect relationships. They are not highly valued in the EBM/EBP research design hierarchy. An example of a cross-sectional study would be to look at the rate of poverty in a community during 1 month of the year. It is simply a snapshot picture of how many individuals would be classified as living in poverty during that month of the study. Comparing the number of persons in poverty with the total population of the community gives the *incidence rate* or *prevalence rate* for poverty.

### The Case Series

It is a descriptive, observational study of a series of cases, typically describing the manifestations, clinical course, and prognosis of a condition. Both qualitative and quantitative data are commonly included. Case series can be used as exploratory research to identify the features and progression of a new or poorly understood disorder. They can be very useful in identifying culture-bound or context-specific aspects of mental health problems. Case series are inherently descriptive in nature, but they are most often based on small and nonrandom samples. The results of case series may not generalize to all potential patients/clients.

Despite its limitations, many scholars point out that the case series is the most frequently found research design in the clinical literature. It may be the type of study most like real-world practice and is a type of study practitioners can undertake easily. In some EBM/EBP research design hierarchies, the case series are among the least valued form of clinical evidence, as they do not demonstrate that an intervention caused a specific outcome. They nonetheless offer a valuable method for making innovative information about new disorders or problems and new treatment methods available at an exploratory and descriptive level.

One example of this type of research design is the Nurses' Health Study (Colditz, Manson, & Hankinson, 1997). This is a study of female nurses who worked at Brigham and Women's Hospital in Boston and who completed a detailed questionnaire every second years on their lifestyle, hormones, exercise, and more. Researchers did not intervene with these women in any way but have used the information compiled by the study over several decades to identify trends in women's health. These results can then be generalized to other women or used to provide information on health trends that could be explored further through more intervention-based research (Colditz et al., 1997).

## The Case Study (or Case Report)

It is a research design using descriptive but "anecdotal" evidence drawn from a single case. The data may be qualitative and/or quantitative. Case studies may be the best research design for the identification of new clinical disorders or problems. They can be very useful forms of exploratory clinical research. They usually include the description of a single case, highlighting the manifestations of the disorder, its clinical course, and outcomes of intervention (if any). Because case studies draw on the experiences of a single case, and often a single clinician, they are often labeled "anecdotal." This differentiates evidence collected on multiple cases from that based on just a single case. Further, case study reports often lack the systematic pre-post-assessment found in single-case research designs. The main (and often major) limitation of the case study is that the characteristics of the single case may, or may not, be similar to other cases in different people and circumstances. Another key limitation is that reporting of symptoms, interventions, course of the problem, and outcomes may be piecemeal. This may be because the disorder is unfamiliar or unique in some way (making it worth publishing about), but since there are few widely accepted standards for case studies, authors provide very different kinds and quality of information to readers.

Case studies offer a valuable method for generating innovative information about new disorders or problems, even new treatment methods, available on an exploratory or formative basis. These ideas may become the starting point for future experimental studies.

We note again that case studies may be “best available evidence” found in an EBP search. If research based on other designs is not available, case study research may be used to guide practice decision-making.

### Expert Opinion or Practice Wisdom

The EBM/EBP research design hierarchy reminds clinicians that expert opinion may not (necessarily) have a strong evidence base. This is not to say that the experiences of supervisors, consultants, and talented colleagues have no valuable role in practice. It is simply to point out that they are not always systematic and may not work well for all clients in all situations. As research evidence, unwritten expert opinion lacks planned and systematic testing and control for potential biases. This is why it is the least valued form of evidence in most EBM/EBP evidence hierarchies. Such studies may still be quite useful and informative to clinicians in specific circumstances. They serve to point to new ways of thinking and intervening that may be valuable to specific clinical situations and settings.

## Resources on Research Design in EBP

Many textbooks offer good introductions to research design issues and offer more illustrations than we do in this chapter. Note, however, that the terminology used in EBM/EBP studies and summaries may not be the same as is used in core social work textbooks. Resources addressing issues in research design are found in Table 6.1.

**Table 6.1** More resources on research design

| |
|---|
| Anastas, J. W. (1999). *Research design for social work and the human services* (2nd ed.). New York: Columbia University Press. |
| Campbell, D., & Stanley, J. (1963). *Experimental and quasi-experimental designs for research.* New York: Wadsworth. |
| Creswell, J., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage. |
| Drisko, J. (2011). Researching Clinical Practice. In J. Brandell (Ed.). *Theory and practice in clinical social work* (2nd ed., pp 717–738). Thousand Oaks, CA: Sage. |
| Hulley, S., Cummings, S., Browner, W., Grady, D., & Newman T. (2018). *Designing clinical research* (4th ed.). Philadelphia, PA: Lippincott, Williams & Wilkins. |
| Kazdin, A. (2010). *Single-case research designs: Methods for clinical and applied settings*. (2nd ed.). New York: Oxford. |
| Rubin, A. (2008). *Practitioner’s guide to using research for evidence-based practice.* Hoboken, NJ: Wiley. |
| Soydan, H., & Palinkas, L. (2014). *Evidence-based practice in social work: Development of a new professional culture.* New York: Routledge. |
| Yin, R. K. (2018). *Case study research and applications: Design and methods*. Thousand Oaks, CA: Sage. |

## Summary

This chapter has reviewed the range of research designs used in clinical research. The different types of research designs have different purposes and different strengths. These purposes range from exploratory, discovery-oriented purposes for the least structured designs like case studies to allowing attribution of cause and effect relationships for highly structured experimental designs. This chapter has also explored the research design terminology used in EBM/EBP. Some of this terminology draws heavily on medical research and may be unfamiliar to persons trained in social work or social science research. Still, most key research design concepts can be identified despite differences in terminology. The EBM/EBP research design hierarchy places great emphasis on research designs that can document that a specific treatment caused the changes found after treatment. This is an important step in determining the effectiveness or efficacy of a treatment. Many documents portray experiments, or RCTs, as the best form of evidence upon which to base practice decisions. Critical consumers of research should pay close attention to the kind of research designs used in the studies they examine for practice application.

Key reviews of outcome research on a specific topic, such as those from the Cochrane Collaboration and Campbell Collaboration, use research design as a key selection criterion for defining high-quality research results. That is, where little or no experimental or RCT research is available, the research summary may indicate there is inadequate research knowledge to point to effective treatments. “Empty” summaries pointing to *no* high-quality research evidence on some disorders are found in the Cochrane Review database. This reflects their high standards and careful review. It also fails to state just what constitutes the best available evidence. Empty reviews do not aid clinicians and clients in practice decision-making. They simply indicate that clinicians should undertake an article-by-article review of research evidence on their clinical topic. Clinicians must bear in mind that the EBP practice decision-making process promotes the use of “the best available evidence.” If such evidence is not based on experimental research, it should still be used, but used with caution. It is entirely appropriate in the EBP framework to look for descriptive or case study research when there is no experimental evidence available on a specific disorder or concern.

Even when experimental or RCT research designs set the framework for establishing cause and effect relationships, a number of related methodological choices also are important to making valid knowledge claims. These include the quality of sampling, the inclusion of diverse participants in the sample, the quality of the outcome measures used, the definitions of the treatments, and the careful use of the correct statistical tests. Adequate sample size and representativeness are important to generalizing study results to other similar people and settings. Appropriately conceptualized, valid, reliable, and sensitive outcome measures document any changes. How treatments are defined and delivered will have a major impact on the merit and worth of study results. Statistics serve as a decision-making tool to determine if the results are unlikely to have happened by chance alone. All these methods work in tandem to yield valid and rigorous results. These issues will be explored in the next two chapters on Step 3 of the EBP process, further appraising some additional methodological issues in practice research.

## References

Anastas, J. W. (1999). *Research design for social work and the human services* (2nd ed.). New York: Columbia University Press.

Campbell, D., & Stanley, J. (1963). *Experimental and quasi-experimental designs for research*. New York: Wadsworth.

Cochrane, A. (1972). *Effectiveness and efficiency: Random reflections on health services*. London: Nuffield Provincial Hospitals Trust.

Colditz, G., Manson, J., & Hankinson, S. (1997). The Nurses' health study: 20-year contribution to the understanding of health among women. *Journal of Women's Health, 6*(1), 49–62.

CONSORT Group. (2010). *The CONSORT statement*. Retrieved from http://www.consort-statement.org/home/

Dana, J., & Loewenstein, G. (2003). A social science perspective on gifts to physicians from industry. *Journal of the American Medical Association, 290*(2), 252–255. https://doi.org/10.1001/jama.290.2.252

Drisko, J. (2011). Researching clinical practice. In J. Brandell (Ed.), *Theory and practice in clinical social work* (2nd ed., pp. 717–738). Thousand Oaks, CA: Sage.

Elkin, I., Shea, T., Watkins, J., et al. (1989). National Institute of Mental Health treatment of depression collaborative research program: General effectiveness of treatments. *Archives of General Psychiatry, 46*, 971–982.

Higgins J., & Green, S. (Eds.). (2018). *Cochrane Handbook for Systematic Reviews of Interventions* Version 6.0 [updated September 2018]. The Cochrane Collaboration, 2011. Available from http://handbook.cochrane.org

Kazdin, A. (2010). *Research design in clinical psychology* (5th ed.). New York: Pearson.

Littell, J. (2011, January 15). *Evidence-based practice versus practice-based research*. Paper presented at the Society for Social Work and Research, Tampa, FL.

Littell, J., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analysis*. New York: Oxford University Press.

Oxford University Centre for Evidence-based Medicine. (2009, April). *Asking focused questions*. Retrieved from http://www.cebm.net/index.aspx?o=1036

Oxford University Centre for Evidence-based Medicine. (2016, May). *The Oxford levels of evidence 2.1*. Retrieved from https://www.cebm.net/2016/05/ocebm-levels-of-evidence/

Oxford Centre for Evidence-Based Medicine. (2019). Study designs. Retrieved from https://www.cebm.net/2014/04/study-designs/

Solomon, P., Cavanaugh, M., & Draine, J. (2009). *Randomized controlled trails*. New York: Oxford University Press.

Thyer, B. (2011, January 15). *Evidence-based practice versus practice-based research*. Paper presented at the Society for Social Work and Research, Tampa, FL.

# Chapter 7
# Step 3 of Evidence-Based Practice: Part 2—Evaluating Research Methods

Appraising the quality of research studies for practice use is Step 3 of the evidence-based practice (EBP) decision-making process. It can be a difficult task that requires professional expertise distinct from doing clinical assessment (Step 1 in EBP) or locating research resources (Step 2 in EBP). While research design (covered in Chap. 6) is one very important aspect of evaluating evidence-based medicine (EBM) and EBP research reports, it is hardly the only important methodological issue. Several other methodological choices also are important to making valid claims about treatments, diagnostic tests, or prognosis. These include the quality, diversity, size, and comprehensiveness of the sample, the validity and sensitivity of outcome measures, the definition of the treatment under investigation, and the careful use of the correct statistical tests. These methods work in tandem to yield valid and rigorous results in quantitative clinical research. In this chapter, we will review each of these issues in order.

For clarity and simplicity, we will focus on treatment outcomes in the examples used in this chapter. Readers are reminded the EBP methods can also be applied to diagnostic protocols, determination of prognoses, and even to cost-effectiveness studies. Our focus on treatment is meant to be representative, and of interest to most clinical social workers. It does not mean that the other concerns are any less important applications of EBP.

## Sampling Issues

Just *who* is included in a clinical study shapes how well its results will reflect the range of persons with a particular disorder or problem. Even an experimental research design will be limited as a resource for treatment planning if it covers very few people or only people with very limited demographic characteristics. There are four key components to look for in sample selection: representativeness, diversity, size, and randomization.

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_7

## *Representativeness and Diversity*

In quantitative research, a sample should be *representative* of the persons and setting of interest. That is, if researchers want to study a specific genetic disorder, they would ideally target all the people with the disorder. They might also include other people without the genetic disorder for comparison purposes. If there were environmental factors or cultural factors that might interact with the genetic disorder, such as diet or exposure to toxins or cultural differences, groups would be sought that vary in diet, exposure to toxins, and culture. This would represent the variety of populations impacted by the genetic disorder as best we can conceptualize them. Of course, money, time, and access might not be available to study all subgroups at once, so researchers might choose to study a smaller subset of this larger population. In this case, several studies would be necessary to obtain a sample that is fully representative of the genetic disorder and the factors we think exacerbate it or minimize it.

In clinical mental health studies, there may be a wide range of factors that could influence the effectiveness of a treatment or diagnostic test. Clinical social workers look for a wide range of biopsychosocial-spiritual factors that help understand multifaceted human problems. These include differences in gender, race, cultural or ethnicity, tribal affiliation, sexual orientation, class, age, ability, religious beliefs, legal status, genetic makeup, and geography. At times additional factors may also be important. This makes representativeness a very challenging issue for mental health researchers. Practical limitations also mean that fully representative samples may not be easy to obtain. This is especially true for minority populations and for low incidence disorders. Researchers, with input from clients and clinicians, must carefully conceptualize both their study problem formulations and the nature of their sample.

Compromises are common in sample size and representativeness due to limitations in time, funding, access, and client participation. For example, Wilt et al. (2008) report that very few RCTs on treatments for prostate cancer have been completed. They found that no type of prostate cancer treatment had then been demonstrated to be more effective than is “watchful waiting.” Side effects of the treatments were also not well identified. One reason was that men were unwilling to participate in the randomization process needed to compare different treatments. In this case, useful clinical research was limited due to the active choices of men who sought, quite understandably, to get what they believed were the best personal outcomes. Wilt et al. (2008) also note that differences in definitions and methods made the synthesis of findings across the available studies difficult to aggregate.

Where in the world samples are drawn may impact study representativeness. Glickman et al. (2009) point out that many drug trials are being “outsourced” to developing countries. They note that this raises ethical issues regarding subjecting people in these countries to the risks of research participation and allows companies to offer lower payments as incentives to participants. They also note that it is unclear if the living conditions of persons in developing countries create an appropriate sample for comparison with those in developed countries. Culture, diet, and other habits may vary. In effect, persons in developing countries *may* be an inappropriate population for sample selection in drug tests when the consumers of the drugs live in different circumstances. Other researchers argue that including a wider range of people in drug tests may benefit the clinical trial participants and others in their country as well. Selecting samples for clinical trials is complex and may raise important ethical, diversity, and representativeness issues.

## *Sample Size*

The size of a sample is also very important. A larger sample is generally more likely to represent the population from which it was selected fully and effectively than is a smaller sample. Larger samples are also more likely to include people with diverse demographics. Larger samples tend to produce less sampling error in accurately representing an entire population. Larger samples also allow for more variety in background factors than is possible in very small samples. Further, when looking at the sample as a whole, the influence of a few "outlier" cases—those with extremely high or low scores—is also reduced as the size of the sample increases. Larger samples also generally allow for greater *statistical power*—the ability of a statistic to show an effect when it is present. Small samples may lack the power to demonstrate any effects at all. Unfortunately, there is no simple way to estimate what constitutes a "large enough" sample without considering the research question, design, sample, measures, and intended analysis type (Dattalo, 2008). The sample sizes needed to demonstrate different outcomes/effects also vary. Too small a sample may be inadequate to demonstrate the effect a researcher wants to study.

Still, it is probably a quick and useful rule that studies with less than 40 participants in total are what researchers call small samples. This would allow comparison of 20 persons in treated and control groups in an experimental research design. On the other hand, some of these small-scale studies may have samples that are quite adequate to document clinical effects, though they may not adequately include socially diverse people. Where small samples are used, having equal numbers in each group is very helpful when some statistical tests are used. Specifically having equal sized groups in an experimental comparison reduces standard error terms in these statistical analyses.

## *Types of Samples*

*Probability samples* are samples in which each member of the population or sampling frame has an equal chance of being selected. A *sampling frame* is a list of potential participants used to make concrete the larger conceptual population the study seeks to address. Probability samples are intended to limit active selection bias by the researcher. Selection bias is a tendency to exclude certain cases (also called elements) from a sample. For example, persons with very severe levels of anxiety might be excluded, while persons with low or moderate levels of anxiety are included in the sample. In this example, a selection bias yields a sample which excludes persons who may make up a substantial part of the population of persons with anxiety. Such a bias is also called a *nonresponse bias*, as persons with high levels of anxiety are excluded from the study sample. Their responses will remain unknown and unstudied. The results of study, based on such a sample, will not apply well to all people who may be found in clinical practice. In other words, the result is not easily *generalized* or applied to the larger population of people with anxiety disorders. Generalization is a key goal of most experimental research.

*Non-probability samples*, oriented by theory or a specific research purpose, emphasize certain characteristics of sample members but do not insure equal chance of selection from the sampling frame or population. Non-probability samples may be representative, or may be very unrepresentative, of the sampling frame or population (Dattalo, 2008). When used in quantitative studies, probability samples provide a better mathematical basis for defining and limiting selection biases and nonresponsive bias than do most non-probability samples.

There are several methods for selecting probability samples. These include single or independent random sampling, systematic sampling, stratified sampling, and cluster sampling. *Simple random sampling* begins with assigning a number to each case or element in the study sampling frame. Sampling frames, however, are often not entirely inclusive of all the cases in the population of interest. A sampling frame might be the list of NASW members used as a way to define the larger, and not perfectly known, population of all social workers in the United States. The next step in simple random sampling is to use an unbiased method to select cases from the sampling frame. This is usually done using a software generated list of random numbers to select cases from the sampling frame. Selection continues, using numbers form the random listing, until the desired number of cases are selected. *Systematic random sampling* is a similar method, which begins with the random selection of a case from the sampling frame. Then every third or tenth or hundredth element is selected until the desired number of cases are selected.

*Stratified sampling* begins with dividing the sampling frame into groups with no shared members. For example, groups might be distinguished by ethnicity, gender differences, or age. These distinct groups are known in sampling as strata. Random sampling is then undertaken within each *stratum*. The purpose of stratified sampling is to insure adequate sampling of subgroups that are few in numbers and might not be sufficiently sampled by simple random sampling methods. Some strata may be disproportionately sampled in order to insure inclusion of enough cases from each subgroup to represent the population successfully. Finally, *cluster sampling* is used for very large populations. Cluster sampling uses existing subsets of a population to define subgroups. Random sampling is then completed on these subgroups to generate a probability sample. One common example is to use geographic areas defined by a government source to identify neighborhoods. Known, representative, neighborhoods may then be selected randomly. From within each neighborhood, cases are then selected on a random basis. Techniques to ensure probability proportionate to the size of each subgroup can be used to insure equal chance of selection for each case.

For further information on probability sampling, clinical social workers may turn to most social work research texts (Anastas, 1999; Engel & Schutt, 2016; Rubin & Babbie, 2017). However, very few social work texts offer detailed information on sampling issues related to qualitative research (Drisko, 2003). Patton (1990) and Kuzel (1999) both offer solid introductions to several varieties of qualitative sampling and their purposes.

Probability samples are used in clinical experiments or RCTs to maximize representativeness. They are often required for the appropriate use of many statistic tests. Finally, probability samples allow appropriate generalization from the sample to the larger populations from which it was drawn. Probability sampling can be a vital part of quantitative clinical research.

## Increasing Statistical Power: Sample Size and Other Influences

Sample size also influences statistical analysis. Dattalo (2008) states "a study should only be conducted if it relies on a sample size that is large enough to provide an adequate and prespecified probability of finding an effect if the effect exists" (p. 16). That is, specific sample sizes are needed to generate adequate statistical power (Kraemer & Blasey, 2016). If a sample is too small, no significant effect can be demonstrated. If a sample is too large, undue and unnecessary burdens are placed on participants. The costs of completing the study also increase.

*Statistical power* is the probability of falsely accepting a null hypothesis when the research hypothesis is actually true (Cohen, 1988). It is defined mathematically as 1-ß, where ß (beta) is the probability of accepting the null hypothesis falsely, also called Type II error. Overall, statistical power is a function of the researcher's selected statistical significance criterion level (or *a* level) set for a specific test, the precision of measures, the type of research design, the magnitude of the effect under study, and the sample size (Dattalo, 2008; Kraemer & Blasey, 2016).

In inferential statistics, a criterion or *a* level of 0.05 (1 chance in 20) is a commonly used standard for rejecting a null hypothesis. This standard is set conservatively in order to avoid making an incorrect, "false positive," decisions, also called Type I errors. Researchers can choose to increase the criterion or *a* level to 0.10 in order to be more likely to obtain a significant result. However, in doing so the chance of false positives, known as Type I errors, is increased. Though there is no simple standard for statistical power, a value of 0.80 is widely accepted. In effect, researchers accept a 4 to 1 trade off in making a "false negative" decision, or Type II error, versus a Type I error. This means researchers are more likely to falsely accept negative results than positive (but incorrect) results. It is a careful, conservative, standard. If the magnitude of an effect is very large, a small sample might lead to a correct decision to reject the null hypothesis. But if the magnitude of the effect is small to moderate, a small sample may not be adequate to reveal it at all. Some samples are simply too small to generate adequate statistical power. This renders the result of the statistical test invalid regardless of the research question and statistical result. Increasing the sample size may be one easy and effective way to increase statistical power.

There are several methods for determining statistical power and related sample sizes (Aberson, 2010; Dattalo, 2008; Kraemer & Blasey, 2016; Murphy & Myers, 2014). These methods differ by the nature of the measures used (categorical versus continuous) and the statistics employed. There are also several computer software programs to calculate statistical power and to identify the specific sample sizes needed to obtain adequate statistical power. A power calculation should be included in all quantitative research reports.

Another way to increase statistical power is to use more structured research designs, particularly experimental and observational designs (Cook & Campbell, 1979). Such research designs reduce the number of extraneous factors that can influence the study results, thereby reducing unknown, systematic errors. Use of measures with high validly and reliability can also increase statistical power. This is because such measures reduce measurement error compared to less precise alternatives.

Overall, ideal samples for EBM/EBP research (1) will be representative of the population of interest, (2) will include human diversity in the final samples, (3) will be selected using probability sampling techniques, and (4) will be large enough in number to insure adequate statistical power. These factors are especially important in experimental or RCT research designs. Very small sample sizes (under 20 per group) warrant very careful review. This is because small samples may lack the statistical power to reveal important but modest differences in outcomes between groups. Inadequate statistical power is a greater concern when tests or measures of uncertain validity and reliability are employed. Researchers using small samples should state clearly how they determined that the sample has adequate power to produce meaningful results. This should be evident in the Methods section of the research report.

## *The Human Diversity Included in Study Samples*

Clinicians should look carefully at the social diversity included in a study's sample. Researchers may not always report many details about the social demographics of their sample beyond age and gender. Even age, racial, and ethnic differences may be minimally detailed or omitted. Some research may unfortunately focus on populations that are not the most likely to suffer from the problem under study (Cherubini, Del Signore, Ouslander, Semla, & Michel, 2010). This may make it unclear if the sample used in an article was representative of a specific minority client whose care you are planning. It would be very helpful for clinical practice use if researchers and publishers provided greater detail about samples in research reports.

Another issue relates to *attrition* of participants as a research project continues. While study attrition is not exactly a sampling issue, it can influence the nature of the final study sample. Excellent sampling plans can be undermined when people drop out of a study, creating unequal group sizes and reducing the number of participants. Readers of research reports should look for the number and characteristics of the original, planned sample. Next, the characteristics of the researcher's final *obtained sample* should be compared to the initial "intent to treat" sample (Gupta, 2011). An intent to treat sample includes *all* participants initially randomized in a study, including those who drop out or fail to complete services. It is the most accurate and complete way to do a clinical study. Further, where follow-up measures are used, researchers should carefully document any attrition during follow-up periods. A common concern is that dropouts and clients who cannot be found for follow-up measures reduce the overall sample size and may alter the equivalence of groups compared in experimental research. Dropouts may also reduce the social diversity in a study's sample.

In mental health research, there is one final complicating issue regarding sampling. Many clients who apply for mental health services discontinue, or drop out of, services after only a few sessions. Many do not complete even planned, short-term treatments. The challenge for researchers is that it is unclear if clients who drop out have actually gotten better, gotten worse, were disappointed in the services, or left for other reasons. Knowing the reasons for dropping out could inform the research but is generally unknown and unexamined. Researchers can end up with unequal group sizes, smaller samples that undermine statistical power, and limited information of the actual effects of treatment. This can reduce the validity of experimental comparisons in mental health studies.

After a research design has been selected and the study sample defined, researchers must select tests and measures to assess key concepts. These tests and measures may define both the grouping variables that define who is treated or untreated, as well as the outcome or dependent variables that define what changes might occur.

## Standardized Tests and Measures of Biopsychosocial Issues

### *Identifying and Locating Standardized Tests and Measures*

To scientifically test if a treatment or a diagnostic protocol is effective, it is vitally important to have valid and reliable measures of the client's situation before and after the intervention. These measures may include observations, frequency counts of behaviors, spoken statements, reviews of client records, and/or standardized tests. Each data collection method has somewhat different strengths and limitations (Anastas, 1999). Standardized tests and measures are widely used in EBM/EBP research. They provide a known and replicable approach to assessing and summarizing client status and behavior.

Standardized tests and measures are developed and refined through a series of steps that helps define their validity and reliability. These characteristics are known as the *psychometric properties* of a test or measure. There are literally thousands of tests and measures that could be used in clinical social work practice. It is sometimes difficult just to understand the abbreviations used to refer to these tests and to learn their intended uses. Copyright protects most standardized tests and measures. Copyright provides protection for the intellectual property of the test creator, as well as some payment for their work. Researchers also keep some tests away from potential test takers to insure they cannot be studied and reviewed by test takers in order to influence, or even to fake, test results. One consequence of copyright protection is that the full text of test and measures may be difficult to obtain, even for practice or teaching purposes. However, some standardized tests are available in full for clinical and research uses (see Corcoran & Fischer, 2014; Hudson, 1982).

An extensive database of tests is available online, without cost, from the Educational Testing Service TestLink web site at https://www.ets.org/test_link/find_tests/. The TestLink database provides abstracts on educational tests but includes many for mental health and counseling as well. It is a fine resource to learn the basics about psychological tests. The limitation of the TestLink database is that it does not provide psychometric information to help clarify the validity and reliability of each test. Another database of tests and measures, the Health and Psychosocial Instruments (HaPI) database, is available through paid subscription or purchase only. It is found online at https://www.ebsco.com/products/research-databases/health-and-psychosocial-instruments-hapi. Many large agencies, hospitals, and social work programs have access to the HaPI database. HaPI includes links to publications about the development psychosocial tests and measures which may provide more detail than is available through TestLink. Still, neither database provides psychometric information on listed tests and measures. Neither database provides copies of tests. Both are still very useful for initially identifying tests and their intended uses.

The Buros Institute's *Mental Measurements Yearbooks* (Carlson, Geisinger, & Jonson, 2017) provide much more information about specific tests and measures. Currently in its 20th edition, these print reference books may be found in academic libraries and even in some larger public libraries. The limitation of print copies is that they may not include the latest versions of tests. (They are not exactly yearbooks; new editions appear about every 3 years.) The strength of the Buros yearbooks is that they provide details on the purposes, norming samples, range of scores, assessments validity and reliability, as well as commentary on the test. Buros Test Reviews Online allows purchase of reviews of individual tests and measures included in the print yearbooks. It is found online at http://buros.org/test-reviews-online. The test reviews online are available at http://buros.unl.edu/buros/jsp/search.jsp. Costs for purchase of individual reviews are modest.

## *Identifying the Specific Properties of Tests and Measures*

Once you have located an appropriate test or measure, the next step is to examine its psychometric properties. These details are available in the Buros' yearbooks or online reviews, as well as in the manual available for most widely used copyrighted measures. Researchers typically provide few details about tests and measures in research reports. However, psychometric information helps readers establish the degree of confidence they should place in specific tests and measures. It also provides information about whom the test was designed to assess. This includes whether or not the test was normed on socially diverse samples and any age-related limits on use of the test. Next, we will review the attributes of tests and measures.

Sound tests and measures must be both valid and reliable. *Validity* refers to whether the measure fully captures what it is intended to measure. *Reliability* refers to whether the measure produces consistent results. Together, validity and reliability make up the key components of the *psychometric properties* of the tests and measures used in mental health research. A third factor, the *sensitivity* of a test, refers to how well it can capture the type and magnitude of changes. Sensitivity is often difficult to assess but may be very important to clinical research. Complete research reports will include the psychometric properties of all tests and measures they employ. Medical research typically focuses on nonpsychological variables using biological and physiological measures that should have strong validity and reliability.

## Validity of Measures

Validity as it relates to tests in mental health research has several aspects (Campbell & Stanley, 1963). The first is *face validity* or whether or not the items (questions) that make up a test explicitly address the concepts of interest. For example, a test of marital conflict should include items that directly and overtly address different types and forms of marital conflict. A similar term is *content validity*. Content validity refers to how well the content of a test reflects the varied concepts making up a multifaceted construct. For example, measure of child maltreatment should include items about the domains of neglect, verbal abuse, sexual abuse, and physical abuse. *Construct validity* refers to the extent to which a test reflects the entire construct of interest. Some constructs may be implicit or inferred rather than directly measured in test items. For example, we would expect a test of depression to include items on mood, diminished interest in activities, sleeping patterns, feelings of worthlessness, inability to concentrate, suicidal ideation and actions, psychomotor retardation, and weight loss. These items reflect core DSM criteria for depression. A valid test must examine all of these component parts to fully cover the construct of depression as defined by DSM criteria. To exclude any one of them would reduce the construct validity of a test of depression. Note that these three aspects of validity are conceptual and require critical thinking to appraise. They also require a look at the actual items included in the measures. The absence of an important component of a construct from a measure is not (usually) captured by quantitative psychometric summaries. Clinicians need to find and look for the actual content of tests and measures to critically evaluate face, content and construct validity unless the report author includes discussion of them.

Other forms of validity are based on quantitative methods. These are collectively known as *criterion validity*. In criterion validity, the results of one test are compared to the results on another, similar, test or measure. Most texts suggest a greater than 70%, or greater than 0.70, criterion for establishing strong criterion validity. This is consistent with the way most correlation statistics are interpreted. Correlation values from 0.00 to 0.30 are generally labeled "weak" correlations, values from 0.31 to 0.70 values are labeled "moderate" correlations, and values from 0.71 to 1.00 are "strong" correlations.

In *concurrent validity* the results of similar tests are correlated with each other or to another established criterion. For example, a researcher might correlate the scores of people at similar points in time on the Beck Depression Inventory, revision II, and the Hamilton Depression Inventory. Both are measures of depression based on DSM criteria. If the results correlated highly ($r > 0.70$), the researcher could reasonably claim there was good concurrent validity between the two measures. Developers of new tests often correlate their results to the results on a more widely used test to establish the new test's validity. *Predictive validity* refers to how well performance on a measure at one point in time predicts future performance on another measure or criterion. A researcher might find that high school grades are predictive of staying in a certain treatment program. This information might be used to screen out people with low high school grades or to examine if the program's model and language are pitched to a higher level than is truly necessary. *Discriminant validity* refers to how well a test distinguishes between groups of different people. For example, a screening test for anxiety disorders should be able to distinguish between people likely to have an anxiety disorder from those who are unlikely to have one.

## Reliability of Measures

In addition to validity, the *reliability* or consistency of a measure is vital to assessing its overall quality. Researchers and psychometricians (psychological test developers) determine the reliability of test and measures through quantitative tests. There are several methods to assess the validity of a measure. In *test-retest reliability* assessment, researchers give the same test to the same group of people at two different times, perhaps a week apart. The results of the two administrations of the test are then correlated with each other to provide a measure of test-retest reliability. Given no major environmental changes, the results are expected to correlate strongly with each other. The assumption is that the characteristics of the group will change very little in the brief time between two test administrations and that exposure to the test items will have limited impact on the results.

In *internal consistency reliability* assessment, researchers correlate the questions or items within a measure with each other. This may be done by comparing results from the first half of the test to results from the second half of the test, called *split-half reliability*. Split-half reliability assumes items are included in the test more than once and that both halves appropriately reflect the full content of interest. Other models involved complex correlations of all test items to all other items. Researchers often report internal consistency reliability using the coefficient alpha ($a$) statistic. Finally, *inter-rater reliability* compares the results of assessments made by two or more researchers to assess their consistency. This might include comparison of diagnoses or quantitative ratings made by clinicians. Researchers also use percentages of agreement, correlation statistics, and the Cohen's (1960) kappa statistic (*k*) to report inter-rater reliability, based on the characteristics of the test or measure.

## Reporting Validity and Reliability Assessments

Due to space limitations in journal articles, many research reports provide only summary information about the psychometric properties of the measures they employ. Some include only abbreviations for tests names and cite only the test developer's manual in regard to a measure's psychometric properties. Such limited information makes it very difficult for the clinician to determine if the outcome measures used in a study are valid and reliable or truly applicable to any specific client's needs. Critical thinking is always necessary in interpreting such reports.

Clinical social workers should expect brief but detailed description of the psychometric properties of standardized tests used in EBP research. Tests should be named in full and any abbreviations used should be clearly explained. At a minimum, a citation to the test manual or other resources describing the tests purposes and psychometric properties should be clearly cited for follow-up. For example, Telch, Agras, and Linehan (2002, p. 1072) describe each standardized test they use in a single sentence followed by a full citation for further review: "Questionnaires used in this study include the Binge Eating Scale (Gormally, Black, Daston, & Rardin, 1982), a measure of severity of binge eating problems...." This is a useful start. We would argue that the validity and reliability of each test should also be described in a bit more detail to guide the reader more fully. This is often done in a very brief summary such as "the XXX depression scale has r = .81 concurrent validity when correlated to results of the widely-used YYY depression measure. The mean test-retest reliability is .76 over 4 trials with different samples." In such a summary, it is clear that the tests in use have documented validity and reliability.

Detailed information on validity and reliability is often omitted when widely used standardized tests are employed. These include tests such as the Symptom Checklist-90, the Achenbach Child Behavior Checklist, the Beck Depression Inventory, and the Hamilton Rating Scale for Depression. The drawback of this practice is that it assumes readers are familiar with the tests and measures, which is very often not that case for clinical practitioners. Further, this summary information does not specify if a standardized test has been "normed" on minority population groups, or with people who have comorbid or co-occurring disorders.

## Interpreting Reports of Clinical Standardized Tests and Measures

One obvious but tricky issue in psychotherapy outcome research is to be sure the people included in a study all share the same challenge. Standardized tests are often used to verify the diagnosis of participants in research studies. For example, the

Structured Clinical Interview for DSM-III for Axis II [SCID-II] (Spitzer, Williams, Gibbon, & First, 1990) was widely used to define operationally many personality disorders. The reliability of the SCID-II was in several studies with kappa values ranging from $k = 0.02$ to 0.98 (Columbia University Biometrics Research Department, undated). The kappa values for each diagnosis included several studies with $k > 0.70$, but results were not consistent across the measures. These extremely varied results mean that across different DSM diagnoses, and evaluated using different methods, the measured reliability of the SCID-II varies widely. It may be understood as a good-enough, but far from perfect, method to determine or affirm a DSM diagnosis.

There are a wide range of tests and measures to assess client status before, during, and after treatment. For example, Binks and colleagues (2006, pp. 5–6), in their systematic review of psychological treatments for borderline personality disorder, were interested in concerns such as anxiety, depression, self-reports of self-harm, mental states, service outcomes, substance use, frequency of admission of psychiatric hospitals, or incarceration. They report these outcomes in 15 categories, including (among others) behavior, global state, mental state, substance use, economic cost, and recidivism. They go on to detail 77 specific types of outcomes, such as no change, no clinically important change, average changes, etc. (pp. 5–6). Such a wide range of variables requires a number of different techniques to assess. Some of these variables are more directly applicable to practice decision-making and immediate client needs than are others.

It is very important that measures be clearly defined and fully specified in reports. Marshall et al. (2000) found that use of poorly defined and unstandardized measures was a major limitation in their research on services for people with schizophrenia. Poorly defined outcome measures, with unknown validity and reliability, will not produce the high quality experimental results sought in EBP. While not all service outcomes can be understood in advance, it is very important that the outcome or dependent variables in an experiment be assessed using valid and reliable methods.

Some measures of status, such as length of an inpatient stay, are *direct measures* leading to frequency counts. Other measures employ scales and indices to cover a wider range of content and to get at internal states, cognition, and feelings. In all cases the process of measurement should be defined and standardized to ensure accurate assessment when used in experimental research. This enhances reader's ability to compare results across different clients and settings. Even a simple count of days of inpatient hospitalization requires a definition of just what constitutes a "day." Similarly, scales of depression or anxiety require careful construction to produce valid and reliable measurements.

Clinical rating scales come in two main types: measures of global function and disorder specific measures. For example, some studies included in Binks and colleagues' (2006) systematic review used the Global Assessment Scale [GAS] (Endicott, Spitzer, Fleiss, & Cohen, 1976) of overall psychological well-being. The GAS, completed by the clinician, rates client well-being on a 0 to 100 scale. Higher scores are positive results. The GAS is a global measure of functioning covering several domains of the patients' well-being. The Brief Psychiatric Rating Scale

[BPRS] (Overall & Gorham, 1962) was also used to assess mental state on several dimensions or subscales. Some of these 18 subscales are somatic concerns, depression, anxiety, suspiciousness, hallucinations, and grandiosity. The BPRS is scored from 18 to 126, with higher scores representing greater overall symptom severity. The BPRS, as a global standardized test, assesses both the client's stated problem and other unspoken concerns as well. Global standardized tests can help clinicians and researchers identify unstated comorbid disorders or sources of resilience and challenge that shape the client's clinical presentation.

To complement the results of global standardized tests, more narrowly focused tests are used. Tests of specific disorders or concerns are often more comprehensive in the dimensions they cover (have greater construct validity) and are often more sensitive to small differences. Thus, they are useful both to pinpoint specific client concerns and to reveal small changes that occur during treatment. The Beck Depression Inventory-II (Beck, Steer, Ball, & Ranieri, 1996) is a disorder specific standardized test that measures depression largely in terms of patient's cognitive views. Binks and colleagues (2006, p. 13) describe the BDI as measuring "supposed manifestations of depression," pointing up the importance of critical thinking and of appraising content validity! The BDI rates depression severity from 0 to 63 with higher scores indicating greater severity of depression.

The Inventory of Interpersonal Problems, Circumplex Version (Horowitz, Alden, Wiggins, & Pincus, 2000), also known as the interpersonal circumplex, measures interpersonal behavior and motives on two axes. One dimension assesses power, dominance, and need for control, while the other assesses friendliness and warmth. It is a 64-item self-report questionnaire on which each item is rated from 0 to 4 and summed up to generate an overall score. Higher scores indicate greater difficulty in interpersonal functioning. Many other disorder-specific rating scales are available for common mental health problems such as anxiety, eating disorders, and thought disorders.

Standardized tests further differ on the source of information—who fills them out—and on what information they are based. *Self-report questionnaires* are quite common. These tests are efficient and cost-effective but allow respondents to enter misleading or false information. Providing socially acceptable but inaccurate information is a widely known phenomenon. Other widely used tests are clinical rating scales based on a diagnostic interview. Such interviews must include specific content for the clinician's appraisal to be valid. Ratings made by clinicians may miss specific content that questionnaires might capture. On the other hand, clinician ratings may capture subtleties of communication and nuances missed by questionnaires. These forms of data collection are complementary.

Standardized tests also differ in sensitivity. *Test sensitivity* is the ability of a measure to correctly identify those with the concern (i.e., the true positive rate). Some standardized measures are meant more as screening tools but are also used in clinical research to measure outcomes. One example is the Achenbach Child Behavior Checklist (CBCL). The CBCL is a widely used screen test and comes in different versions for preschool (Achenbach & Rescorla, 2000) and for school-aged children (Achenbach & Rescorla, 2001). It is based on rating specific behaviors as "not true" or not evident, "sometimes true," or "always true." As a result, important changes in just one or two key behaviors may not be immediately evident in an overall CBCL score. In other words, the CBCL may lack sensitivity to small changes. Its use as an outcome measure must be carefully appraised. Optimal outcome measures have strong sensitivity to small changes. This is especially important when they are used to assess change in brief interventions.

All tests and measures used in clinical research should be reported in detail. The complete names of standardized tests should always be reported, with citations for sources. Many measures have more than one version, and multiple editions are common. At what point(s) in time the measures are completed should also be stated clearly. As noted above, the basic psychometric properties of a measure, including assessments of its validity and reliability and norming population, should be reported clearly. Limitations to the use of the measures, by age range, gender, intellectual ability, or other factors, should be clearly stated. For example, the use of adult measures with adolescents and with persons over age 65 may be invalid. Measures for children of different age ranges are also common. For progressive disorders such as Alzheimer's disease, different version of measures may be available for persons with different functional abilities. The scoring range of the measures, and whether high scores represent positive or negative results, should always be stated.

Standardized tests are increasingly available in versions useable by persons for whom English is not their first language. Bit by bit, versions of standardized tests normed for different racial and ethnic groups are being developed or identified. However, not all standardized tests have been normed on nonwhite or multicultural populations. Resources for standardized measures suitable for populations of color include Jones' (1996) and Benuto and Leany (2015) on African-American populations, Benuto (2013) on Hispanic populations, and Benuto, Thaler, and Leany (2014) on Asian populations.

For further information, most social work research texts offer good introductions to tests and measures. More detailed information on psychometrics may be found in texts by Furr and Bacharach (2007) or Rust and Golombok (2009).

Defining outcomes is a challenging process. Yet there are many test and measurement technologies available to both researchers and clinical practitioners. Still more complex is clearly defining and distinguishing among treatments and their "active" ingredients.

## Defining Treatments

Standardized tests are used to assess both the baseline state (before or at the start of treatment) and later on the outcome of interventions. They are the dependent or outcome variables in EBM/EBP research. The independent variable, or the factor that leads to change in an experiment, also needs careful definition. The goal is to learn if a specific treatment causes specific changes. There are many models of biopsychosocial-spiritual interventions. Interventions also vary in modality, with individual, dyad, couple, family, group, and even community interventions available. Mental health and social service treatments also vary in complexity and in specificity. Some treatments involve several components, often delivered in a specific sequence. Other treatments may be described using a curriculum-style manual, while some are described using a set of principles but are intentionally individualized in application. Defining treatments is a very difficult undertaking. However, if the delivered treatment is not well defined, one key foundation for making cause and effect attributions is absent.

To illustrate the challenges of defining biopsychosocial therapies, we will examine Binks and colleagues' (2006, p. 4) definitions of psychological treatments for people who have borderline personality disorder (BPD). These definitions are drawn from a careful systematic review and are meant to illustrate how thoughtful researchers address the challenges of defining treatments. The authors report that they faced a "huge" number of distinct treatment types making an exhaustive listing "almost impossible" to develop (p. 4). They ended up defining six key treatment types, including cognitive-behavioral, behavioral, psychodynamic, group, miscellaneous, and standard care categories. They defined cognitive-behavioral treatments (CBT) as follows:

> A variety of interventions have been labelled CBT and it is difficult to provide a single, unambiguous definition. Recognising this, we constructed criteria we felt to be both workable and to capture the elements of good practice in CBT. In order to be classified as 'well defined' the intervention must clearly demonstrate that a component of the intervention: 1) involves the recipient establishing links between their thoughts, feelings and actions with respect to the target symptom; and 2) the correction of the person's misperceptions, irrational beliefs and reasoning biases related to the target symptom. In addition a further component of the intervention should involve either or both of the following: i) the recipient monitoring his or her own thoughts, feelings and behaviours with respect to the target symptom; and ii) the promotion of alternative ways of coping with the target symptom. All therapies that do not meet these criteria but are labelled [by the original authors as] 'CBT' or 'Cognitive Therapy' will be included as 'less well defined' CBT. (p. 4)

Here the definition of the treatment is based on a few reasonable, but broad, principles that look for the application of CBT theory in practice. Note that some CBT studies may not include enough information in their reports to be classified as CBT even if they did actually meet these standards. Note too that it would be difficult to completely replicate CBT treatments in other agency settings using this definition. Other agencies might be doing CBT according to this definition, but other factors not covered in the definition might interact to make the treatment more or less successful.

Binks and colleagues (2006, p. 4) defined psychodynamic therapy in similar fashion:

> In order to be classified as psychodynamic, the intervention must not focus on a specific presenting problem (such as aggression) but rather on the unconscious conflicts that repress the individual and need to be confronted and re-evaluated in the context of the people' [sic] adult life. The following two components had to be documented in the therapeutic intervention for the therapy to be included: a) it must explore an element of the unconscious, and b) emphasises the importance of the patient's relational interaction with the therapist.

In some measure this definition appears to define psychodynamic therapy by an absence of attention to the presenting problem, which might surprise some psychodynamically informed clinical social workers. Further, sole attention to repression seems an odd choice for treating people who have BPD as it is not a prominent defense among persons who have personality disorders. Uncovering unconscious conflicts could actually be contraindicated for people who have BPD in contemporary psychoanalytic theory and practice; supportive interventions are instead recommended (Goldstein, 1995, 2001).

The authors' intent, it seems, is to again define the therapy by how its background theory is evident in real-world practice. Yet identifying unconscious conflicts and patterns interpersonal interaction might look in practice very much like establishing links among thoughts, feelings and actions in order to change irrational (or no longer relevant) perceptions and beliefs about the target symptom. This is the same language used to define CBT!

Finally, group therapy is defined. Group therapy of course is actually a modality of treatment that can be informed by several different theories, including cognitive-behavioral and psychodynamic theories. Binks and colleagues (2006, p. 4) define group therapy as "any intervention that extends beyond the individual and specifically uses a group format in this category (e.g. family therapy and psychoanalytic group therapy). We would have included studies of therapeutic communities in this category...." Here the modality of therapy defines its key features. How specific theories are evident within the content of the group sessions is not highlighted as the defining feature for group therapy. On the other hand, theory is the defining feature used for CBT and psychodynamic therapies. Note that this definition would be quite inadequate if used to replicate any particular model of group therapy in a new setting.

To aid further clarity to the definition of treatments, researchers often report the number and duration of sessions, the qualifications of the clinicians doing the treatment, and how often supervision was provided. This information does help describe the treatments used. These descriptive efforts, too, fall short of defining treatments in a manner that allows replication in other settings. Defining mental health treatments can be very difficult.

It is interesting to note that the two therapies Binks and colleagues (2006) found to be effective in treating BPD, a psychodynamically informed partial hospital program and DBT, both included highly structured treatment programs with several components such as individual and group therapy. These shared features of the two models found to be effective were not identified in Binks and colleagues' systematic review. Instead their different theoretical foundations were emphasized. (No disrespect to Binks and colleagues is intended. We view them as going much further than do most authors in providing and explaining treatment definitions.)

Another effort to further clarify the definition of treatments or other biopsychosocial intervention processes, including diagnostic procedures, is the treatment manual. Researchers often use treatment manuals to add greater specificity to the definition of treatments.

## *Treatment Manuals*

Treatment manuals seek to set forth the components of treatments in detail. Some go so far as to offer a curriculum, defining the tasks and activities to be completed in each session. One goal of the treatment manual is to improve the quality of treatment definitions in order to enhance the replicability and validity of clinical mental health research. Researchers view treatment manuals as an important way to increase the integrity of the intervention that causes change in experimental trails. This requires enough detail to be able to replicate the same treatment in different locations. As LeCroy (2008, p. 3) states, "treatment manuals move us closer to treatment fidelity." *Treatment fidelity* means that clinicians deliver the treatment fully as intended. It also means that different clinicians in different setting deliver the same treatment fully and consistently. This enhances replicability. Such replicability is useful in research to insure a treatment was fully delivered. In practice, it may also be promoted administratively to allow less well-trained, and less costly, providers to deliver a service. There is also no clear evidence that use of treatment manuals improves client outcomes, and there is some evidence that they do not (Truijens, Zühlke-van Hulzen, & Vanheule, 2019).

Some clinicians state that treatment manuals may undermine the individualization of therapies and other interventions to fit unique client needs, situations, and values. Ollendick, King, and Chorpita (2006) argue that treatment manuals might lead to mechanical interventions, stifling creativity and innovation. Smith (1995) called treatment manuals "cookbooks," and Silverman (1996) called them "paint by number approaches." In effect, these clinicians argue that treatment manuals omit professional expertise, a core component of EBM/EBP according to Haynes, Devereaux, and Guyatt (2002). There is a clear tension between individualizing therapy to specific and perhaps unique client needs, versus enhancing fidelity of treatment for research purposes.

In mental health, Sanderson and Woody (1995) define a treatment manual as materials that provide sufficient detail to allow a trained clinician to replicate a specific treatment. They leave unclear if description of broad psychological principles provides sufficient detail or if much greater detail is necessary. Sanderson and Woody also point out that treatment manuals are inadequate if the clinician lacks solid theoretical grounding or lacks supervised experience in the particular approach they deliver. Specifically, they point out that workshop training alone, without supervised experience, does not constitute adequate training in any therapeutic model. This view is countered, however, by manuals that claim to provide "step-by-step instructions for conducting individual and group sessions" (Center for Substance Abuse Treatment, 2007, p. 2). In such manuals, detail is substituted for professional expertise, contrary to the goals of EBM and EBP. There appear to be very different views on both the definition and optimal use of treatment manuals.

What do treatment manuals cover? Trepper et al. (n.d.) offer a treatment manual for solution-focused therapy (SFT) with individuals. Their manual details the basic tenets of SFT, how goals are set via conversations with clients, and the specific active ingredients of SFT. These ingredients include (1) a collaborative interaction between clients and clinician; (2) a positive, solution-focused stance; (3) looking for previous solutions; (4) looking for exceptions to problems; (5) using questions rather than interpretations; (6) maintaining a present time focus rather than a focus on the past; and (7) using compliments. Within each session, pre-session changes are appraised, goals are framed in terms of desired outcomes to current problems, goals are numerically scaled, and the miracle question technique may be used. The manual also includes vignettes of interactions within sessions as illustrations of the techniques.

In the SFT manual, a broad description of the therapy is combined with specification of certain techniques that make it possible to determine if the treatment was delivered in a valid and complete manner. A supervisor or a researcher could review a videotape or a transcript of a SFT session and determine if this therapy had been fully applied. Left a bit unclear is how many of these features must be present for the therapy to be called valid SFT for research purposes. For example, using many more interpretations than questions would not fit with SFT, but it is probably fine that the miracle question is not used in a specific therapy session.

Other manuals are still more detailed and prescriptive. Stark, Streusand, Krumholz, and Patel (2010) offer a manualized treatment for girls ages 9–13 and their caregivers called the ACTION program. They set forth a number of plain language themes for the program, including (1) "If you feel bad and you don't know why, use goals skills," (2) "If you feel bad and can change the situation, use problem solving," and (3) "If you feel bad and it is due to negative thoughts, change the thoughts" (p. 94). Structurally, the program consists of 20 sessions of 45 to 75 minutes delivered in school to small groups of girls (*n* = 2–5). Parent training involves once a week meetings with the same therapist but for only 10 sessions. Skills emphasized in the girl's groups include affective education, goal setting, coping skills training, and mood monitoring.

These skills are further broken down into a session-by-session format. Meeting 1 (p. 97) centers on "Introductions and discussion of pragmatics." The objectives for meeting 1 are to: "Discus parameters of meetings. Introduce counselors and participants. Establish rationale for treatment. Discus confidentiality. Establish group rules. Build group cohesion. Establish written group incentive system." We may assume that setting of parameters is not so unlike any other small group, but the specific rationale for the ACTION program may be. Note that building group cohesion is a universal issue for new groups but one that is very difficult to specify fully and may include some idiosyncratic components that vary from group to group.

Later meetings have different goals and progressively more focused objectives. Meeting 6 centers on "Cognition and emotion introduction to cognitive restructuring." The objectives for meeting 6 session are to: "Demonstrate the role of cognition in emotion and behavior. Introduce connection of thoughts to feelings. Enactment of coping skills activity within session." Over the course of the ACTION program, the group leaders teach the girl clients to be "thought detectives," to consider if there are alternative ways to look at a problem, and to assess the evidence on which a thought is based. Several techniques fill out the objectives for Meeting 6. One such technique in the ACTION program is talking back to the "Muck Monster." The group leaders label being unable to let go of a negative way of thinking as "being stuck in the Muck Monster." In turn, the Muck Monster creates distance from the negative thoughts and the whole person of the client and creates a suitable opponent to challenge. The enactment within Meeting 6 is likely a direct exploration of being stuck in the Muck Monster and ways to move out of this stuck position. Such displacement of the problem and generalization of are techniques widely used across different types and theories of therapy. Later session-by-session content is also outlined and linked to related ACTION techniques. Many of the later meetings (12 to 20) include practice of the program techniques within the group setting.

It is not clear that treatment manuals fully achieve their goal of making biopsychosocial therapies more fully replicable, but they may help. Treatment manuals can make more explicit the principles and tenets, the distinguishing characteristics, and the key techniques of a treatment. This alone, however, may not allow a therapy to be fully replicated by others in a different location. Therapeutic principles and techniques overlap considerably despite differences in theory and even across treatment modalities. Individual differences in client needs, style, and comfort may require adaptations of carefully described treatment procedures. Still, treatment manuals take a useful step toward improving the validity of complex biopsychosocial interventions in order to enhance the validity of research claims made about them.

Treatment manuals are not limited to behavioral and cognitive-behavioral approaches, though they are more common for these therapies. Treatment manuals are available for certain psychodynamic psychotherapies (i.e., Clarkin, Yoemans, & Kernberg, 2006), for many behavioral and cognitive-behavioral therapies (i.e., Reilly & Shopshire, 2002; or Andrews et al., 2002), and for certain family therapies (i.e., Lock, Le Grange, Agras, & Dare, 2002). Treatment manuals for specific disorders may also include sections or chapters on different age groups or other subpopulations that are likely to be affected by the disorder (see, e.g., Benedek & Wynn, 2011 on PTSD).

The last component of appraising a research report centers on methods of analysis. For quantitative research, statistics are a vital method for decision-making. The final section in this chapter offers a review of key statistics and issues in their appropriate use.

## Statistics

Statistics do not tend to be the greatest strength of many clinical social workers. While statistics are required content in most social work programs, many students do not often retain a good grasp of their use after graduation. There are many statistics, each with limiting assumptions that shape their appropriate use. We will review a number of premises for the appropriate use of statistics and point out a few key issues in interpreting statistics in research reports. It is, however, beyond this book to provide a thorough introduction or review of all statistics.

Many good introductory statistics texts are available such as Weinbach and Grinnell (2014) or Abu-Bader (2006, 2010), along with review books such as Norman and Streiner (2003).

Chapter 6 has examined how research designs shape clinical research. In interpreting research results, readers should always be clear on whether the study seeks to show differences between groups or seeks correlations among characteristics of clients. Experimental and quasi-experiment research designs explore differences between groups. Observational research designs often explore correlations among the characteristics of group members. In similar fashion, statistics fall into the same general categories: those that examine differences and those that examine correlations or associations.

Where differences are being studied, it is important that the groups being compared are as similar as possible. Comparing group differences is best achieved by using an experimental research design, but readers should further be sure the demographic characteristics (ages, genders, races, religions, etc.) and levels of functioning of the groups being compared are similar. Researchers often report comparisons of the characteristics of the groups in a clinical trial at or before the start of treatment, called a baseline. Statistics are often used to show that there is no significant difference between the treated and comparison group at baseline to document that they are similar before treatment.

## *Levels of Measure*

Data may be either discrete or continuous. Discrete data comes only in certain finite values. If we think of "number of children," answers such as "3" or "0" make sense, but 1.5 does not. On the other hand, income is continuous data. It makes sense to have an annual income of $23,453.72, even if the cents might not matter all that much. Similarly, a scale of depression might range on a continuous scale from "0" for no depression to "20" for severely depressed. A group mean score of 12.32 for several depressed clients makes sense and allows comparison to another group with a mean score of 18.65. Most (but not all) outcome measures draw upon continuous data.

The next issue to review is the nature of the data the researchers have examined. Researchers use different statistics to examine different kinds of data. Numbers can be used to define categories with no rank order, such as "1" represents the treated group and group "2" represents the untreated control group. Measures with mutually exclusive categories and without a hierarchical ranking are called *nominal-level measures*. Numbers can also be used to establish a rough hierarchy with clear but imprecise differences among the ranks. We could use "0" to represent no formal schooling, "1" to represent some grade school, "2" to represent finished grade school, "3" to represent some middle schooling, and so forth. The higher numbers do represent more school completed, but the numbers do not reflect years of school completed in a precise and consistent manner. Measures with mutually exclusive categories and a rough hierarchy but without equal intervals between values are called *ordinal-level measures*. We can also use numbers to establish a more precise hierarchy in which the interval between the numbers represents some measured dimension. It is meaningful to distinguish between a body temperature taken by mouth of 98.6 degrees and another of 102.4 degrees. The intervals between the "tenths" of a degree are all the same and provide a scale or metric for comparison. Measures with mutually exclusive categories, a clear hierarchy of values, and equal intervals between values are called *interval-level measures*. If the scale includes a nonarbitrary zero point, we gain even more information. A body temperature of 0.00 degrees has no everyday meaning (and is not included in the range of most thermometers). But having zero dollars of annual income has a very real meaning and is much less desirable than an income of $30,000. Each dollar represents an equal and consistent increase (or decrease) in annual income. Measures with mutually exclusive categories, a clear hierarchy of values, equal intervals between values, and a nonarbitrary zero point are called *ratio-level measures*.

These differences in levels of measure are important for selecting appropriate statistics. Researchers select specific statistics in part based on the level of measure of the available data. Generally speaking, using interval- or ratio-level provides more information and allows use of more powerful statistical tests. In experiments, the independent or grouping variable must be constituted by at least nominal-level nonoverlapping categories. The dependent or outcome variable is typically interval- or ratio-level data that conveys a meaningful scale of severity. Interval- and ratio-level measures also allow for more precise scaling. While interval- and ratio-level data are more "information rich" than are nominal and ordinal-level data, any level of measures can be used as a clinical outcome (dependent) variable. For example, nominal categories (i.e., meets criteria for a DSM diagnosis or does not meet criteria) and ordinal-level data (i.e., low, moderate, or high pain severity) would both be appropriate outcome variables.

## *Parametric and Nonparametric Statistics: Differences in Population Distributions*

Another issue that influences the selection of statistics is the nature of the distribution of values or score in the target population. All statistical tests are either parametric or nonparametric. *Parametric data* assumes that the population from which the researchers collected the sample data was a particular kind of distribution. Most often, this is to assume a normal distribution of data in the population. A normal distribution is symmetrical around the mean value, with equal "tails" on each side. Most textbooks call this the bell curve, though normal distributions can vary in look when graphed. A normal distribution means that there are roughly equal numbers of very low scores and very high scores. *Nonparametric* data distributions, on the other hand, make no assumptions about the form or parameters of a frequency distribution. In general, parametric statistics are more powerful and researchers should use them when possible. This is because nonparametric statistics are calculated using rank-order information only, which includes less specific information than do the parametric statistics.

Once the data is collected, researchers must examine the nature of the obtained sample's distribution. Data collected from a population that is assumed to be normally distributed population may prove to have different characteristics. The collected data ideally should have few "outliers" or very extreme high or low scores. In studies of small samples, a few outliers can alter the results of statistical comparisons profoundly as they increase or decrease group mean scores. In some studies, outliers are purposefully excluded from the final data analysis to avoid their strong influence on the overall results. Authors should clearly state if outliers are present and how outliers were interpreted and handled. Researchers should also review the distribution of scores in the obtained data. Distributions may be skewed or have many high or low scores, shifting them away from a symmetrical normal shape. The problem with skewed distributions is that comparing skewed and non-skewed groups may lead to results that are inaccurate. Statisticians can often transform non-normal distributions of data into a near-normal form by doing logarithmic transformations or other procedures. These transformations do not alter the relative values of scores, only the shape of their distribution. If transformations of the data distribution are undertaken, they should be clearly reported in the research report.

## *The Five Uses for Statistical Tests*

There are five main uses for quantitative or statistical data analysis. These uses or purposes are (1) describing the characteristics of a sample or population, (2) testing for differences among groups, (3) testing for associations among variables, (4) testing for group membership, and (5) examining structure of a theory or of a measure. The first purpose is descriptive; the other four are inferential in nature.

*Descriptive statistics*, as the name implies, seek to (a) describe the typical or most common member of a distribution and to (b) describe the spread or dispersion found within a distribution of scores. Descriptive statistics therefore come in two types: *measures of central tendency* and *measures of dispersion*. Descriptive measures of central tendency seek to tell us about the typical member of the distribution we are studying. That is, of all the cases we have, what are the most common features and what would the typical member of the distribution look like? Descriptive measures of dispersion tell us about the variation within a distribution—how much cases differ one from the other.

*Descriptive statistics are applied differentially based on the target variable's level of measure.* Among descriptive measures of central tendency, only the mode can be used with a categorical or nominal measure. For an ordinal, hierarchal measure, both the mode and the median may be used. The median conveys information about both category and place in the hierarchy, so it is a bit more "information rich" than is the mode and therefore a somewhat more useful measure of central tendency. For an interval- or scaled level measure, any measure of central tendency can be used (mean, median, or mode). This is because with interval measures, we can perform mathematical operations on the data legitimately. With an interval variable, the mean is viewed as the preferable measure of central tendency because mathematical operations are used in its calculation, requiring equal intervals along the hierarchy it measures.

Measures of dispersion are all calculated using mathematical operations, so they may be used only with interval or "quantitative" measures. No measure of dispersion can be used with nominal- or ordinal-level data. Key measures are the range (maximum value minus minimum value), the variance, and the standard deviation. Skewness and kurtosis also provide information about how similar—or how different—a given distribution of scores is to a calculated "normal" distribution.

*Inferential statistics,* as the name implies, are used to make inferences and decisions about statistical significance. They are all based upon probability theory and compare actual, "observed" results with a mathematically constructed model that presumes no difference or no association between/among the variables under study. *Inferential statistics tells us how likely it would be to obtain a specific result if there was no difference or no association among the variables under study.* If the result is quite unlikely to have occurred by chance alone, we may say there is a statistically significant difference or correlation among the variables under study. Alas, statistics only provide probabilities and never "prove" anything absolutely. Instead they can only be said to "support" or to "fail to support" specific hypotheses about relationships among variables being studied. Still, this is a very useful technology for making decisions, especially about large groups of people.

Inferential statistics are available in many named types. Researchers select specific inferential statistics based on (a) the kind of research question being asked (about difference or association/correlation), (b) the level of measure of each variable of interest, (c) the nature of the sample (independently selected or paired/correlated selection), (d) whether the sample distribution is parametric or nonparametric, and (e) the number of variables under study. This makes it imperative to carefully think out which inferential statistic best meets your decision making needs.

Inferential statistics come in two main types: *tests of difference* and *tests of association. Tests of difference* help us decide if two or more groups differ on one or more outcome measures. Note there must be both an independent, or grouping variable (to establish the groups under comparison), *and* another dependent, or outcome, variable that reveals the extent of differences across the groups. That is, do women and men differ on average annual income? The groups are the values of gender (here limited female and male options only). The dependent variable shows difference in income. For example, the values of income establish if the groups differ through the application of statistical tests.

In *tests of association*, researchers take another approach. The goal here is to see if two variables are related, and if so, how strongly. That is, if one variable increases one value, will the other variable's value also increase or might it decrease instead? To determine if two or more variables are correlated, treatment and control groups are not needed, only values on both variables for all participants. Say a researcher measures the number of hours studied before a test and also the grades received on the test. If there is an association between the variables "hours studied" and "grades," people who studied for more hours will likely score higher than people who studied less.

Tests of association are often reversible, meaning there is no clear independent variable and no clear dependent variable. For example, the association between height and weight can be viewed from either direction. This is most common with bivariate (two variable) questions. However, with several variables under study in tests of association, we tend to think of independent variables as those that precede the dependent variable in time. For example, SAT scores precede college grades (even though they do not have much direct impact on them). Thus, we might call SAT scores the independent variable and grades the dependent variable—though the terminology gets awkward at times. It is also very important to keep in mind that even a statistically significant association does not necessarily indicate that one variable *causes* the other to change. Association or correlation does not imply cause and effect.

Multivariate statistics, based on inferential statistics, are also used to *predict group membership* and to *examine the structure of a theory* using quantitative data. *Predicting group membership* requires a large sample and interval-level data on several variables. We might want to study whether certain teens fall into "high-risk" or "low-risk" groups based on information about drug use, sexual activity, and basic mental health problems. Statistical techniques such as discriminant analysis help us predict which group one would fall based on our data.

Finally, structural equation modeling techniques, including factor analysis and principal component analysis, use interval-level data on several variables and a large sample to *explore or confirm the structure of theory and measures.* Say we wanted to create a test for depression, knowing it has several component parts such as mood problems, sleep problems, and psychomotor problems. We might collect data from people who have depression and see if these "parts" actually are elements of a general depression or if they differ enough to help identify different forms of depression (such as a predominantly sleep disturbance type which may not have much apparent mood change to it). Factor analysis takes data on each of the component parts of a theory and examines which elements (factors) maximally differ one from the other. This allows factors with similarities and distinct differences to be identified.

## *Choosing a Statistical Test*

So, what statistical tests can researchers use and how do they select them? First, examine the nature of the research question we are asking—is it descriptive, or a question of difference or of association, or one of group membership or of theoretical structure? This is the first choice point. Next, look at the number of variables under study. Third, look at the level of measure of each variable. It may also be important to distinguish the independent and dependent variables. Fourth, review the nature of the sample. Was there independent selection versus paired or correlated selection? Fifth, for interval- or ratio-level, scaled, data, determine the nature of the data distribution. Is it a normal distribution or not? If not, can it be mathematically transformed into a near-normal distribution? From this review, researchers select a statistic that fits the mix of variables under study.

There are many charts to help researchers and statisticians pick the correct statistical test. The table that follows is adapted from Leeper's (n.d.) "Choosing the Correct Statistic." It is provided to help clinical social workers review the requirements for selecting among several widely used statistical tests. Note that the appropriate use of these tests is constrained by several factors, including the level of measure of each variable, the number of variables under study, and the nature of the distribution of the collected data (see Table 7.1).

## *The Misuse and Misinterpretation of Statistics in Published Reports*

It should be clear by now that the correct use of statistics is a complicated process. There is a small but important literature on the misuse of statistical tests in social work and in allied mental health fields. Cowger (1984) initially described the misuse of statistical tests in the social work literature. Huxley (1986) profiled errors in the use of statistics in *The British Journal of Social Work*, Volumes 1 through 14, finding over half of the articles using statistics contained errors. Dar, Serlin, and Omer (1994) found several repeated misuses of statistical test in their review of the psychology literature between 1968 and 1988. These include inappropriate use of null hypothesis tests and p values, neglect of effect sizes, and inflation of Type I error rate through multiple comparisons. We point out these concerns to make clear to clinical social workers that statistics should not be taken simply at face value. Researchers, like all human beings, sometimes make mistakes. Critical thinking and careful attention are always required in professional endeavors.

## *Reporting Statistics*

Statistical tests should always be reported in detail. This begins with providing enough information to allow the reader to fully determine the specific hypothesis under study. Since statistical tests actually examine the null hypothesis of no difference between groups or no association between variables, the reader should also be able to determine the null hypothesis under study. Null hypotheses are almost never stated in published reports, but they can be inferred from statements of the research

**Table 7.1** Choosing a statistical test: number of independent and dependent variables, required levels of measure, and required types of data distribution

| Number of dependent variables | Nature of independent variable(s) | Nature of dependent variable(s); and data distribution | Appropriate statistical test(s) |
|---|---|---|---|
| 1 | 0 IVs (1 population) | Interval; normal | One-sample *t*-test |
| | " | Ordinal or interval; any distribution | One-sample median |
| | " | Nominal (only 2 categories); any distribution | Binomial test |
| | " | Nominal; any distribution | Chi-square goodness-of-fit |
| | 1 IV with 2 levels (independent groups) | Interval; normal | 2 independent sample t-test |
| | " | Ordinal or interval; any distribution | Wilcoxon-Mann or Whitney test |
| | " | Nominal; any distribution | Chi-square test |
| | " | Nominal; any distribution | Fisher's exact test |
| | 1 IV with 2 or more levels (independent groups) | Interval; normal | One-way ANOVA |
| | " | Ordinal or interval; any distribution | Kruskal Wallis |
| | " | Nominal; any distribution | Chi-square test |
| | 1 IV with 2 levels (dependent/matched groups) | Interval and normal | Paired *t*-test |
| | " | Ordinal or interval | Wilcoxon signed ranks test |
| | " | Nominal; any distribution | McNemar test |
| | 1 IV with 2 or more levels (dependent/matched groups) | Interval and normal | One-way repeated measures ANOVA |
| | " | Ordinal or interval | Friedman test |
| | " | Nominal; any distribution | Repeated measures logistic regression |
| | 2 or more IVs (independent groups) | Interval and normal | Factorial ANOVA |
| | " | Ordinal or interval | (none) |
| | " | Nominal; any distribution | Factorial logistic regression |
| | 1 interval IV | Interval; normal | Correlation |
| | " | " | Simple linear regression |

| Number of dependent variables | Nature of independent variable(s) | Nature of dependent variable(s); and data distribution | Appropriate statistical test(s) |
|---|---|---|---|
| | " | Ordinal or interval; any distribution | Nonparametric correlation $r_s$ |
| | " | Nominal; any distribution | Simple logistic regression |
| 1 | 1 or more interval IVs and/or 1 or more nominal IVs | Interval and normal | Multiple regression |
| | " | " | Analysis of covariance |
| | " | Nominal; any distribution | Multiple logistic regression |
| | " | Nominal; any distribution | Discriminant analysis |
| 2 or more | 1 IV with 2 or more levels (independent groups) | Interval and normal | One-way MANOVA |
| 2 or more | 2 or more | Interval and normal | Multivariate multiple linear regression |
| 2 sets of 2 or more | 0 | Interval and normal | Canonical correlation |
| 2 or more | 0 | Interval and normal | Factor analysis |

Adapted from "Choosing the Correct Statistic" by James Leeper of the University of Alabama College of Community and Health Sciences. (Retrieved from http://bama.ua.edu/~jleeper/627/choosestat.html)

hypothesis. This may take some effort in unpacking a complex table but should be made a bit easier by descriptions in the text as well. Note that it is almost always the case that the null hypothesis is obviously incorrect; the issue is *how unlikely* a result is to occur by chance alone. Second, after stating the hypotheses, the levels of measure for all variables should be stated if not obvious. Readers should not expect to have the level of measure for gender specified, but it should be stated for unusual tests or measures. Third, the nature of the obtained data distribution should be clearly stated. A normal distribution is required for many statistical tests. If a normal distribution is not obtained, or generated by transformation, only nonparametric statistics may be used. Fourth, the criterion level to be used to determine if results are statistically significant should be selected *before* data is collected, analyzed, and reported (Dar et al., 1994). This criterion level should be clearly stated in research reports but is often just a footnote in a table and is often mainly represented by an asterisk. This is an acceptable, if perhaps confusing, space-saving convention in publications. Readers should expect that a consistent criterion level is used throughout a study unless changes in the criterion level are explained in detail. It is inappropriate for researchers to change criterion levels without providing a rationale for such changes.

By American Psychological Association (2009) publication standards, a particular format for reporting the results of statistics is widely used. These conventions apply to both tables and text-based reports. First, the names of the variables under analysis should be clearly stated or evident in the table. Second, the name or symbol for the statistic is stated. Publishers assume that journal readers will understand the names and abbreviations for most common statistical tests. Any unusual statistical test should be explained in some detail, and a citation for more information should also be provided in the report. Third, the numerical value of the statistic is reported. Fourth, the sample size or degrees of freedom for the statistic is reported. Finally, the probability of the result is reported. It is good practice to state exact probabilities for all statistics, rather than to simply note that some are "not significant." For example, the results of an analysis of variance or $F$ test used to compare to groups might be reported as: "A statistically significant difference on level of general anxiety was found between the treated and control groups, $F = 5.681$ (1, 85), $p = .001$." Here the value of the $F$ statistic ($F = 5.681$) is clear, as are the degrees of freedom (1 and 85), and the precise probability value. Since probability levels vary with both the value of the statistic and the degrees of freedom (or sample size), both are reported to allow readers to verify the probability level is correct for this information.

The probability level or $p$ value for each statistic is used to determine if the null hypothesis is to be accepted or rejected. If the $p$ value is less than (smaller than) the criterion level in use for the study (i.e., $p = 0.003$ compared to a criterion level of $p < 0.05$), the null hypothesis is rejected. Researchers may then state that a statistically significant difference exists. Readers are often confused that reports do not directly address the null hypotheses but instead simply move on to what it implies about the research hypothesis. This too is a convention used to save space based on the assumption that professional readers should have a basic understanding of statistics.

Bear in mind that sample size influences some statistical tests. As noted above in regard to statistical power, small samples may not be able to reveal significant differences between group. On the other hand, large samples may yield significant associations even when the strength of the association is small. Readers should not confuse statistical significance with substantive or clinical significance.

To assess the magnitude of changes, effect size statistics are often reported along with tests of statistical significance. Effect size statistics complement tests of significance by more directly summarizing the size of differences between groups in experimental research (Dar et al., 1994). Effect size statistics will be examined in the next chapter.

Finally, where group differences are reported, as is common in outcome research, confidence interval should be presented along group means and probabilities. Most statistical results are presented as *point estimates* that appear quite exact. *Confidence intervals* [CI] estimate the chance that the same study, repeated with another sample taken from the same population, will yield the same results. Usually the confidence interval is established at a 95% chance that replicating the same study on a different sample will yield the same results. If the CI is narrow, the study results are more likely to be consistent when replicated. If the CI is wide, the study results are less likely to be consistent when replicated. CI ranges help the reader assess the confidence that should be placed in study results when generalizing from a single sample to the larger population. However, a confidence interval does *not* predict that the unknown, true, value of the population parameter has a defined probability of being in the confidence interval.

## Summary

This chapter has examined several issues of research methodology that join with research designs to influence the validity of clinical research. Research, like clinical practice, is a complex process involving many decisions. While use of an RCT research design allows for claims of cause and effect relationships, such claims are only valid and useful if they are predicated on many other interconnected choices. The other choices include the quality and comprehensiveness of the sample, the type, validity and sensitivity of outcome measures, the quality of the definition the treatment study, and the careful use and reporting of the correct statistical tests.

Individual research reports may be integrated or synthesized to provide a summary of available research on a topic. The research designs used in individual studies may become a criterion for the inclusion or exclusion of studies from such reviews. Indeed, many summaries of research include only studies using experimental or RCT designs. Two useful resources for clinical social workers in the EBP process are meta-analysis and its elaboration into the systematic review of research studies. Examining systematic reviews will be the focus of the next chapter.

## References

Aberson, C. (2010). *Applied power analysis for the behavioral sciences*. New York: Routledge Academic.

Abu-Bader, S. (2006). *Using statistical methods in social work practice*. New York: Lyceum Books.

Abu-Bader, S. (2010). *Advanced and multivariate statistical methods for social science research*. New York: Oxford University Press.

Achenbach, T., & Rescorla, L. (2000). *Manual for the ASEBA preschool forms and profiles*. Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T., & Rescorla, L. (2001). *Manual for the ASEBA school-age forms and profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, D.C.: American Psychological Association.

Anastas, J. W. (1999). *Research design for social work and the human services* (2nd ed.). New York: Columbia University Press.

Andrews, G., Creamer, M., Crino, R., Hunt, C., Lampe, L., & Page, A. (2002). *The treatment of anxiety disorders: Clinician guides and patient manuals*. New York: Cambridge University Press.

Beck, A., Steer, R., Ball, R., & Ranieri, W. (1996). Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *Journal of Personality Assessment, 67*(3), 588–597. https://doi.org/10.1207/s15327752jpa6703_13

Benedek, D., & Wynn, G. (Eds.). (2011). *Clinical manual for management of PTSD*. Arlington, VA: American Psychiatric Publishing.

Benuto, L. (2013). *Guide to psychological assessment with Hispanics*. New York: Springer Science+Business Media.

Benuto, L., & Leany, B. D. (Eds.). (2015). *Guide to psychological assessment with African Americans*. New York: Springer Science+Business Media.

Benuto, L., Thaler, N., & Leany, B. D. (Eds.). (2014). *Guide to psychological assessment with Asians*. New York: Springer Science+Business Media.

Binks, C., Fenton, M., McCarthy, L., Lee, T., Adams, C., & Duggan, C. (2006). Psychological therapies for people with borderline personality disorder. *Cochrane Database of Systematic Reviews*, (1), CD005652. https://doi.org/10.1002/14651858.CD005652

Campbell, D., & Stanley, J. (1963). *Experimental and quasi-experimental designs for research*. New York: Wadsworth.

Carlson, J., Geisinger, K., & Jonson, J. (Eds.). (2017). *The twentieth mental measurements yearbook*. Lincoln, NE: Buros Center for Testing.

Center for Substance Abuse Treatment. (2007). *Counselor's treatment manual: Matrix intensive outpatient treatment for people with stimulant use disorders.* DHHS Publication No. (SMA) 07-4152. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from http://kap.samhsa.gov/products/manuals/matrix/index.htm

Cherubini, A., Del Signore, S., Ouslander, J., Semla, T., & Michel, J.-P. (2010). Fighting against age discrimination in clinical trials. *Journal of the American Geriatrics Society, 58*(9), 1791–1796.

Clarkin, J., Yoemans, F., & Kernberg, O. (2006). *Psychotherapy for borderline personality: Focusing on object relations*. Arlington, VA: American Psychiatric Publishing.

Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement, 20*(1), 37–46.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: Routledge Academic.

Cook, T., & Campbell, D. (1979). *Quasi-experimentation: Design & analysis issues for field settings*. New York: Houghton Mifflin.

Corcoran, K., & Fischer, J. (2014). *Measures for clinical practice and research* (5th ed.; 2 Vols.). New York: Oxford University Press.

Cowger, C. (1984). Statistical significance tests: Scientific ritualism or scientific method? *Social Service Review, 8*(3), 358–372.

Dar, R., Serlin, R., & Omer, H. (1994). Misuse of statistical tests in three decades of psychotherapy research. *Journal of Consulting and Clinical Psychology, 62*(1), 75–82.

Dattalo, P. (2008). *Determining sample size: Balancing power, precision, and practicality*. New York: Oxford University Press.

Drisko, J. (2003, January 17). *Improving sampling strategies and terminology in qualitative research*. Paper presented at the Society for Social Work and Research Annual Meeting, Washington, D.C..

Endicott, J., Spitzer, R., Fleiss, J., & Cohen, J. (1976). The global assessment scale. A procedure for measuring overall severity of psychiatric disturbance. *Archives of General Psychiatry, 33*(6), 766–771.

Engel, R., & Schutt, R. (2016). *The practice of social work research* (4th ed.). Thousand Oaks, CA: Sage.

Furr, R. M., & Bacharach, V. (2007). *Psychometrics: An introduction*. Thousand Oaks, CA: Sage.

Glickman, S., McHutchison, J., Peterson, E., Cairns, C., Harrington, R., Califf, R., et al. (2009). Ethical and scientific implications of the globalization of clinical research. *New England Journal of Medicine, 360*, 816–823.

Goldstein, E. (1995). *Ego psychology and social work practice* (2nd ed.). New York: Free Press.

Goldstein, E. (2001). *Object relations theory and self psychology in social work practice*. New York: Free Press.

Gormally, J., Black, S., Daston, S., & Rardin, D. (1982). The assessment of binge eating severity among obese persons. *Addictive Behaviors, 7*(1), 47–55.

Gupta, S. (2011). Intention-to-treat concept: A review. *Perspectives in Clinical Research, 2*(3), 109–112.

Haynes, R., Devereaux, P., & Guyatt, G. (2002). Clinical expertise in the era of evidence-based medicine and patient choice. *Evidence-Based Medicine, 7*, 36–38.

Horowitz, L., Alden, L., Wiggins, J., & Pincus, A. (2000). *Inventory of Interpersonal Problems manual*. Odessa, FL: The Psychological Corporation.

Hudson, W. (1982). A measurement package for clinical workers. *The Journal of Applied Behavioral Science, 18*(2), 229–238.

Huxley, P. (1986). Statistical errors in papers in the *British Journal of Social Work* (Volumes 1–14). *British Journal of Social Work, 16*(6), 645–658.

Jones, R. (1996). *Handbook of test and measurements for black populations*. (2 vols.). Hampton, VA: Cobb & Henry.

Kraemer, H., & Blasey, C. (2016). *How many subjects? Statistical power analysis in research*. Thousand Oaks, CA: Sage.

Kuzel, A. (1999). Sampling in qualitative research. In B. Crabtree & W. Miller (Eds.), *Doing qualitative research* (pp. 33–46). Thousand Oaks, CA: Sage.

LeCroy, C. W. (2008). *Handbook of evidence-based treatment manuals for children and adolescents*. New York: Oxford University Press.

Leeper, J. (n.d.). *Choosing the correct statistical test*. Retrieved from http://bama.ua.edu/~jleeper/627/choosestat.html

Lock, J., Le Grange, D., Agras, W. S., & Dare, C. (2002). *Treatment manual for Anorexia Nervosa: A family-based approach*. New York: Guilford Press.

Marshall, M., Lockwood, A., Bradley, C., Adams, C., Joy, C., & Fenton, M. (2000). Unpublished rating scales: A major source of bias in randomised controlled trails of treatment for schizophrenia. *British Journal of Psychiatry, 176*, 249–252.

Murphy, K., & Myers, B. (2014). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests* (4th ed.). New York: Routledge.

Norman, G., & Streiner, D. (Eds.). (2003). *PDQ statistics* (3rd ed.). Shelton, CT: People's Medical Publishing House (PMPH).

Ollendick, T., King, N., & Chorpita, B. (2006). Empirically supported treatments for children and adolescents. In P. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures*. New York: Guilford Press.

Overall, J., & Gorham, D. (1962). The brief psychiatric rating scale. *Psychological Reports, 10*, 799–812.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.

Reilly, P., & Shopshire, M. (2002). *Anger management for substance abuse and mental health clients: A cognitive behavioral therapy manual*. Washington, D.C.: SAMHSA.

Rubin, A., & Babbie, E. (2017). *Research methods for social work* (8th ed.). Boston, MA: Cengage.

Rust, J., & Golombok, S. (2009). *Modern psychometrics: The science of psychological assessment* (3rd ed.). New York: Routledge.

Sanderson, W., & Woody, S. (1995). *Manuals for empirically validated treatments: A project of the Task Force on Psychological Interventions, Division of Clinical Psychology, American Psychological Association*. Washington, D.C.: American Psychological Association.

Silverman, W. (1996). Cookbooks, manuals and paint by numbers: Psychotherapy in the 1990s. *Psychotherapy, 33*, 2017–2215.

Smith, E. (1995). A passionate, rationale response to the 'manualization' of psychotherapy. *Psychological Bulletin, 22*, 36–40.

Spitzer, R., Williams, J., Gibbon, M., & First, M. (1990). *Structured Clinician Interview for DSM-III-R Axis II Disorders (SCID-II)*. Washington, D.C.: American Psychiatric Press.

Stark, K., Streusand, W., Krumholz, L., & Patel, P. (2010). Cognitive-behavioral therapy for depression: The ACTION treatment program for girls. In J. Weisz & A. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (2nd ed., pp. 93–109). New York: Guilford.

Telch, C., Agras, W. S., & Linehan, M. (2002). Dialectal behavior therapy for binge eating disorder. *Journal of Consulting and Clinical Psychology, 69*(6), 1061–1065.

Trepper, T., McCollum, E., DeJong, P., Korman, H., Gingerich, W., & Franklin, C. (n.d.). *Solution focused therapy: Treatment manual for working with individuals (preliminary)*. Research Committee of the Association for Solution Focused Therapy. Retrieved from http://www.sfbta.org/Research.pdf

Truijens, F., Zühlke-van Hulzen, L., & Vanheule, S. (2019). To manualize, or not to manualize: Is that still the question? A systematic review of empirical evidence for manual superiority in psychological treatment. *Journal of Clinical Psychology, 75*, 329–343. https://doi.org/10.1002/jclp.22712

Weinbach, R., & Grinnell, R. (2014). *Statistics for social workers* (9th ed.). New York: Pearson.

Wilt, T., MacDonald, R., Rutks, I., Shamliyan, T., Taylor, B., & Kane, R. (2008). Systematic review: Comparative effectiveness and harms of treatments for clinically localized prostate cancer. *Annals of Internal Medicine, 148*(6), 435–448.

# Chapter 8
# Step 3 of Evidence-Based Practice: Part 3—Meta-analysis and Systematic Reviews: Aggregating Research Results

Step 3 of the evidence-based practice (EBP) decision-making process is to critically evaluate the relevant research on your topic. In the previous two chapters, we have examined the role of research design and other methodological issues in evaluating practice research. These chapters explored how individual research studies are designed and reported in a rigorous manner. However, in many circumstances multiple research studies are available on a clinical topic. In this chapter we will explore how reports that aggregate the results of several separate studies on single topic are designed and analyzed.

Clinical social workers who search for research to use in EBP will often find compilations of several research studies on their topic of interest. Researchers call such compilations “meta-analyses” or “systematic reviews.” Both can be very useful to the clinician seeking to evaluate research for use in practice. Both methods help the clinician appraise and compare the results of multiple studies on the chosen topic. It is important to understand how meta-analysis and systemic reviews are similar and different. It is also important to understand their strengths and limitations for evidence-based medicine (EBM) and for EBP.

## Meta-analysis as a Method of Research Synthesis

Researchers first developed the method of *meta-analysis*, which introduced several important concepts and methods for aggregating research results. The steps of meta-analysis may seem quite familiar to clinical social workers and others learning EBP. Meta-analysis begins with (1) clearly formulating and stating the focal question, followed by (2) a defined and reproducible search of the literature. Next, researchers (3) evaluate the relevant literature using specifically stated quality criteria, leading to identification of the best research for analysis. Finally, studies are (4) compared statistically using specified procedures that vary to accommodate

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_8

different kinds of data. The process, in its outline, is parallel to some steps of the EBM/EBP practice decision-making process. The purpose of meta-analysis, however, is to aggregate study results and provide a general, summary conclusion.

Pratt, Rhine, Smith, Stuart, and Greenwood (1940) completed one of the earliest meta-analyses on the topic of extrasensory perception (ESP). They located and reviewed over 50 studies on ESP using similar methodologies. A full 61% of the studies endorsed ESP. Pratt and colleagues noted, however, that published reports with positive results had much more influence than did many more unpublished studies with negative results. This was important because, they believed, the unpublished studies might have been refused publication due to the negative results. In today's EBM/EBP context, early meta-analyses demonstrated how important it is to search thoroughly for all the relevant published and unpublished literature and to have a solid method for aggregating results.

In the 1970s and 1980s, researchers developed more sophisticated models of meta-analysis. Many of these pioneers addressed mental health topics. Smith, Glass, and Miller (1980) completed a meta-analysis entitled "The Benefits of Psychotherapy" that found similar, positive effects for several therapies for adults with depression or anxiety drawing on different theoretical premises and using different measures. A key innovation from Glass was a statistical method for aggregating studies that used different tests as outcome measures. These statistical techniques, called *meta-analysis*, are in wide use today in EBM/EBP.

It may be confusing that meta-analysis refers to both a research process with many steps as well as to statistical techniques. Meta-analysis set the stage for still more detailed systematic reviews of research. Today's systematic reviews employ the statistical techniques of meta-analysis in the aggregation of quantitative studies results. Yet articles may also be entitled "A meta-analysis of. . ." referring to either a systematic compilation of studies on a specific topic or only the use of meta-analytic statistical methods. Careful reading and critical thinking is required since authors may use the same terms quite differently.

Over time, wide variation in the quality of studies included in, or excluded from, meta-analyses proved a serious problem. Researchers might use very different standards to appraise research quality and very different methods to report how they had searched the literature. Issues of undisclosed biases, methodological flaws, and lack of reproducible results raised questions about the quality of many meta-analyses. Further, the methods used to locate studies were often poorly or inadequately described. These problems required the development of standards that would make compilations of research results fully reproducible by other researchers. Researchers call such reports *transparent* results. In EBM, the Cochrane Collaboration began in 1993. This international organization works to develop and promote standards for reviewing and synthesizing medical research results. Their standards added many details to the meta-analysis process but continued to use the meta-analysis statistical techniques.

The current, more refined approach to research synthesis is called the *systematic review*. The *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins & Green, 2011) defines a systematic review as an:

> attempt to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question. It uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made. (1.2.2)

A systematic review should have clearly stated objectives and eligibility/inclusion criteria for studies defined before the researcher begins the review. The methodology of the reviews should be reproducible, including details of the literature search strategy that produces the set of studies for review. Researchers should document the validity of included studies and make with extensive efforts to limit bias. The final presentation of the systematic review results should also be structured to provide details on the included studies (1.2.2).

The *Cochrane Handbook* further points out that many (but not all) systematic reviews contain meta-analyses. Meta-analysis here refers to only the statistical techniques for aggregating the results of several individual quantitative studies. "Meta-analyses can provide more precise estimates of the effects of health care than those derived from the individual studies included within a review... [by identifying] the consistency of evidence across studies, and the exploration of differences across studies" (Higgins & Green, 2011, 1.2.2).

In summary, meta-analyses introduced an approach to aggregating the results of research studies that was further refined and elaborated with the systematic review. Meta-analysis, as a set of statistical techniques, is now widely used as a component of a systematic review. Reports of systematic reviews can be a valuable resource for clinical social workers doing EBP. We will now explore the systematic review in detail.

## Systematic Reviews

A systematic review is an aggregate summary of research on a single topic. Systematic reviews may focus on either quantitative or qualitative research studies, though the vast majority are quantitative. In the mental health literature, so-called systematic reviews may range from efforts based on an individual authors' work and views or a team effort following many well-defined rules to assure transparency and quality. At best, a systematic review is a special form of research synthesis, guided by an extensive set of rules and leading to both plain language and highly technical reports. These rules are intended to insure transparency of methods so that the review could be fully repeated, or replicated, by others. The rules establish procedures to locate, evaluate, and integrate the research results while limiting bias. Both the focus of the systematic review and its procedures must be defined before the review is begun. These practices are all steps to minimize bias and build transparency in the review.

The Cochrane Collaboration's *Handbook for Systematic Reviews of Interventions* (Higgins & Green, 2011) is the key resource for planning and implementing quantitative systematic reviews. The Campbell Collaboration also uses these standards as the two organizations work cooperatively. The *Cochrane Handbook* is a book-length and very detailed document. It is updated from time to time to include new methods and improve the transparency of review procedures. (A major revision is planned for 2019.) The *Cochrane Handbook* is available for free review online at https://training.cochrane.org/handbook and also for purchase as a hardcover book.

Methods for systematic reviews of qualitative studies are more less standardized. Meta-ethnography, which pioneered the core methods of qualitative systematic reviews, was developed by Noblit and Hare (1988). Recent methods with a specific clinical focus are offered by Sandelowski and Barroso (2007), Dixon-Woods, Bonas et al. (2006), and Dixon-Woods, Cavers et al. (2006). The Cochrane Collaboration Methods Group (2017) offers an online library addressing methods of qualitative research synthesis. While qualitative systematic reviews have considerable merit, the focus of the remainder of this chapter will be on quantitative systematic reviews.

It is useful to understand what goes into a systematic review, even if most clinicians may not often review the full, technical versions of such reviews. More often, clinicians will use the much shorter plain language abstract that provides the key information in a condensed form. The format of even the plain language summaries follows that used for full systematic reviews. We remind readers that systematic reviews are not mentioned in the practice decision-making process of EBM/EBP. Systematic reviews are a process that groups of professionals have developed to summarize research results with rigor and consistency. Professional expertise and judgment must be used to decide if a systematic review offers more relevant and clinically useful information than do other sources of "the best available evidence" for practice decision-making.

## *Specifying the Systematic Review Topic*

To start a systematic review, the topic it will cover must be clearly stated (Higgins & Green, 2011). This step is a guide to the researchers but also keeps the review focused. It also sets boundaries on what topics, and what kinds of research, will be studied from the outset. Its purpose is to keep systematic reviews focused and to limit alterations to the review to include material of interest to the authors but not quite on topic or not using high-quality methods.

Applications to register systematic reviews at both the Cochrane Collaboration and the Campbell Collaboration require a clear statement of the review focus. Scholars and researchers must apply to register a proposed systematic review before it is started. A team of peer reviewers evaluate each application. The peer reviewers look for a clear focus and a detailed research plan consistent with the *Cochrane Handbook* standards (Higgins & Green, 2011). Only proposals that meet the quality standards are accepted and registered. Clinicians may find some reviews in their preliminary stages listed online as "registered" or "in progress." Such reviews do not (yet) include any results. This can be frustrating as it does not help in practice decision-making, but it shows such knowledge may be available in the near future. It also tells other researchers that the topic is taken.

Cochrane and Campbell systematic reviews are team efforts (Littell, Corcoran, & Pillai, 2008). Several people, ideally including at least one consumer, constitute the review team (Higgins & Green, 2011, section 2.3.4.1). Not only researchers but also policy-makers and clinicians may be included as well. This range of review team members should bring in some diversity of viewpoints about the purposes of the review and serve as some check on its final report. It also allows for more than a single researcher to assess each piece of research, again as an effort to limit bias.

Researchers undertaking a systematic review must also declare their "interests and commercial sponsorship" to set forth any potential conflicts of interest. Sponsorship of Cochrane reviews by any commercial interest is prohibited. Noncommercial sponsors of Cochrane systematic reviews, such as foundations offering research funding, must agree to have no influence over its process and final report content (Higgins & Green, 2011, 2.6).

### *Locating Research Studies for a Systematic Review*

Once a topic is selected, the literature on the topic is next extensively reviewed. What literature is included in the review must be fully specified. It is common to see a listing of several electronic databases in quality systematic reviews. Each electronic database will cover many journals and articles. The point of detailing how the literature search was done in great detail is to make it replicable by other researchers. This means that other people could repeat the review process fully and should come up with the same results. It is a way of insuring quality and transparency in methods. Steps to insure quality and transparency are included in each part of the systematic review process.

Not only the databases that are included in the study are detailed; the search strategies used to locate relevant studies within each database are also set forth. These often include a combination of search terms or keywords that represent variations on the topic (i.e., depression, depressive, major depressive episode) but also types of research designs (i.e., experiments, RCTs, outcome studies). Further, the dates of the studies included in the review and the range of countries or languages searched are often stated. Again, the purpose of specifying the search strategy is to make the process both transparent to readers and replicable by other researchers.

Finally, systematic reviews include active efforts to locate unpublished research. There is a bias in journal publications that favors studies with positive results (Dickersin, 1990; Hopewell, Loudon, Clarke, Oxman, & Dickersin, 2009; McGauran et al., 2010; Sridharan & Greenland, 2009). "Positive results" are those that show a significant difference between a treatment and a control group or that one treatment is better than another. This means that research studies that do not show significant differences are often unpublished. Researchers call this the "file draw problem"

(Scargle, 2000). Research that is completed but unpublished may literally end up in a researcher's file draw, unknown to others. This can create a bias in favor of making it seem that a treatment is better than it would appear with the nonsignificant results also examined. Further, there have been cases where businesses and other groups that do not want negative results published have actively undermined the publication of negative results. One such case involves the active intervention of drug companies to limit publication of results that make their products look bad—even if they are not effective. Carey (2008) reports that makers of antidepressant drugs did not publish up to one-third of their research results but only those that were unflattering. Carey also notes that a similar incident had occurred previously in 2004.

Authors of systematic reviews seek out unpublished reports by contacting the author of published studies to ask if they have unpublished research on the topic. They also ask the published authors if they know of other researchers who might have unpublished studies. These efforts also uncover works in progress that have not been formally published, such as evaluations funded by state agencies. Occasionally the researcher is near completion of a study in progress. Such as yet unpublished results may be included in the systematic review as well, whether positive or negative. Efforts to locate unpublished results must also be specified in the systematic review methods.

Methods suggested to resolve problems that may distort the research available on a topic include publishing all studies and adding a second stage of peer review to the publication process (Carroll, Toumpakari, Johnson, & Betts, 2017). Until such methods are implemented, researchers instead seek to be fully transparent about the choices they make in including or excluding studies from a meta-analysis or a systematic review.

The entire process of the literature search can be presented in summary form using a Quorom flowchart (see Fig. 8.1). In the1990s, a group of physicians called the Quorom Group began to establish standards for reporting meta-analyses (Moher et al., 1999). Quorom is an acronym for the "*Qu*ality *o*f *R*eporting *o*f *M*eta-analyses." A Quorom flowchart summarizes the number of relevant items found at each stage of a literature search process. It starts with the total number of relevant articles or reports located and then identifies all the criteria for including or excluding reports in the review process. The flowchart identifies both why materials were included or excluded and how many reports were included or excluded. In the figure, we see that 9676 reports were located, but 8538 proved to be off topic. In the end, only 14 reports met all of the study's inclusion criteria and were not duplicates. A Quorom flowchart provides a quick and visually effective way to summarize the search process of a meta-analysis or a systematic review. They are beginning to become common in the social work literature (see, e.g., Drisko & Simmons, 2012; Litschge, Vaughn, & McCrea, 2010).

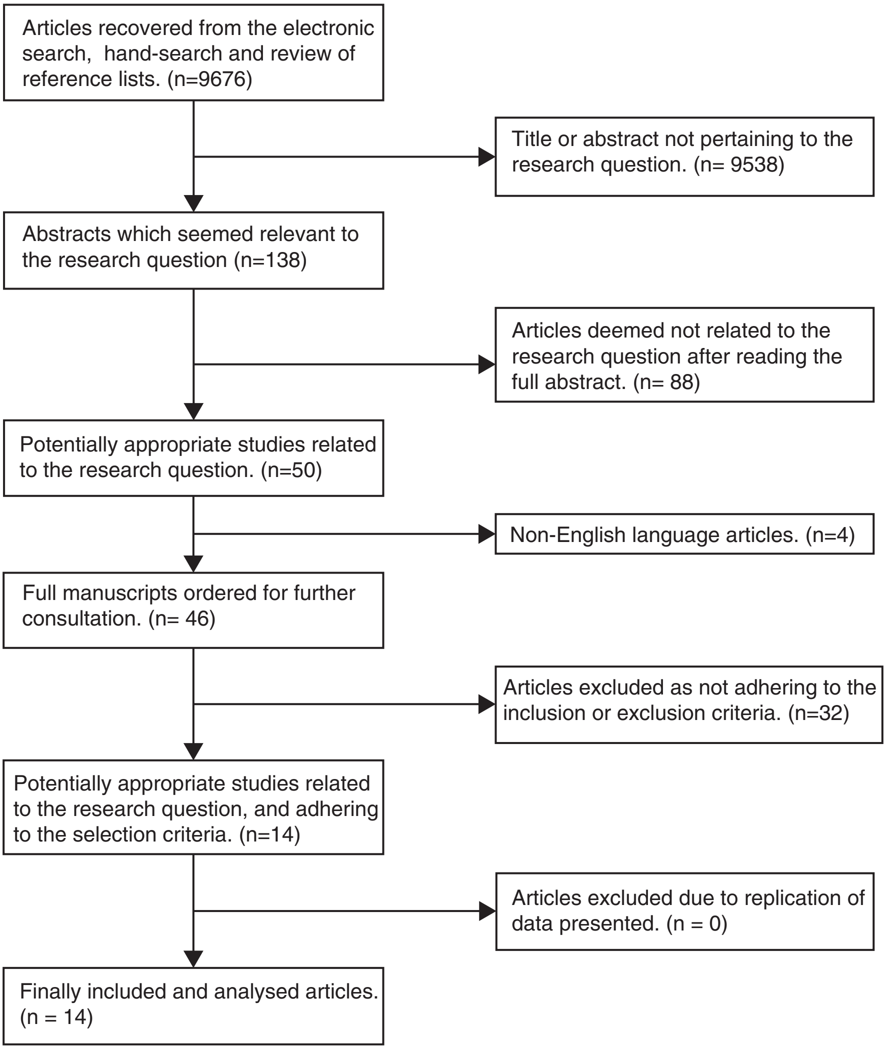


**Fig. 8.1** A Quorom flow chart. (Retrieved from www.springerimages.com/Images/MedicineAndPublicHealth/5-10.1186_1471-2474-9-64-0 Source Chester et al. (2008)).

## *Evaluating the Methodological Quality of Research Reports in Systematic Reviews*

The next activity in a systematic review is again parallel to the steps of the EBP process. Once research on the review topic is located, its quality must be evaluated. Most systematic reviews only include studies based on experimental or RCT research designs. This is an acceptable choice for inclusion in a quantitative systematic review. It makes the rationale for including or excluding individual studies quite clear. On the other hand, it does not fully conform to the EBM/EBP standard of using "the best available" research evidence if such evidence is not based on experimental research. This may happen where a topic is not well conceptualized, such as chronic fatigue syndrome or reactive attachment disorder, or is not so common as to be extensively researched. The EBM/EBP practice decision-making process takes into account that not all topics are well studied by multiple RCTs. EBM/EBP process then points clinicians to use thoughtfully the results of research derived from other research designs, following the research design hierarchy. (Research design issues in EBP are examined in Chap. 6.)

While Cochrane systematic review standards clearly reflect a privileging of results from RCTs, there is also some ambiguity in the *Cochrane Handbook*. The *Cochrane Handbook* includes a brief section on including qualitative research results in systematic reviews (Higgins & Green, 2011, Chap. 20). This brief chapter states that qualitative research can address questions beyond those examined by quantitative research and may be helpful in explaining the results of RCTs. Here we find an instance where the hierarchy of research evidence used by both the Cochrane and Campbell Collaborations seems limited and other forms of research are explicitly acknowledged as valuable. Nonrandomized studies "may" be included in Cochrane reviews, but are to be "interpreted with caution" (Higgins & Green, 2011, Chap. 13). At the same time, qualitative studies are devalued as sources of evidence in other sections of the manual. Systematic reviews are social constructions and may have some inconsistencies despite a great deal of work by many people to make them internally consistent. Researchers differ in how they understand and prioritize research designs and methods. Systematic review standards may also apply a hierarchy of evidence that leads to results that are *less* inclusive of useful research knowledge than is called for by the core definitions of EBM and EBP.

The *Cochrane Handbook* emphasizes attention to reducing bias and ensuring clarity of methods in all reviews. This is a very worthy and important goal. Note carefully that much less attention is directed to the initial conceptualization of disorders, to the quality of measures, and to the definition of treatments. Experimental research has great strength in the attribution of cause-effect relationships but is only meaningful if the disorder of interest is quite well understood and the measures used to assess it are valid, complete, and reliable. Further, the populations included in the experimental research must be very similar to those of interest to clinicians. Attention to social diversity, and to socially structured oppressions, is not emphasized in the *Cochrane Handbook* criteria though it is heavily emphasized in social work.

Criteria for including or excluding studies in a systematic review may also be based on issues such as sample size, the clarity of the description of the treatment, the fidelity or care shown in insuring the treatment was delivered as described, and the kinds of statistical information provided. The various components of each study must be carefully assessed and coded as warranting inclusion in the systematic review or as warranting exclusion from it.

### Coding Study Components and Results

All decisions regarding inclusion and exclusion from Cochrane and Campbell systematic reviews must be made by at least two reviewers. These reviewers work independently but then compare their results for consistency and quality control purposes. This ensures discussion where the reviewers are not fully in agreement regarding their views of a study's quality. How these differences were resolved, and the final inclusion/exclusion standards, must be stated in the full systematic review. At least two reviewers also make all later study quality appraisal decisions.

Summaries of the quality appraisal process may be presented in a Quorom flowchart in reports of systematic reviews. These flowcharts can illustrate succinctly the inclusion and exclusion criteria used in the review, as well as other criteria used in data extraction and assessment of study quality. As noted above, Quorom flowcharts specify the numbers of studies found in the literature search and the numbers included or excluded at each step in the review process. In most cases the number of research studies found on the topic is large and the final set of included studies much smaller.

## Statistical Meta-analysis

As noted above, meta-analysis is a term used in two different but related ways. The first usage refers to a set of statistical techniques employed to combine the quantitative results of prior research. The yield of these statistics is usually a measure of *effect size*, a weighted average of the magnitude of difference between groups. This first, statistical usage will be our focus in this book. The other usage of meta-analysis now overlaps with the process of a systematic review. Indeed, meta-analyses were the precursors of today's systematic reviews. Meta-analyses, as publications, are research reports that locate, evaluate, and combine statistically the results of prior research. Systematic reviews expanded on the original methods of locating and evaluating research literature created for meta-analysis. Systematic reviews often use the statistical techniques of meta-analysis to combine the results of prior quantitative research. One key difference is that the procedures of Cochrane and Campbell systematic reviews are more fully detailed and better documented than is common in most meta-analysis reports. This increases the clarity and transparency of systematic reviews. Systematic reviews are also examined by methodologically sophisticated peer reviewers, which may not the case for some published meta-analyses.

The purpose of a meta-analysis statistic is to develop a common measure (also called a metric) to allow the combination of research results across several studies on a topic. Research results on a given topic often differ and may include discordant results. Meta-analysis provides a technique to combine results despite differences in measures. For example, in a meta-analysis of depression treatments, the goal is to combine the results of studies on people who have depression treated by different professionals, using different treatment models, and whose depression was assessed by different measures. This might include people treated for depression with cognitive behavioral, interpersonal, short-term psychodynamic, and multisystemic therapies. The goal is to find out the overall effects of depression treatments and often to determine if the specific treatments have different results. Suppose it turns out that the available studies use different measures to assess depression levels. Some use the Hamilton Rating Scale for Depression and others use the Beck Depression Inventory. This may appear to be a major "apples and oranges" problem where the varied treatments and different measures do not seem to allow comparison. Solving this problem is the strength of meta-analysis. Meta-analysis allows the creation of a common measure of change or difference, using the same units despite any differences in the original scales used in each study. Thus, it allows for fair comparison of treatment outcomes despite initial differences in methods.

## *Statistics Used in Meta-analysis*

The most widely used meta-analysis statistic is Cohen's *d* (Ellis, 2010), also called a standardized mean difference (SMD). Cohen's *d* is a measure of the standard mean difference across two groups. This statistic shows the magnitude of change in an experimental comparison. Researchers calculate it by subtracting the mean score for the control group from the mean score of the treated group and then dividing the result by the pooled standard deviation of both groups. Cohen's *d* provides a measure of the magnitude of the difference between the treatment and control groups, taking into account the variation of scores within both groups.

Cohen's *d* scores range from 0.0 to about 2.0. Cohen (1988) established rough benchmarks to help interpret these scores in plain language. Cohen's *d* values between 0.00 and 0.49 are "small" effects. Values from 0.50 to 0.79 are "moderate," and values larger than 0.80 are "large" effects. This means that the magnitude of the difference between two treatments can be called "small" if Cohen's *d* is 0.48 or lower and "large" if the Cohen's *d* value is 0.80 or larger. Lenth (2008) cautions that all effects size statistics should be interpreted in context and with attention to operational definitions.

The purpose of Cohen's *d* is to assess the magnitude of differences between groups. This is not the same as establishing the statistical significance (usually reported with a $p =$ value). However, it is *usually* the case that moderate and strong effect sizes are found where significant differences between groups are found using probability tests. Effect size measures complement probability statistics.

Cohen's *d* is best when used with large samples. With smaller samples (roughly 20 or fewer participants in each treatment), the Hedges' *g* statistic is usually a better choice. This is because in a small sample one or two "outliers," or extreme scores, can have a large impact on the value of the *d* statistic. In addition, Hedges' *g* employs a different calculation of the pooled standard deviation than does Cohen's *d*. It includes a correction factor when used to make population level estimates. Thus, Hedges' *g* yields more conservative estimates of the magnitude of group differences for small samples. Some critiques of mental health meta-analyses target the use of Cohen's *d* with small samples as a methodological concern (Thombs & Jewett, 2009). Hedges' *g* does not make any statement about whether or not the difference found is likely to reflect that in the larger population, as probability statistics do. The Hedges' *g* statistic is very rarely covered in social work research and statistics texts.

SMD statistics are usually coupled with a *95% confidence interval*. A 95% confidence interval is an estimated range likely to include a value (technically a population parameter) of interest. This value is generally unknown, so the CI is a statistical estimate of its likely value in the whole population. Two numbers define a 95% CI, a lower and an upper value around which it is probable with 95% confidence that the true population value lies (O'Brien & Yi, 2016). In other words, if a standardized mean difference (or SMD; such as Cohen's *d* or Hedge's *g*) value is found within the 95% CI, it is likely that, in the population from which the sample was drawn, the results will be similar to the true population value. Thus, the result has practical implications for the entire population, not just the specific sample that was studied. In a systematic review report, one might find information such as, for symptom reduction, individual CBT and EMDR were more effective than was a control group (SMD −1.79; 95% CI −2.12 to −1.16). Because the SMD value is within the range defined by the 95% CI, it is likely that the unknown population value is likely to be like the study results. This supports confidence for its use in practice.

Other measures of effect size include correlations and odds ratios. Correlations are used as measures of effect sizes in observational studies. Correlations statistics can serve as their own measures of effect size, with a range from −1.0 (a perfect negative correlation, through 0.0 (no correlation) to +1.00 (a perfect positive correlation). Cohen (1988) states that a correlation of 0.10 may be interpreted as "small," a correlation of 0.25 or larger as "medium," and a correlation of 0.40 or higher as "large."

An *odds ratio* (OR) is a summary measure of the association between a treatment or "exposure" and an outcome where both variables are binary (Szumilas, 2010). It summarizes the odds or chance that an outcome will occur given a particular exposure in contrast to the odds of the same outcome occurring without the exposure. Odds ratios are most commonly used in nonexperimental case-control studies. Odds ratios are interpreted as an OR of exactly 1 indicating that exposure does not affect odds at outcome; an OR of less than 1 indicating that exposure is associated with lower or reduced odds at outcome (Deng, 2012); and OR > 1 indicating that exposure is associated with greater or increased odds of risk at outcome. OR results do not include statistical significance, nor do they demonstrate cause and effect. A 95% confidence interval (CI) is typically coupled with an OR to provide an estimate of the precision of an OR result. A large CI indicates a low level of precision; in contrast a small CI indicates a higher precision of the OR. An example of OR is found in a Cochrane Collaboration systematic review of treatments for post-traumatic stress disorder [PTSD] in children and adolescents. Gillies, Taylor, Gray, O'Brien, and D'Abrew (2012) found that "across all psychological therapies [studied], improvement was significantly better (three studies, n = 80, OR 4.21, 95% CI 1.12 to 15.85) … compared to a control group" (Abstract, Main results). In other words, having treatment (the exposure) was associated with more than four times greater odds of improvement in PTSD symptoms than was no treatment. However, the CI, ranging from 1.12 to 15.85, suggests a low level of precision for these results as the CI is a large range (14.73) compared to the OR of 4.21. The authors go on to state that “the findings of this review are limited by the potential for methodological biases, and the small number and generally small size of identified studies” (Author’s conclusions). This may, in part, account for the low level of precision of the CI in this study.

*Relative risk* (RR), also known as the risk ratio, is another statistic that measures the risk of an event relative to an independent variable (Chittaranjan, 2015). Relative risk is a ratio of the probability of the event occurring in a treated or “exposed” group versus an untreated or “nonexposed” group (Sistrom & Garvan, 2004). The frequency, or count, of how often the event occurs in the treated group is divided by the frequency of the event observed in the untreated group. For example, the number of smokers who develop lung cancer might be compared over a 20-year period to the number of nonsmokers who develop the same illness. A relative risk ratio value of 1.0 indicates no difference in risk between the two groups. A value of less than 1.0 indicates the outcome event is less likely to occur in the treated group than the control/comparison group. A value of more than 1.0 indicates the outcome event is more likely to occur in the treated group than in the control/comparison group. OR and RR are epidemiological statistics that are rarely covered in social work research and statistics texts. They are, however, quite commonly found in systematic reviews.

Risk statistics may be reported along with “Number Needed to Treat” (NNT) statistics. NNT is a measure used in epidemiology to assess the effectiveness of a treatment (Christensen & Kristiansen, 2006; Mendes, Alves, & Batel-Marques, 2017). *NNT is the number of people who need to be treated to prevent one additional negative outcome*. In other words, how many people would need to be treated for one person to benefit more than was observed in the control/comparison group. A NNT value of 1 is ideal since it means everyone who is treated benefits from the treatment while no one benefits in the comparison group. Low NNT values indicate that the treatment is more effective compared to the comparison group. The higher the NNT value, the fewer people benefit compared to the comparison group in the study. McQuay and Moore (1997) note that NNT values of 2 or 3 are rare but indicate that the treatment is highly effective.

Researchers use many statistics with meta-analyses depending on the nature of the data relevant to the clinical question. A more complete overview of these statistics may be found in Littell et al. (2008). The European Patients’ Academy (2015) provides an online tutorial for patients and families at www.eupati.eu/clinical-development-and-trials/statistics-clinical-trials-key-concepts/.

Meta-analytic statistical analyses are not possible when only one or two studies are found on a topic. This is why meta-analysis may not be appropriate for all systematic reviews. Such a small number of studies does not allow for appropriate use of the meta-analysis statistics. Of course, meta-analysis statistics are not used in qualitative systematic reviews.

Meta-analysis is a very helpful part of a quantitative systematic review. The procedures of the systematic review structures the identification of high-quality studies that meet the stated inclusion criteria for the review. A meta-analysis provides a useful summary statistical measure of the magnitude of differences between the tested groups. It also provides a general way to articulate the statistical differences in plain language.

### Integrating Results and Identifying Limitations and Cautions

Meta-analysis is one very useful statistical method for integrating the results of several studies on a topic. Written Cochrane and Campbell Collaboration systematic reviews generally include meta-analysis statistical results. In addition, most systematic reviews also point out the limitations of the available research and some cautions about its application. For example, a systematic review might note that while two treatments are effective, the outcome for one treatment was measured by rates of rehospitalization and the other was measured by a standardized test of symptoms. Clearly helping a client stay out of the hospital is a general good, but it may not be the main concern of the client or the client's family. The client may be more directly concerned about reducing symptoms. In such a situation, the systematic review may help the clinician recommend to the client the treatment that demonstrated symptomatic improvement, while noting an alternative treatment was also effective but that it was measured by rates of rehospitalization. Here the details of the review can be useful in helping the client understand the differences in evidence that may matter to them in making informed treatment choices.

Systematic review summaries may also point out the relative limitations of the available research they summarize. For example, review authors may state that sample sizes for all of the included treatments were small. This might suggest that while the treatments were effective, it is not yet unclear if this will generalize to other clients and settings. Cochrane and Campbell systematic reviews also point out potential biases in the available research. One key area is to identify when the researchers who study a treatment are also the originators of the treatment model under investigation. Considerable research suggests that when the developer of a treatment model tests the effectiveness of their model they may, unconsciously or consciously, introduce attribution biases in favor of their model. It is helpful for readers to keep in mind what kinds of biases might influence studies done by researchers who might favor one model over another. Economic influences, such as sources of funding, may also shape research results in a nonscientific, biased manner.

## An Example of a Cochrane Collaboration Systematic Review

One disorder of considerable interest to clinical social workers is post-traumatic stress disorder [PTSD]. Adult clients present with PTSD based on a wide range of traumatic and overwhelming experiences. Their stories may also generate painful reactions in clinicians and others. PTSD is linked with several other disorders, notably including personality disorders, and may be difficult to differentially diagnose. Its presentation may be delayed following the trauma, and it may present with dissociation.

The DSM-5 criteria (American Psychiatric Association, 2013) center on exposure to risk of death, serious injury, or sexual violence. Exposure may be direct, through witnessing, or indirect through learning of a loved one's exposure to trauma or through indirect exposure to traumatic details. These exposures lead to persistent re-experiencing of the trauma through memories, nightmares, flashbacks, or emotional and/or physical reactivity after reminders of the event. People avoid trauma-related stimuli, thoughts, feelings, or reminders. Symptoms must last more than 1 month and include worsening of trauma-related arousal and reactivity that cause significant distress or impairment of functioning. Symptoms must not be due to medications, substance use, or other illnesses.

A search of the Cochrane Library reveals 26 systemic reviews related to PTSD. Medications, psychotherapy, sports and games, and diaries are treatments included in these systematic reviews. Target clinical populations are adults, children, and adolescents, victims of torture, law enforcement officers, women following childbirth, as well as people with critical illnesses and traumatic injuries.

Some preventive efforts are also included in the Cochrane systematic reviews. A systemic review by Rose, Bisson, Churchill, and Wessely (2002) found single-session debriefing to be ineffective. Amos, Stein, and Ipser (2014) report in their systematic review of the effectiveness of mediation for preventing PTSD that:

> There is moderate quality evidence for the efficacy of hydrocortisone for the prevention of PTSD development in adults. We found no evidence to support the efficacy of propranolol, escitalopram, temazepam and gabapentin in preventing PTSD onset. The findings, however, are based on a few small studies with multiple limitations. Further research is necessary in order to determine the efficacy ofpharmacotherapy in preventing PTSD and to identify potential moderators of treatment effect. (Author's conclusions)

## *Cochrane Systematic Reviews: Organization and Audiences*

Cochrane Library reviews located online typically provide only a summary or abstract of available information. This may be sufficient for many information needs. However, pdfs of the more complete *standard* version and the entire *full* versions are also available, though at cost for US users. The standard version provides more detail than does the abstract alone but excludes complete data and analyses as well as appendices. The full version is the complete report. Only the full version reveals all the choices, and rationales for them, used in completing the SR. Full versions of SR reports can be over 200 pages in length.

## *Psychological Therapies for Chronic Post-traumatic Stress Disorder (PTSD) in Adults*

Bisson, Roberts, Andrew, Cooper, and Lewis (2013) completed a systematic review [SR] of psychological therapies for adults who have chronic PTSD registered with the Cochrane Collaboration. Their SR is available in English, Spanish, and Portuguese languages. Information is included for clinicians as well as for clients and the public. Both detailed professional and plain language summaries are included in the SR report. The plain language summary of this SR, intended for both clinicians and for clients, is available online at https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD003388.pub4/full#CD003388-abs-0004.

## *The Plain Language Summary of a Systematic Review*

Bisson et al.'s (2013) plain language summary begins with a section on *background information* defining PTSD and continuing to explain some previously researched therapies for it:

> Post-traumatic stress disorder (PTSD) can occur following a traumatic event. It is characterised by symptoms of re-experiencing the trauma (in the form of nightmares, flashbacks and distressing thoughts), avoiding reminders of the traumatic event, negative alterations in thoughts and mood, and symptoms of hyper-arousal (feeling on edge, being easily startled, feeling angry, having difficulties sleeping, and problems concentrating).
>
> Previous reviews have supported the use of individual trauma-focused cognitive behavioural therapy (TFCBT) and eye movement desensitisation and reprocessing (EMDR) in the treatment of PTSD… (Plain language summary, Background)

The next section of the plain language summary describes the *Study characteristics* of the studies included in the SR: "This review draws together up-to-date evidence from 70 studies including a total of 4761 people" (Study characteristics). Here we learn how many studies and participants were included in the SR, but do not learn why other studies were included or excluded by the authors.

*Key findings* make up the next section of the SR's plain language summary. These findings link to the treatments defined previously in the background section of the SR:

> There is continued support for the efficacy of individual TFCBT, EMDR, non-TFCBT and group TFCBT in the treatment of chronic PTSD in adults. Other non-trauma-focused psychological therapies did not reduce PTSD symptoms as significantly. There was evidence that individual TFCBT, EMDR and non-TFCBT are equally effective immediately post-treatment in the treatment of PTSD. There was some evidence that TFCBT and EMDR are superior to non-TFCBT between one to four months following treatment, and also that individual TFCBT, EMDR and non-TFCBT are more effective than other therapies. No specific conflicts of interest were identified [among the researchers competing the original studies]. (Key findings)

The last section of the plain language summary offers a *quality appraisal* of the best available research evidence as determined by the SR authors:

> Although we included a substantial number of studies in this review, each only included small numbers of people and some were poorly designed. We assessed the overall quality of the studies as very low and so the findings of this review should be interpreted with caution. There is insufficient evidence to show whether or not psychological therapy is harmful.

Overall, the plain language summary of the Bisson et al. (2013) SR indicates that psychological therapies are more effective than no treatment for persons who have chronic PTSD, with trauma-focused therapy and EMDR supported by the best available research evidence, though the evidence is of low quality and based on few studies. No harms from undertaking these therapies were reported. In addition, the *Author's conclusions* state that "non-TFCBT is effective in the short term" and "there is more limited evidence that some other non-trauma-focused psychological therapies may be effective" (Bisson et al., 2013, Author's conclusions).

Plain language summaries offer a clear and succinct way to access the best available evidence under Cochrane Collaboration standards. Considerable information is summarized, though even the plain language summary may be confusing to many readers. It is a very useful resource and starting point for professionals doing EBP in practice. However, much greater detail is also available in a full SR report. Plain language summaries may be very useful in Step 4 of the EBP process in which the clinician must inform the client about the best available research evidence in treatment planning.

## *The Systematic Review Abstract*

Like the plain language summary, the SR abstract opens with background information about the disorder under study and the objectives of the SR. A key difference is that the *Search methods* employed are described in much greater detail. This is to better guide the clinician and to show which databases and publications were examined. Efforts to locate unpublished studies and studies in progress are also stated. (Complete details are only found in the *Full* SR report however.)

Bisson et al. (2013) state:

> For this update, we searched the Cochrane Depression, Anxiety and Neurosis Group's Specialised Register (CCDANCTR-Studies and CCDANCTR-References) all years to 12th April 2013. This register contains relevant randomised controlled trials from: The Cochrane Library (all years), MEDLINE (1950 to date), EMBASE (1974 to date), and PsycINFO (1967 to date). In addition, we hand searched the Journal of Traumatic Stress, contacted experts in the field, searched bibliographies of included studies and performed citation searches of identified articles. (Search methods)

Specific search terms are not detailed, but the approach of the SR team and their database search parameters are clearly stated. Additional searches for the gray literature were also undertaken using several techniques.

Next, a section describes the *Selection criteria* or more precisely the inclusion and exclusion criteria for this SR:

> Randomised controlled trials of individual trauma-focused cognitive behavioural therapy (TFCBT), eye movement desensitisation and reprocessing (EMDR), non-trauma-focused CBT (non-TFCBT), other therapies (supportive therapy, non-directive counselling, psychodynamic therapy, and present-centred therapy), group TFCBT, or group non-TFCBT, compared to one another or to a waitlist or usual care group for the treatment of chronic PTSD. The primary outcome measure was the severity of clinician-rated traumatic-stress symptoms.

Note that consistent with the Oxford University Hierarchy of Research Evidence (, 2016), only experimental studies or RCTs were included in this SR. RCTs allow cause-effect determination unlike other research designs. However, other potentially informative studies using nonexperimental research designs were excluded. Note too that a clear definition of PTSD using DSM and ICD standards is assumed, though studies may use different versions of PTSD diagnoses over time with different criteria (such as the older DSM-III or DSM-IV criteria). Further, the kinds of trauma leading to PTSD in these adults are not specified. Many kinds of trauma appear to be included, without consideration of specific differences in populations needs across victims of sexual violence versus combat veterans.

Next, the *Main results* section offers much more detail on findings than does the plain language summary. Beyond the number of studies and total number of participants, we now find details about specific comparisons among treatment, including statistics supporting the authors' conclusions:

> We include 70 studies involving a total of 4761 participants in the review. The first primary outcome for this review was reduction in the severity of PTSD symptoms, using a standardised measure rated by a clinician. For this outcome, individual TFCBT and EMDR were more effective than waitlist/usual care (standardised mean difference (SMD) -1.62; 95% CI -2.03 to -1.21; 28 studies; n = 1256 and SMD -1.17; 95% CI -2.04 to -0.30; 6 studies; n = 183 respectively). There was no statistically significant difference between individual TFCBT, EMDR and Stress Management (SM) immediately post-treatment although there was some evidence that individual TFCBT and EMDR were superior to non-TFCBT at follow-up, and that individual TFCBT, EMDR and non-TFCBT were more effective than other therapies.
>
> Non-TFCBT was more effective than waitlist/usual care and other therapies. Other therapies were superior to waitlist/usual care control as was group TFCBT. There was some evidence of greater drop-out (the second primary outcome for this review) in active treatment groups. Many of the studies were rated as being at 'high' or 'unclear' risk of bias in multiple domains, and there was considerable unexplained heterogeneity; in addition, we assessed the quality of the evidence for each comparison as very low. As such, the findings of this review should be interpreted with caution. (Main results)

Here we see that clinician ratings of symptom severity using a standardized measure were the data source for the outcome or dependent variable. Individual TFCBT and EMDR were more effective than either "usual care" or a wait list condition. The effect size or SMD [standardized mean difference] for TFCBT was −1.62, a large reduction from initial symptom severity at the end of treatment. The reported 95% confidence interval ranges from −2.03 to −1.21. (The negative signs indicate reduction in PTSD symptoms, the desired goal of treatment.) Since the SMD of −1.62

falls within the 95% CI range, it is likely that these results will prove applicable to the larger population of adults with PTSD. Similarly, the SMD for EMDR was −1.17 which falls within the 95% CI range of −2.04 to −0.30.

Note that there was no statistically significant difference among TFCBT, EMDR, and stress management at the end of treatment, though TFCBT and EMDR appeared with "some evidence" to be superior to stress management at later follow-up. Further, individual TFCBT, EMDR, and non-TFCBT were more effective than were "other therapies" though the "other therapies" proved superior to wait list/usual care control along with group TFCBT. Complete supporting details for these conclusions can be found in the full version SR report.

The greater detail provided in the abstract of this SR can help clinicians answer client questions about specific treatments not discussed in the plain language summary. This is especially important if the treatments with the strongest research support are not acceptable to the client due to the client's values and preferences or are not accessible due to financial limitations or lack of appropriately trained clinicians in a geographical area.

The last section of the SR abstract addresses the *Authors' conclusions*. Here the SR authors describe the quality of the studies they located and included in the SR. Not all studies are of high quality, though they are included in the SR as "the best available evidence" meeting their stated inclusion criteria. Bisson et al. (2013) state:

> The evidence for each of the comparisons made in this review was assessed as very low quality. This evidence showed that individual TFCBT and EMDR did better than waitlist/usual care in reducing clinician-assessed PTSD symptoms. There was evidence that individual TFCBT, EMDR and non-TFCBT are equally effective immediately post-treatment in the treatment of PTSD. There was some evidence that TFCBT and EMDR are superior to non-TFCBT between one to four months following treatment, and also that individual TFCBT, EMDR and non-TFCBT are more effective than other therapies. There was evidence of greater drop-out in active treatment groups. Although a substantial number of studies were included in the review, the conclusions are compromised by methodological issues evident in some. Sample sizes were small, and it is apparent that many of the studies were underpowered. There were limited follow-up data, which compromises conclusions regarding the long-term effects of psychological treatment. (Author's conclusions)

Here we see that though some treatments prove more effective than wait list or usual care, these conclusions must be tempered by the "very low quality" of the available outcome studies for chronic adult PTSD. Unstated methodological concerns (which would be detailed in the full version of this SR) also were found in some included studies. One concern was the lack of statistical power (the ability of a statistic to demonstrate *any* difference). The lack of many follow-up studies also limited evaluation of how lasting these changes were after the end of treatment.

The abstract summary of this SR provides more detail than does the plain language summary version. With greater detail comes a requirement for the reader to have the knowledge and skill to interpret issues of research design and statistics. This requirement increases further when one reads and interprets the full version of the SR.

Note carefully that the treatments under consideration are broadly defined, but shared or common components are not mentioned. Summary definitions of the various treatments are found in the full version SR (see pp. 6–7). The full version also notes that there was no restriction on including studies that treated persons with comorbid conditions as well as PTSD, so long as PTSD was the primary diagnosis (p. 7).

SRs help clinicians locate relevant research studies and critically evaluate research results. However, critical thinking is always required, as is careful attention to how well studies and SRs include persons who are like the client you are treating. Most SRs do not provide details on socially constructed oppressions and other factors that may impact treatment feasibility and effectiveness.

## Evaluating Systematic Reviews

We have noted that systematic reviews and meta-analysis are terms that may be applied to reports of varying methods and overall quality. Working groups have made efforts to establish ways to assess the methodological quality of systematic reviews. One such effort is AMSTAR, developed by an international group of epidemiologists and public health specialists (Shea et al., 2007). AMSTAR is an acronym for *A*ssessment of *M*ultiple *S*ys*T*em*A*tic *R*eviews. AMSTAR is an 11-item rating scale for assessing systemic reviews, including meta-analytic content. The full checklist is available free online at https://amstar.ca/Amstar_Checklist.php. The checklist summarizes several quality issues necessary for a strong systematic review. These include having an a priori review design (stating the review question at the start) and clear report selection criteria. Other criteria address standards for "scientific quality" assessment of each included study and for appraising the quality of meta-analyses used to synthesize multiple studies. Finally, the use of a range of efforts to identify and reduce bias in the systematic review is assessed. Cochrane and Campbell systematic reviews generally conform to the AMSTAR criteria very well.

The AMSTAR checklist provides a useful way for clinicians to frame their assessments of systematic reviews. Its main limitation is that the 11 items are quite general. For example, specific elements of "scientific quality" assessment are not provided but must be undertaken by the user. This leaves many technical issues to the knowledge and skills of the user. On the other hand, the AMSTAR checklist provides a very helpful framework for assessing the overall quality of a systemic review.

## Summary

This chapter has reviewed systematic reviews as used in clinical research and in Step 3 of EBM/EBP process. It also introduced the Cochrane and Campbell Collaboration systematic reviews process and requirements. One part of this process is the statistical technique known as meta-analysis. Meta-analysis provides a way to combine the quantitative results of several different research studies. Clinical social workers are reminded that not all reports claiming to be systematic reviews meet the careful standards of the *Cochrane Handbook* (Higgins & Green, 2011). Similarly, meta-analytic reports studies may vary in scope and quality.

The reports of Cochrane and Campbell systematic reviews include both a plain language summary of key results and a much longer technical report giving much more detail about each study and the review process. In the United States, only the abstracts of Cochrane Collaboration systematic reviews are available free online. The full technical reports, however, are only available on a subscription basis. In most other countries, the full versions of the Cochrane systematic reviews are available free. Even abstracts of systematic reviews may include considerable statistical detail. There are both print and online resources that can help clinicians interpret these details as needed.

While the EBM/EBP practice decision-making model makes no mention of systematic reviews or meta-analyses, the standards of Cochrane and Campbell reviews make them a key source for clinicians. Still, clinical social workers must apply their professional expertise and critical skills in determining just what constitutes “the best available research evidence” for their unique practice needs.

Appraising the quality of research reports and systematic reviews requires skills quite different from the core skills of clinical practice or the skills used in locating practice research. It can be a complex, multifaceted process. Yet bringing the results of high-quality research into practice decision-making should improve outcomes and reduce harm. It is an important part of EBM and EBP.

The next step in the EBP practice decision-making process is to collaboratively discuss the best available research with the client. Step 4 brings “the best available evidence” back to the client to inform their part of treatment planning and to allow for the client’s questions and concerns to be addressed. This process is the focus of the next chapter.

## References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.) (DSM-5). Washington, DC: Author.

Amos, T., Stein, D. J., & Ipser, J. (2014). Pharmacological interventions for preventing post-traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews, 2014*(7), CD006239. https://doi.org/10.1002/14651858.CD006239.pub2

Bisson, J., Roberts, N., Andrew, M., Cooper, R., & Lewis, C. (2013). Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults. *Cochrane Database of Systematic Reviews, 2013*(12), CD003388. https://doi.org/10.1002/14651858.CD003388.pub4

Carey, B. (2008, January 17). Antidepressant studies unpublished. *The New York Times*. Retrieved from https://www.nytimes.com/2008/01/17/health/17depress.html

Carroll, H., Toumpakari, Z., Johnson, L., & Betts, J. (2017). The perceived feasibility of methods to reduce publication bias. *PLoS One, 12*(10), e0186472. https://doi.org/10.1371/journal.pone.0186472

Chester, R., Smith, T., Sweeting, D., Dixon, J., Wood, S., & Song, F. (2008). The relative timing of VMO and VL in the aetiology of anterior knee pain: a systematic review and meta-analysis. *British Medical College Musculoskeletal Disorders, 9*(1), 64. https://doi.org/10.1186/1471-2474-9-64

Chittaranjan, A. (2015). Understanding relative risk, odds ratio, and related terms: As simple as it can get. *The Journal of Clinical Psychiatry, 76*(7), e857–ee86.

Christensen, P., & Kristiansen, I. (2006). Number-needed-to-treat (NNT): Needs treatment with care. *Basic & Clinical Pharmacology & Toxicology, 99*(1), 12–16.

Cochrane Methods (Group): Qualitative and implementation. (2017). *Core library of qualitative synthesis methodology* [online bibliography]. Retrieved from: http://methods.cochrane.org/qi/core-library-qualitative-synthesis-methodology

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: Routledge Academic.

Deng, C.Q. (2012, February 12). *How to interpret odds ratios that are smaller than 1?* Retrieved from https://onbiostatistics.blogspot.com/2012/02/how-to-interpret-odds-ratios-that-are.html

Dickersin, K. (1990). The existence of publication bias and risk factors for its occurrence. *Journal of the American Medical Association, 263*, 1385–1389.

Dixon-Woods, M., Bonas, S., Booth, A., Jones, D., Miller, T., Sutton, J., et al. (2006). How can systematic reviews incorporate qualitative research? A critical perspective. *Qualitative Research, 6*(1), 27–44.

Dixon-Woods, M., Cavers, D., Agarwal, S., Annandale, E., Arthur, A., Harvey, J., et al. (2006). Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups. *BMC Medical Research Methodology, 6*. (electronic journal). Retrieved from http://www.biomedcentral.com/1471-2288/6/3

Drisko, J., & Simmons, B. (2012). The evidence base for psychodynamic psychotherapy. *Smith College Studies in Social Work, 82*(4), 374–400.

Ellis, P. (2010). *The essential guide to effect sizes: An introduction to statistical power, meta-analysis and the interpretation of research results*. New York: Cambridge University Press.

European Patients' Academy. (2015). *Statistics in clinical trials: Key concepts*. Retrieved from https://www.eupati.eu/clinical-development-and-trials/statistics-clinical-trials-key-concepts/

Gillies, D., Taylor, F., Gray, C., O'Brien, L., & D'Abrew, N. (2012). Psychological therapies for the treatment of post-traumatic stress disorder in children and adolescents. *Cochrane Database of Systematic Reviews, 2012*(12), CD006726. https://doi.org/10.1002/14651858.CD006726.pub2

Higgins J., & Green, S. (Eds.). (2011). *Cochrane handbook for systematic reviews of interventions,* version 5.1. Available from https://training.cochrane.org/handbook

Hopewell, S., Loudon, K., Clarke, M. J., Oxman, A., & Dickersin, K. (2009). Publication bias in clinical trials due to statistical significance or direction of trial results. *Cochrane Database of Systematic Reviews, 2009*(1), MR000006. https://doi.org/10.1002/14651858.MR000006.pub3

Lenth, R. (2008). *Java applets for power and sample size*. Retrieved from http://www.stat.uiowa.edu/~rlenth/Power/

Litschge, C., Vaughn, M., & McCrea, C. (2010). The empirical status of treatments for children and youth with conduct problems: An overview of meta-analytic studies. *Research on Social Work Practice, 20*(1), 21–35.

Littell, J., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analysis*. New York: Oxford University Press.

McGauran, N., Wiesler, B., Kreis, J., Schüler, Y.-B., Kölsch, H., & Kaiser, T. (2010). Reporting bias in medical research: A narrative review. *Trials, 11*, 37.

McQuay, H., & Moore, A. (1997). Using numerical results from systematic reviews in clinical practice. *Annals of Internal Medicine, 126*, 712–720. Retrieved from http://www.medicine.ox.ac.uk/bandolier/booth/painpag/NNTstuff/numeric.htm

Mendes, D., Alves, C., & Batel-Marques, F. (2017). Number needed to treat (NNT) in clinical literature: An appraisal. *BMC Medicine, 15*, 112. Retrieved from https://doi.org/10.1186/s12916-017-0875-8

Moher, D., Cook, D., Eastwood, S., Olkin, I., Rennie, D., & Stroup, F. (1999). Improving the quality of reports of meta-analyses of randomized controlled trails: The Quorom group statement. *Lancet, 354*(9193), 1896–1900.

Noblit, G., & Hare, R. (1988). *Meta-ethnography: Synthesizing qualitative studies*. Newbury Park, CA: Sage.

O'Brien, S., & Yi, Q. L. (2016). How do I interpret a confidence interval? *Transfusion, 56*(7), 1680–1683.

Oxford University Centre for Evidence-based Medicine. (2016, May). *The Oxford levels of evidence 2.1*. Retrieved from https://www.cebm.net/2016/05/ocebm-levels-of-evidence/

Pratt, J., Rhine, J., Smith, B., Stuart, C., & Greenwood, J. (1940). *Extra-sensory perception after sixty years*. New York: Henry Holt.

Rose, S., Bisson, J., Churchill, R., & Wessely, S. (2002). Psychological debriefing for preventing post traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews, 2002*(2), CD000560. https://doi.org/10.1002/14651858.CD000560

Sandelowski, M., & Barroso, J. (2007). *Handbook for synthesizing qualitative research*. New York: Springer Publishing.

Scargle, J. (2000). Publication bias: The "file-drawer problem" in scientific inference. *Journal of Scientific Exploration, 14*(2), 94–106.

Shea, B., Grimshaw, J., Wells, G., Boers, M., Andersson, N., Hamel, C., et al. (2007). Development of AMSTAR: A measurement tool to assess the methodological quality of systematic reviews. *BMC Medical Research Methodology, 7*, 10. https://doi.org/10.1186/1471-2288-7-10

Sistrom, C., & Garvan, C. (2004). Proportions, odds, and risk. *Radiology, 230*(1), 12–19. https://doi.org/10.1148/radiol.2301031028

Smith, M., Glass, G., & Miller, T. (1980). *The benefits of psychotherapy*. Baltimore, MD: Johns Hopkins University Press.

Sridharan, L., & Greenland, P. (2009). Editorial policies and publication bias: The importance of negative studies (editorial commentary). *Archives of Internal Medicine, 169*, 1022–1023.

Szumilas, M. (2010). Explaining odds ratios. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 19*(3), 227–229.

Thombs, B., & Jewett, L. (2009). Letter: Analyzing effectiveness of long-term psychodynamic psychotherapy. *Journal of the American Medical Association, 301*(9), 930.

# Chapter 9
# Step 4 of Evidence-Based Practice: Collaboratively Discussing Treatment Options with the Client

Step 4 of the evidence-based practice (EBP) decision-making model focuses on actively and collaboratively discussing research results with the client (Drisko, 2017). The goal is to inform the client about identified potentially effective options in order to discuss how these options fit with the client's values and preferences. This requires the clinical social worker to summarize the results of the literature search and evaluation of located relevant research results. It also requires that the social worker state the results to the client in easily understandable language. Active and collaborative discussion allows for exploration of the client's views, values, and preferences. This step of the EBP process fits well with social work's professional values and ethics. This step also has implications for developing a therapeutic alliance and building client motivation. However, it may pose some challenges in practice.

In 2001, Gambrill wrote an article titled "Social work: An authority-based profession." In this article, she argues that for social workers to uphold the values of the profession, they must be transparent in their work with clients and include the "clients in making decisions that affect their lives" (p. 166). This is a key aspect of informed consent and consent to treat. We hope that all social workers strive to work collaboratively with their clients regarding all aspects of any social work intervention process. Step 4 in the EBP highlights this important aspect of social work practice by formally addressing the need to discuss and explore the options with clients. However, in order to address the concerns raised by Gambrill (2001), it is essential that social workers discuss the options *with* their clients, and not just *inform* their clients as to the plan. This step is a crucial factor in diminishing the potential authoritarian or expert stance clinicians may take with clients.

Step 4 distinguishes EBP from traditional medical models and hierarchical "expert" approaches. In this step, the clinician *collaboratively* discusses the research results *with the* client to determine how the potential treatment options fit with the client's values, preferences, and interests while simultaneously always keeping in mind the client's context and unique circumstances. We believe that this step in EBP

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_9

is often overlooked and/or sometimes interpreted as involving a *presentation to the client*, rather than *a dialog with the client*. We hope that after reading this chapter, readers will have a stronger appreciation for importance of having a conversation with the client before making a decision regarding a treatment approach.

## Reasons to Include the Client in the Decision-Making Process

### *Consistency with the* Code of Ethics

There are many reasons to include the client in the decision-making process in EBP (Drisko, 2017). One of the reasons is that our *Code of Ethics* (National Association of Social Workers [NASW], 2017) states:

> Social workers should use clear and understandable language to inform clients of the purpose of the services, risks related to the services, limits to services because of the requirements of a third party payer, relevant costs, reasonable alternatives, clients' right to refuse or withdraw consent, and the time frame covered by the consent. Social workers should provide clients with an opportunity to ask questions. (1.03)

While individuals can interpret this part of the Code in multiple ways, informed consent does not limit the worker to simply stating or explaining a proposed treatment plan. We view this ethical standard as calling for an interactive dialog with the client. Gambrill (2001) states that social workers are "in violation of our code of ethics" (p. 169) if they use an authoritarian or approach in which the clinician informs the client about the treatment approach that is "best" without including the client in the decision-making process. A true interactive dialog with the client about treatment options should continue until a unified decision has been made regarding an intervention plan that is agreeable to both the clinician and the client.

### *Active Collaboration Is Part of Culturally Competent Practice*

Given documented racial and ethnic dispraise in health care, addressing difference is an important part of contemporary social work practice. Culturally competent care has been proposed as one key method for addressing health-care disparities and limitations in research (Smedley, Stith, & Nelson, 2002). Cultural competence in health care is "the delivery of health services that acknowledges and understands cultural diversity in the clinical setting and respects individuals' health beliefs, values, and behaviors" (Romana, 2006, p. 1). It is inherently an individualized process. Active exploration of the client's culture, religion, and personal values is therefore a necessary part of assessment and treatment planning. Contemporary health care has begun to shift toward efforts to include cultural humility, openness, and inquisitiveness toward each individual patient (Ortega & Coulborn Faller, 2011; Romana, 2006; Tervalon & Murray-Garcia, 1998). To do this, the clinician must engage in personal development and learning, as well as introspection and reflection. Co-learning with the client affirms the client's agency and may reduce harmful power dynamics in practice.

In their systematic review of 34 studies, Beach et al. (2005, p. 256) found "excellent evidence that cultural competence training improves the knowledge of health professionals, …good evidence that it improves patient satisfaction…and limited evidence it improves adherence and outcome." Practitioner knowledge and skill can expand or improve with cultural competence and/or cultural humility training. Integrating EBP and cultural humility will take effort and practice but is important to improving service effectiveness (Drisko, 2017).

It is important to note that while we have addressed culturally competent care, other forms of socially structured oppression, including gender, age, ability, and other forms of human diversity, can be similarly explored in Step 4 of the EBP process (Drisko, 2017). These are also areas warning more research to guide practice.

### *Research Support for Active Collaboration with the Client*

In addition to adhering to the *Code of Ethics*, psychotherapy research has demonstrated that "if a client is not attuned to the approach being offered and shows resistance to the treatment, persistently and insistently offering the same approach is not therapeutically helpful and probably is harmful" (Wampold, 2010, p. 54). Therefore, before the intervention process can begin, it is essential that the client and the practitioner be in agreement about the approach that will be used. Without agreement at the start of the intervention, the intervention is less likely to be effective (Høglend, 2014; Wampold, 2010).

### *Including the Client Strengthens the Alliance*

Another reason to include the client in the practice decision-making process is because such action will help to foster a collaborative relationship. Collaborative relationships have been shown to be a critical component in the formation of a strong therapeutic relationship (Horvath & Bedi, 2002). A strong therapeutic relationship or therapeutic alliance has been consistently shown to be one of the most critical factors in producing positive outcomes in treatment (Høglend, 2014; Horvath & Bedi, 2002; Horvath & Symonds, 1991; Hubble, Duncan, Miller & Wampold, 2010; Norcross, 2010; Orlinsky, Rønnsted & Willustzki, 2004; Wampold, 2010). Given the depth of research on the importance of the therapeutic alliance, it is imperative that the clinician work to strengthen it with clients throughout the course of treatment. The therapeutic relationship may be especially important at the beginning of the treatment process. A collaborative relationship that includes the clients in the decision-making process can strengthen the therapeutic relationship and may increase the likelihood of a positive outcome in treatment.

Huber et al. (2018) report that higher levels of subjective personal agency among clients were "associated with more active involvement and affiliative interaction. The findings support the idea that patients need to feel capable of acting within and having an influence on their therapy to benefit from it" (abstract). Clinicians should carefully work to build and strengthen the client's sense of personal agency during the assessment and treatment planning process.

Anderson, Bautista, and Hope (2018) report that "being a woman, identifying as a sexual minority, and having a therapist low in perceived multicultural competence were associated with increased risk of premature termination [of therapy]. However, the best predictors of premature termination were a weak therapeutic alliance and symptoms of depression" (abstract). It appears that collaboratively developing a strong therapeutic relationship, through active collaboration, is vital to effective treatment for many clients. It may also help identify and address issues of socially structure oppression as they impact treatment.

## *Growing Policy and Financial Support for Active Collaboration with Clients*

There is growing policy and funding support for patient-centered care, including active collaboration with client in treatment planning. In 1999, Towle and Godolphin introduced the concept of "informed, shared decision making" in health care (p. 766). Further, the similar concept of "patient-centered care" was identified in 2001 by the Institute of Medicine as one of its six goals for a twenty-first-century health-care system. Some new financial incentives based on this concept were included in the Affordable Care Act [ACA]. This has increased the importance in patient-centered care in practice. While patient-centered care is assumed to lead to reduced health-care expenditures, it is also intended to help improve outcomes. This is because active patient participation and adherence to treatment plans are also assumed to improve health-care outcomes. In turn, incentives for delivering patient-centered care are developing, and measures of patient-centered care are being refined (Levinson, Lesser, & Epstein, 2010). Patients may also see modest reimbursements for participating in patient-centered care under some insurance plans.

Some preliminary research suggest that patients/clients also prefer patient-centered care. Swenson et al. (2004) found in their experimental study of 250 US patients that "a patient-centered versus a biomedical communication style" (p. 1069) was preferred. In terms of outcomes, Weiner et al. (2013) report that in a study of over 750 patients and more than 130 physicians, attention to patient needs, contexts, and circumstances in treatment planning was associated with improved health-care outcomes. Active collaboration with clients has many benefits.

## Factors to Consider During the Conversation

After completing the literature review process, it is imperative that the clinician consider how the various treatment alternatives are “compatible with the attitudes and values of the client. If not, the client is likely to be resistant to what is being presented” (Wampold, 2010, p. 53). In order to reduce resistance, research suggests it is important for clinicians to match therapeutic approaches to individual characteristics of the client. These include personality, cognitive abilities, and coping styles. Such matching addresses the fit of the treatment alternatives to the client rather than to the disorder (Wampold, 2010). As such, when a clinician presents the results of a literature search to a client, the clinician must consider how the various interventions align with the individual characteristics of the client. In fact, one of the guiding principles of EBP for social workers published by The Institute of the Advancement of Social Work Research (2008) is that the EBP process must be adapted and personalized for clients based on their culture, interests, and circumstances. Social workers do not view clients merely as “diagnoses.” Rather, social workers view clients using a person-in-environment perspective (Kondrat, 2008) and should at all times consider the context of their clients’ lives.

To that end, we offer the following points for clinicians to consider when presenting the options found in the practice research literature. These points are not meant to be an exhaustive list but rather a number of starting points to help clinicians think about the unique characteristics of their client. These questions help clinicians appraise how well the alternatives under consideration match with the client or client system.

### *Guiding Questions to Consider*

- What is the composition of the client system and how does that effect the definition of the client or client system?
- Where does the power lie within the client system or family?
- Is the identified client a minor? If so, with whom do you discuss the options? Does the age of the minor influence this decision? Who gets to make the decision about treatment?
- Is the identified client an older adult who has other adult family members involved with the client’s care? Are you legally able to talk to those family members?
- What are the client’s cognitive capacities?
- What are the client’s beliefs about what helps in treatment?
- What are the values of the client regarding issues that may shape treatment? Culture? Race or ethnicity? Gender identity? Sexuality? Class and opportunity? Special abilities or limitations?

- What are the client's views about religion and spirituality? How do these views influence the client's understanding of the problem? How do these influence the client's views about healing, and how it occurs?
- Are there any language barriers that might impact either your ability to effectively communicate with your client? Are there any language barriers regarding homework or other tasks within the treatment?
- Are there any external factors that might influence a client's ability to participate in treatment, such as financial status, immigration status, access to services, disabilities, transportation, child care, employment responsibilities, caregiving responsibilities, or other such factors?
- What were the client's previous experiences with treatment (if any)? What worked and what did not? Was any aspect of treatment unacceptable to the client?
- What is the severity of the presenting problem? What is the urgency or acuity surrounding this issue?
- How able is the client to engage in the potential treatments due to the current challenges?
- Are their multiple disorders or presenting problems with which the client is struggling? What is main priority of the client?
- How motivated is the client? Is the client eager to participate in treatment or feeling forced to participate? How well do the treatment requirements match with the client's level of motivation?
- What is the client's view of a helper? An expert? A partner? An enemy? How are clinicians viewed within this framework?
- Are clinicians seen as trustworthy individuals? As experts?
- How is the system in which you work viewed by the client?
- What influence might personal history or cultural beliefs have on the client's views regarding how acceptable it is to receive help from an individual outside of the family?

## *Additional Questions to Consider Regarding the Clinician and Setting*

- Are there aspects of your personal values and beliefs that shape your interpretation of the information? Are they in tension with professional values?
- Do you have any values or significant personal experiences that influence your view of this particular client? The client's age? Race/ethnicity? Gender identity? Sexual orientation? Class? Immigration Status? Legal Concerns? Other factors?
- What is your level of expertise regarding the various alternatives you are suggesting?
- Are you able to present the information clearly and concisely?

- Can you or others at your agency provide each of the proposed evidence-based alternative treatments?
- Is there appropriate supervision and support to for you to deliver the treatment alternatives fully?

Discussing treatment alternatives with the client involves many considerations. Most of these issues are addressed in the assessment process and should be familiar to the clinician. However not all points of sensitivity and concern will be identified during the assessment process. New issues and specific concerns may arise as client and clinician dialog about treatment alternatives.

## *Key Dimensions of Client Input in Clinical Decision-Making*

### Client Preferences and Wishes

As discussed in Chap. 4, it is possible that the practitioner and the client may have different views regarding what to address in treatment or what alternatives may be most effective. It is also possible that there are times when both the client and the clinician agree on the presenting problem but have different views on how to address it. In other words, it is possible that the treatment alternatives proposed by the clinician based on the review of the literature are all incompatible with the values and preferences of the client. For example, for a client with an anxiety disorder, a clinical social worker determines through a thorough literature review that a cognitive behavioral treatment (CBT) has the strongest empirical support for addressing the client's concerns. However, this particular client has had a prior CBT treatment. She did not find it effective and does not believe it will be useful to her at this time. At this point, the clinician must make several important decisions based on professional expertise and knowledge of the client. Is more information needed? Should the clinician ask for more information about the prior treatment and its quality? Should treatment alternatives with lesser research support be offered to the client? Could a modified version of CBT be used to accommodate the client's concerns? Would such modifications undermine the evidence base supporting this treatment alternative? Are such modifications appropriate and ethical? Should the client be referred to another therapist who can give her what she wants? Is this ethical and clinically appropriate?

Unfortunately, there is no definitive answer as to what to do in this situation. We offer the following recommendations to help guide clinical social workers in this process.

1. Ensure that you have completed a thorough assessment. Obtain more information as needed.
2. Listen to the client's concerns and see what she or he feels would be most helpful.

3. Ask additional questions regarding the client's concerns about the proposed model to better understand why the model is not helpful.
4. Discuss other treatment options based on the literature search and discuss the evidence or support of these models. Repeat the literature search if more options need to be identified. (But be sure to explain the differences in research support for the effectiveness of each option.)
5. Decide in discussion with the client what treatment alternative has the best combination of evidence, "buy in" from the client, and fits within your expertise to deliver it competently.
6. If you and the client cannot agree on an approach that (1) fits with the views of the client, (2) that you believe will be effective based on your understanding of the literature, and (3) that you are competent to deliver, then you and the client must discuss if you are the best professional to provide services. If the answer to this question is no, then ethically, you are responsible to refer the client to another agency or professional who is more qualified to provide the type of treatment the client is seeking.
7. Document the conversation in the client's record.

We believe it is essential that the decision-making process with the client be transparent (Gambrill, 2001). In addition, treatment alternatives must be discussed with the client using language that the client can understand (Walsh, 2010). The social worker should ask for the client's feedback about the proposed treatment alternatives and how they fit the client's own values and preferences. Through collaborative discussions with the client regarding treatment alternatives in the EBP practice decision-making process, clients will be more engaged and more hopeful and often have increased motivation for the treatment process (Wampold, 2010).

## Safety Concerns

There are times when a client may suggest a treatment that poses risk of harm or has been shown to be ineffective for the presenting problem. In this situation, the National Association of Social Workers obligate social workers [NASW] *Code of Ethics* (2017) to refuse to provide such a service. "Social workers should base practice on recognized knowledge, including empirically based knowledge, relevant to social work and social work ethics" (NASW, 2017, 4.01.c). While it is important to listen to the client, and their preferences, the *Code* also states:

> When generally recognized standards do not exist with respect to an emerging area of practice, social workers should exercise careful judgment and take responsible steps (including appropriate education, research, training, consultation, and supervision) to ensure the competence of their work and to protect clients from harm. (1.04.c)

A social worker's primary duty is to his or her client. Therefore, if after reviewing the literature and evidence, the client proposes treatment options that are known to be ineffective or potentially harmful, the social worker must refuse to provide such services. The social worker must also explain the reasons behind the refusal. Such conversations must also be documented in the client's record.

## Summary

"It is the client who makes therapy work" (Wampold, 2010, p. 103). This is a simple but powerful statement illustrating the important role each client plays in the success of a treatment intervention. To increase the client's willingness to work and engage in the work of treatment, the client must believe in and feel part of the intervention process. A simple yet powerful way clinicians can engage clients early in treatment is to have them actively and collaboratively participate in practice decision making. Step 4 of EBP makes discussion of treatment alternatives with the client a key part of the treatment planning process. By doing so clients will understand all their options and hopefully feel that the treatment they select to is one in which they had an active role in choosing.

Some authors frame this step of the EBP practice decision-making process in a more "top-down," expert manner. We believe this step of the EBP process can be critical to maximizing client motivation and participation in treatment. We also believe in an active and thorough dialog with the client fits well with social work values and ethics. Research results increasingly support its merits. Without client participation and expression of wishes and preferences, the process of EBP is not complete. The client's preferences and circumstances must be included for EBP to be a success in clinical social work practice.

## References

Anderson, K., Bautista, C., & Hope, D. (2018). Therapeutic alliance, cultural competence and minority status in premature termination of psychotherapy. *American Journal of Orthopsychiatry*. Online first. https://doi.org/10.1037/ort0000342

Beach, M., Price, E., Gary, T., Robinson, K. A., Gozu, A., Palacio, A., et al. (2005). Cultural competence: A systematic review of health care provider educational interventions. *Medical Care, 43*(4), 356–368.

Drisko, J. (2017). Active collaboration with clients: An under-emphasized but vital part of evidence-based practice. *Social Work, 62*(2), 114–121.

Gambrill, E. (2001). Social work: An authority-based profession. *Research on Social Work Practice, 11*, 166–175.

Høglend, P. (2014). Exploration of the patient-therapist relationship in psychotherapy. *American Journal of Psychiatry, 171*, 1056–1066.

Horvath, A., & Symonds, B. (1991). Relation between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Consulting Psychology, 38*, 139–149.

Horvath, A., & Bedi, R. (2002). The alliance. In J. Norcross (Ed.), *Psychotherapy relationships that work: Therapist contributions and responsiveness to patients* (pp. 37–69). New York, NY: Oxford University Press.

Hubble, M., Duncan, B., Miller, S., & Wampold, B. (2010). Introduction. In B. Duncan, S. Miller, B. Wampold, & M. Hubble (Eds.), *The heart & soul of change, 2nd ed.* (pp. 23–46). Washington, DC: American Psychological Association.

Huber, J., Born, A.-K., Claaß, C., Ehrenthal, J. C., Nikendei, C., Schauenburg, H., et al. (2018). Therapeutic agency, in-session behavior, and patient–therapist interaction. *Journal of Clinical Psychology*. [online first]. https://doi.org/10.1002/jclp.22700

Kondrat, M. E. (2008). Person-in-environment. In T. Mizrahi & L. E. Davis (Eds.), *Encyclopedia of social work* (20th ed., pp. 348–354). New York: Oxford University Press.

Levinson, W., Lesser, C., & Epstein, R. (2010). Developing physician communication skills for patient-centered care. *Health Affairs, 29*(7), 1310–1318.

National Association of Social Workers (NASW). (2017). *Code of ethics*. Washington, DC: NASW Press.

Norcross, J. (2010). The therapeutic relationship. In B. Duncan, S. Miller, B. Wampold, & M. Hubble (Eds.), *The heart & soul of change* (2nd ed., pp. 113–141). Washington, DC: American Psychological Association.

Orlinsky, D., Rønnestad, M., & Willutzki, U. (2004). Fifty years of process-outcome research: Continuity and change. In M. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., pp. 307–390). New York, NY: Wiley Press.

Ortega, R., & Coulborn Faller, K. (2011). Training child welfare workers from an intersectional cultural humility perspective: A paradigm shift. *Child Welfare, 90*(5), 27–49.

Romana, H.-W. (2006). Is evidence-based medicine patient-centered and is patient-centered care evidence-based? *Health Services Research, 41*(1), 1–8.

Smedley, B., Stith, A., & Nelson, R. (Eds.). (2002). *Unequal treatment: Confronting racial and ethnic disparities in care*. Washington, DC: The National Academies Press.

Swenson, S., Buell, S., Zettler, P., White, M., Ruston, D., & Lo, B. (2004). Patient-centered communication: Do patients really prefer it? *Journal of General Internal Medicine, 19*(11), 1069–1079.

Tervalon, M., & Murray-Garcia, J. (1998). Cultural humility versus cultural competence: A critical distinction in defining physician training outcomes in multicultural education. *Journal of Health Care with the Poor and Underserved, 9*(2), 117–125.

Towle, A., & Godolphin, W. (1999). Framework for teaching and learning informed shared decision making. *British Medical Journal (BMJ), 319*(7212), 766–771.

Walsh, J. (2010). *Theories for direct social work practice* (2nd ed.). Belmont, CA: Thompson Brooks/Cole.

Wampold, B. (2010). *The basics of psychotherapy: An introduction to theory and practice*. Washington, DC: American Psychological Association.

Weiner, S., Schwartz, A., Sharma, G., Binns-Calvey, A., Ashley, N., Kelly, B., et al. (2013). Patient-centered decision making and health care outcomes. *Annals of Internal Medicine, 158*(8), 573–579.

# Chapter 10
# Steps 5 and 6 of Evidence-Based Practice: Finalizing the Treatment Plan and Practice Evaluation

Steps 5 and 6 of the evidence-based practice (EBP) model are (Step 5) to finalize the treatment plan and (Step 6) to implement it. Authors of books and articles on EBP frequently address these two steps only minimally as they mark the shift from making practice decisions back to "doing" practice. We think these steps warrant some further exploration and discussion. We also think that practice evaluation, sometimes included as a step in EBP, also deserves some further examination. These issues will be the focus of this chapter.

## Discussing Treatment Options with the Client and Finalizing the Treatment Plan

There is no clear line that distinguishes discussing treatment options with the client (Step 4 of EBP) from finalizing and implementing a treatment plan (Step 5). The purpose of the discussion with the client is to avoid unacceptable options and to find acceptable ones. It is to ensure the treatment options are clear to the client and that any concerns they have are articulated and taken into account. We hope that the discussion also enhances client motivation and enhances the working alliance between the clinical social worker and client. The goal is to integrate the views, values, and preferences of the client into the treatment plan to maximize its potential effectiveness and to minimize misunderstandings that will lead to early termination or failed treatment. We assume an interactive, collaborative effort between clinician and client. This aspect of EBP is different from the hierarchical, or expert, model sometimes apparent in EBM descriptions of the practice decision-making model. In the EBP model, clients are invited to be active participants, rather than passive and compliant recipients, in treatment planning. This allows for the enhancement of the curative factors of client motivation, of the therapeutic alliance, and of shared treatment goals and a shared view of what will lead to change to become active (Lambert,

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_10

1992). Not just specific therapies or techniques, but a variety of common factors, lead to positive outcomes (Cameron & Keenan, 2010; Drisko, 2004, 2013; Frank & Frank, 1991).

To clinical social workers, such an interactive approach to treatment planning should be quite familiar. It is important to understand, however, that it is not consistently applied in all book and articles about EBM/EBP. The early model of EBM, and some current descriptions of EBP, so heavily emphasize the use of research findings as a guide to practice that they often omitted or minimized attention to the client's view and preferences. For example, Gray (2004) in his book *Concise Guide to Evidence-Based Psychiatry* labels the fourth step of EBP as "Applying the Evidence" (p.186) or "Apply the Results to Your Patient" (p. 12). He states that "where valid evidence is found, the next step is to apply it to the care of your patient, which is where your clinical expertise is most important" (p. 12). He goes on to note that "this step is where we often falter … The most important question to ask here is whether your practice is becoming more evidence based (p. 186). Gray does not mention interactive or collaborative discussion of results with the patient or client, nor efforts to understand their views and values. Such collaborative is not excluded, but it is certainly not emphasized. This approach reflects a more hierarchic, medical model of treatment decision making. Clinical social workers generally take a more participatory approach, including client views and values in the treatment planning process.

Critical thinking and clinical expertise is required to distinguish more authoritarian approaches to EBM/EBP from more collaborative and less hierarchic ones. The requirement to locate the best available evidence is shared by both approaches, but most social work models are more likely to take a collaborative approach to treatment planning. Emphasis on client views and values and also on clinical expertise is much more explicit in contemporary models of EBM/EBP but is still not universal.

## Documenting the Treatment Plan

One action that marks the end of treatment planning is the formal documentation of the treatment plan in the client's record. There do not (yet) appear to be standards for documenting the use of EBP steps in all mental health records. It is appropriate to briefly summarize the search process you have completed and briefly document its key results in the client's record. A few sentences should be adequate. For example, "I reviewed the Cochrane Collaboration Library and PubMed for systematic reviews on Panic Disorders. There was research support for the use of cognitive behavioral therapies or medication for these disorders. After discussion with the client, she preferred the therapy as a first choice and expressed concern about medication side effects." In this example, considerable high-quality research evidence was located, with good support for the proposed treatments. The clients' concerns were clearly stated and led to selection of a preferred option that was feasible to deliver.

Where clients have religious or cultural concerns about treatments with strong empirical support, we suggest a more detailed summary be included in the client's record. This would clarify how and why a treatment plan was developed that might not employ a treatment with the strongest research support. It provides useful information for future health-care providers, as well as documenting the rationale for using treatments that may have less research support. As always, client records may be part of legal actions, and such documentation clarifies the basis for treatment selection. Similarly, justifications to payers for the use of treatments without strong empirical support may be increasingly required where client values and preferences lead to use of alternative treatments.

Clinical social workers must carefully attend to the reporting and documentation requirements of their agencies and their funders. Public and private funders have begun to develop lists of treatments that they argue have "demonstrated empirical support." The treatments included on these lists may—or may not—meet the standards for empirically supported treatment (EST) interventions (ESIs) or programs. However, they may not be consistent with the results of an EBP search using the (often more rigorous) Cochrane Handbook standards.

To argue for the use of a treatment not on the list of approved treatments, clinical social workers are encouraged to carefully document the results of an EBP search on the client's need. Where payers limit funded treatment options to a specific list, they may not allow for consideration of client preferences and values. This may run counter to key participatory aspects of the EBP practice decision-making model. It may also run counter to both clinical expertise and the client's views. In some cases, clients may be unwilling to accept any treatment on the funder approved list, keeping them from treatment and posing a serious ethic issue for the clinical social worker. In the current system of health care in the United States, clients are not entitled to treatment. Yet funders are frequently willing to make exceptions for clients they cover where a clear rationale for the use of alternative approaches is made on the basis of good research evidence.

## Implementing the Treatment

Step 6 of EBP appears quite simple: implement the treatment. Clinical social workers know that implementing a treatment can be challenging, with many twists and turns. Clinical expertise is always required. First, implementing a treatment assumes that it is available to the client, financially and practically. For persons with borderline personality disorder, the Cochrane Library (Binks, Fenton, McCarthy, Lee, Adams, & Duggan, 2009) reports preliminary support for two treatments: Linehan's (1993) dialectical behavior therapy (DBT) and Bateman and Fonagy's (1999, 2001) psychodynamically informed partial hospital program. To implement either therapy requires that the client has reasonable access to a program. This assumes these treatment programs are available in one's geographic area and funded by the client's payer or otherwise subsidized. It also assumes the client's family and employer are supportive of the client's undertaking such an extensive therapeutic process. In fact, geographic variation in treatment availability can be a serious obstacle to locating effective treatments. Even if located and feasible, funding may be another obstacle to obtaining treatment.

One important aspect of both discussing treatment options with a client (EBP Step 4) and finalizing a treatment plan (EBP Step 5) must be a realistic appraisal of feasible options. It is often unclear that the specific treatments found to be effective by high-quality research are actually available in many areas. Sometime qualified and trained providers are not immediately available.

Where effective treatments are located but local options or expertise is lacking, clinical social workers are obligated to make difficult choices about alternative options. The NASW *Code of Ethics* (2017) argues that social workers should only provide services that they fully are competent to deliver. Section 1.04a states that social workers should only provide services "…within the boundaries of their education, training, license, certification, consultation received, supervised experience, or other relevant professional experience." Further, social workers should only provide services that "…are new to them only after engaging in appropriate study, training, consultation, and supervision from people who are competent in those interventions or techniques" (1.04b). Professional expertise dictates that clinical social workers should only provide services that they are well qualified to deliver. This may mean treatments and other services with good research support are not available to clients in areas where no fully trained providers can be located. In such circumstances, referral to other providers is warranted.

Finally, the NASW *Code of Ethics* (2017) states that clients must be protected from harm. Professionals have an active obligation to be educated about treatments and services that may be useful to their clients. We believe that this obligation to learn new skills should be shared by, and actively promoted by, their agencies and their funding sources. However, the obligation to learn new knowledge and skills is more often made an individual cost, enforced through continuing education requirements for licensure and certification. Clinical social workers must remain current and renew their professional knowledge and skills regularly.

In implementing new treatment models, note carefully that a key obligation is to protect clients from harm due to the intervention. Clinical social workers must always be sure that their service efforts provide the least, or no, harm. Dr. Archie Cochrane's (1972) vision of EBM as reducing the number of harmful and benign but ineffective treatments should be a routine and ongoing part of clinical practice.

## Practice Evaluation

Some authors make practice evaluation a formal step in the EBM/EBP process (Gibbs, 2002). We take a different position. First, we believe that evaluation is a vital part of any professional practice effort. That is, we view practice evaluation as an essential part of routine good practice. The NASW *Code of Ethics* (2017) and many social work textbooks also support this position. Clinical social workers have long expressed this viewpoint (Hollis, 1964) and the National Association of Social Workers (2016) standards for practice in practice in health care specifically endorses this position.

This position is not in conflict with EBP, it simply distinguishes the steps of practice decision making from practice monitoring and evaluation as distinct processes.

Second, we believe that the best practice evaluation is an ongoing process, from assessment to termination. We also believe that the best practice evaluation addresses not just outcomes but also monitoring the processes of treatment. This process provides feedback to both the clinical social worker and to the client. It helps clarify if treatment is working or not. That is, evaluation includes ongoing formative discussion of how the client perceives the treatment, what parts seem helpful or unhelpful, and what other influences may be influencing the progress of the treatment. It allows for changes in the treatment plan. It also maximizes client participation in the treatment process. At several points in treatment, a summative evaluation of progress should also be routine.

Third, it is imperative that evaluation of practice directly address the client's view of the clinical problem. This may sound obvious, but measures of success or effectiveness may use standards that are a bit different from the client's stated concerns. Sometimes this is mandated. For example, a court-mandated client may have to come to sessions and have "clean" urine tests. These are surely measures of progress or even success, but they may not fully reflect the motivations or goals of the client. In addition to mandated measures, the client's own goals should be monitored and evaluated. If the client views drug use as self-medication, the court-mandated goals, while appropriate, may not address all the important concerns in the client's life. Both mandated and client-specific measures of progress and outcome should be evaluated. Both should also be regularly documented in the client's record.

Practice evaluation also allows payers and administrators to have confidence that clinical services actually work. If published as case reports, practice evaluations can contribute to our professional knowledge base. However, this knowledge is very different from the population scale experimental research used in the EBM/EBP practice decision-making process.

There are several models of practice evaluation. These models are intended to be easy to incorporate into practice, but they do take some planning and effort to complete. They range from informal to formal methods. All such evaluation efforts should be documented in the client's record.

## *Models of Practice Evaluation*

There are both qualitative and quantitative models of practice evaluation. It is beyond the goals of this book to describe them all, but a few key points are worth exploring. Qualitative models based on client self-report are the traditional form of practice evaluation used for many years in clinical social work practice (Chambon, 1994; Davis, 1994; Gilgun, 2005; Lang, 1994; McDowell, 2000; Nye, 1994; Ruckdeschel, Earnshaw, & Firrik, 1994; Shaw & Lishman, 1999) as well as in psychiatry (Campbell et al., 2000) and clinical psychology (Amedeo, 1997). There are both informal and formal approaches to qualitative practice evaluation (Drisko, 2004; Greene, Doughty, Marquart, Ray, & Roberts, 1988; Shaw & Lishman, 1999). Qualitative methods are flexible, allow for individually tailored client input, examine both behaviors and internal experiences, and can address both issues of process and outcomes. They can capture complex and unexpected results. Critics of qualitative practice evaluation state that it lacks replicability and precision. Further, critics argue its data analysis procedures may be unclear or prone to bias.

Quantitative practice evaluation methods have been widely used over many years in behavioral and cognitive behavioral practice. A wide range of research designs may be used in quantitative practice evaluation (Drisko, 2011; Orme & Combs-Orme, 2012). The most common method of quantitative practice evaluation centers on a pre- to post-comparison of client functioning on one or more target issues. This model of evaluation is known as the single-case or single-system research design. This model was widely used in social work during the “Empirically based practice” movement of the 1980s and early 1990s. (Note carefully, this is not the same as the current “evidence-based practice” movement.) The effort to increase usage of single-case evaluation was part of an attempt to demonstrate the effectiveness of social work services. The single-case method is very useful in documenting client changes but does not clearly demonstrate that the treatment or services caused the change. That is, in contrast to true experimental research designs, the single-case design has limited interval validity. Others argued that the logic of the single-case design did not fit well with psychodynamic or family systems approaches (Dean & Reinherz, 1986).

Clearly, there are a wide variety of practice evaluation methods for use with clinical practice. Yet given the foundation of the EBM/EBP movement in quantitative epidemiology, single-case evaluation methods are most often suggested for evaluation of client progress and outcomes. This is one reasonable choice for clinical social workers to use. On the other hand, they should understand that single-case evaluation differs from the overall logic of EBM/EBP in important ways.

## Single-Case Evaluation and Evidence-Based Practice

Several models of single-case evaluation are available for clinical social work and clinical psychology (Barlow, Nock, & Hersen, 2008; Kazi, 1998; Orme & Combs-Orme, 2012; Thyer & Myers, 2007). Single case practice evaluation is based on a different logic, and a different model, than is other EBM/EBP research. EBM/EBP places great emphasis on experimental (RCT) research designs for individual studies and systematic reviews that combine the results of multiple high-quality studies. Random assignment of cases to treated and control condition is also very highly valued. Quantitative practice evaluation emphasizes pre- to post- comparison of status for just one client using pre-experimental research designs. Each method is appropriate to its purpose, but the purposes and methods are quite different.

In addition, many models of single-case evaluation use unique, situation-specific measures. This is a strength of the single-case model. Self-anchored outcome measures can be developed collaboratively with the client and tailored to specifically address their concerns (Nugent, 1992). Such measures may include counts of thoughts or observation of behaviors that are simply not replicable by others. In some instances, self-anchored scales are employed to quantitatively measure the severity or intensity of a client's concern (Nugent, 1992). Such measures are, again, specifically tailored to the client and may not be replicable or even relevant to other clients with similar concerns. Both the nature of the research designs used in single-case evaluation and the nature of the measures used in it differ considerably from those most valued in EBM/EBP research. Both are useful, but they have different purposes and are based on different logics.

Finally, the analytic methods for single-case evaluation and large-scale EBM/EBP experimental research differ (Jagaroo, Maxwell, & Satake, 2008). Single-case designs may be analyzed using visual inspection methods that document pre- to post-changes. These visual methods do provide a reasonable accounting of the client's situation but lack precision and a clear basis for deciding if the changes described are truly significant. They are very helpful in documenting change in a clear manner for use directly with the client.

There are statistical methods for estimating statistically significant changes for use with single-case evaluation designs. These include the "2 standard deviation method" in which improvement from pre-treatment baseline status is interpreted as statistically significant (Jagaroo et al., 2008). This is an application of a well-defined logic and a reasonable way of estimating significance, so long as the measures are valid and the data was collected in a reliable manner. Further, statistics specific for use with single-cases and time series data are also available for single-case data analysis (Jagaroo et al., 2008; Jayaratne, 1978).

Single-case evaluation offers one valuable method for documenting change in clinical practice. It may be easy to incorporate in some forms of clinical practice. In terms of limitations, incomplete results are common in single-case evaluation using self-report measures. Biases in the data are difficult to rule out. Well-defined analytic methods are available for single-case evaluation but, as always, are only as good as the data upon which they are based. Making cause and effect claims from single cases is usually inappropriate.

We encourage all clinical social workers to monitor and to evaluate all their practice efforts. There are many useful models of practice evaluation from which to choose. Some of the models apply more smoothly to specific models of practice. We view practice evaluation as an integral part of good clinical practice, but we leave open to the clinician, the agency, and the circumstances the selection of an appropriate model of evaluation.

In summary, practice evaluation is based on such a different logic than is EBM/EBP that we have chosen not to include practice evaluation in the EBP process. Reasonable people may hold different views on this issue. We believe distinguishing between the two approaches helps make understanding the logic of the EBP model easier. We believe our view is more internally consistent than are models that advocate for practice evaluation as a part of EBP. Both are worthy; they are just different.

## Instruments and Procedures for Practice Evaluation

In recent years, researchers have created several different instruments designed to monitor and evaluate the success of treatment. One such instrument is Miller and Duncan's (2000) Outcome Rating Scale (ORS). The ORS was designed to be a briefer alternative to the Outcome Questionnaire 45.2 (Lambert et al., 2013). The ORS was designed in an effort to create an instrument that could be completed in less time and was simpler for clients to use (Miller, Duncan, Brown, Sparks, & Claud, 2003). The ORS addresses three areas of functioning: individual, relational, and social. The ORS has undergone extensive testing regarding its reliability and validity and has been found to have strong psychometric properties (Bringhurst, Watson, Miller, & Duncan, 2006; Campbell & Hemsley, 2009; Miller, Duncan, Brown, Sorrell, & Chalk, 2006; Miller et al., 2003). Further, in a large study involving 75 therapists and 6424 clients over a 2-year period, there was a high rate of use among therapists. These findings appear to counter concern that therapists felt it was cumbersome to use (Miller et al., 2006).

A second instrument also developed by Johnson, Miller, and Duncan (2000) is called the Session Rating Scale (SRS). As its names implies, it is a measure intended for use on a session by session monitoring basis. This instrument is a:

> Brief, four-item, client-completed measure derived from a ten-item scale originally developed by Johnson et al. (2000) …The scale assesses four interacting elements, including the quality of the relational bond, as well as the degree of agreement between the client and therapist on goals, methods, and overall approach of therapy. (Miller et al., 2006, p. 8)

Miller et al. (2006) report from previous research on the psychometric properties of the SRS that it has strong reliability with a Cronbach alpha coefficient of 0.96 based on a sample of nearly 15,000 administrations (Duncan et al., 2003). In addition, they tested concurrent validity through correlations with another valid instrument that yielded Pearson correlation coefficients averaging $r = 0.48$. Subsequent evaluations of both instruments psychometric properties have yielded similar results (Campbell & Hemsley, 2009). Both of these instruments and related documents can be found on Duncan's web site, The Heart and Soul of Change Project, online at http://heartandsoulofchange.com/.

Research on the ORS and the SRS has not only examined its psychometric properties and its rate of use but also how its use impacts the outcome of treatment. The same study by Miller et al. (2006, p. 14) found that:

> Ongoing feedback to the therapists regarding clients' experience of the alliance and progress in treatment results in significant improvements in both client retention and outcome… At the same time, clients of therapists who failed to seek feedback regarding the alliance as assessed by the SRS were three times less likely to return for a second session and had significantly poorer outcomes.

Similarly, in a RCT conducted with 46 heterosexual couples in therapy, the results indicated that those couples whose therapists administered the ORS and SRS had significantly better outcomes compared to those couples receiving treatment as usual, without monitoring feedback (Reese, Toland, Slone, & Norsworthy, 2010).

Those couples in the treatment that utilized the instruments were more likely to experience significant clinical changes (48.1%) compared to those in the control group (26.3%). While the authors state that much still needs to be understood regarding the mechanism of change to which feedback contributes, they conclude that this study lends further support for the importance of incorporating such feedback into the therapeutic process in order to improve outcomes in clients (Reese et al., 2010).

Lambert (2010) has explored the use of another monitoring system in routine psychotherapy practice. Using the Outcome Questionnaire (OQ-45), developed by Lambert and Burlingame, clients completed weekly measures of therapeutic status (Lambert et al., 2013; Lambert & Vermeersch, 2008). Clinicians were given weekly "green light" indicators where OQ scores showed clients were improving, "yellow light indicators where clients were not improving, and "red light" indicators where clients were regressing. These simple indicators, completed by staff, helped clinicians change their interventions when progress was not noticeable. Dropout rates were reduced, though early changes did not necessarily predict later changes consistently. Further, decelerating rates of improvement cannot be taken for granted (Percevic, Lambert, & Kordy, 2006). The course of psychotherapy is highly variable, but simple quantitative monitoring can be useful in shaping clinical practice.

The OQ-45 is available in several languages. It has been researched on white, African-American, Asian/Pacific Islander, Latino, and Native American clients, making it useful with many diverse populations (Lambert et al., 2006). The OQ system allows for routine practice monitoring and outcome evaluation.

Still another approach to evaluating practice outcomes has been developed by Chorpita and colleagues. Their evaluation model is called dashboards (Chorpita, Bernstein, & Daleiden, 2008). Dashboards are a computer-based quantitative method that was designed to link specific outcomes with specific intervention strategies. Chorpita is known for developing the common elements (CE) approach, in which clinicians build treatment plans for clients using specific techniques that have been used previously in empirically supported treatment models. These elements include, for example, exposure or cognitive restructuring (Chorpita, Becker, & Daleiden, 2007). Dashboards are an evaluative method that tracks changes in clinical progress over time as recorded quantitatively on an Excel spreadsheet. The dashboard allows the clinician to graph where there are improvements and declines in specific target areas. In addition, the progress made is also linked to the specific elements the clinician has chosen to implement in the treatment.

For example, an adolescent client presents with depression, which manifests in the client's self-report of depressive symptoms, a reduction in social activities and missing school or going to school late. The goals for treatment are (1) to improve mood based on self-report on a 1–10 scale, (2) to increase the number of social activities each week from the baseline of 0, and (3) to increase on-time school attendance from 3 days per week to 5 days per week. Using the CE approach, the clinician identifies that for this particular client's age, race, and gender, the treatment elements included should be psychoeducation, cognitive coping, activity scheduling, and problem-solving. On separate spreadsheets within the case Excel computer file, the therapist enters in data on the three target goals. On one spreadsheet, the therapist enters in a score for each outcome measure during each session. On a second spreadsheet, the therapist enters which treatment element was covered during each session. On a third spreadsheet, Excel tracks the progress for each outcome graphically to illustrate the changes being made on the identified outcomes. The third spreadsheet also includes a table aligned with the outcome graph. This spreadsheet summarizes which element of treatment was linked to improvement, no change, or regression (Chorpita et al., 2008). The result of this process is a graphic report that shows how the client improves or declines over time. The graphic report also shows how those changes are linked with the specific elements included within each session.

Returning to the case example, in studies of depression psychoeducation and cognitive coping are elements of treatment that appear in the highest percentage of studies. In theory, these common elements should have the highest likelihood of positively impacting on the client's depression. However, in tracking the case using the dashboard method, the clinician sees that it was not until activity scheduling was introduced into the treatment that there was improvement for this specific client on the outcome measures. The dashboard provides an immediate method for documenting how different interventions impact the progress on the identified outcome measures. This makes changes and their sources clear to both client and clinician. It also allows changes in the choices of interventions to be altered relatively quickly within the course of the intervention.

Note that this evaluative model demonstrates what helps, or may help, a specific client. It documents the association between common elements and specific outcomes. However, as a single-case evaluation tool, the dashboard model does not demonstrate conclusively that each element *causes* the change observed. Like other single-case evaluation methods, it employs a logic different from the large-scale, experimental research most valued in EBM and EBP. The use of self-anchored rating scales also can produce measures of uncertain validity.

Chorpita and his colleagues have now created multiple templates of dashboards (PracticeWise, 2018) including the common elements with some empirical support for various disorders already programmed into the Excel spreadsheet. For example, there are dashboard templates for depression, anxiety, and trauma. There are also blank ones so that clinicians can build their own unique dashboards using elements identified through the CE approach. Templates for the child- and family-focused dashboards are available on the PracticeWise Web site (https://www.practicewise.com/#services). However, access to these resources, and others, is restricted to those who subscribe to their services.

Many models for monitoring practice and documenting single-case outcomes are available for clinical social works to use. These models and measures offer a fine complement to the EBP practice decision-making model.

## Summary

Steps 5 and 6 of EBP center on finalizing the treatment plan and implementing it. In these steps, the clinical expertise of the clinical social worker is crucial. Finalizing the treatment plan decided in conjunction with identification of the client's values and preferences allows for formal documentation in the client's record. It is also appropriate to document the research evidence that supports the plan in a succinct manner. Clinicians should also document any client-specific values and preferences that shape the treatment plan. This is especially important when treatments with limited research support are chosen.

Monitoring of progress and summative evaluation are key components of good clinical social work practice. These practice components draw on single-case evaluation logic which differs from the premises of population-based experimental research used to guide EBP. Still, qualitative or quantitative evaluation of practice should always be part of good clinical social work practice. Single-case evaluation methods offer one widely used approach to practice evaluation. More recent innovations employ session by session progress monitoring using convenient standardized measures. The dashboard model of progress monitoring and evaluation links outcomes to specific common elements of practice.

In Part 1 of this book, we have introduced EBP and explored three perspectives useful to understanding its application to clinical practice, policy, and research. We have also explored the six steps of EBP in detail. In Part 2 of this book, we will examine several cases to illustrate the EBP process in action. Both the strengths and some challenges of doing EBP come to life when the model is applied to clinical social work practice.

## References

Amedeo, G. (1997). The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology, 28*(2), 235–260.

Barlow, D., Nock, M., & Hersen, M. (2008). *Single case experimental designs: Strategies for studying behavior change* (3rd ed.). New York: Allyn and Bacon.

Bateman, A. & Fonagy, P. (1999). The effectiveness of partial hospitalization in the treatment of borderline personality disorder: A randomized controlled trial. *American Journal of Psychiatry, 156*, 1563–1569.

Bateman, A. & Fonagy, P. (2001). Treatment of borderline personality disorder with psychoanalytically oriented partial hospitalization: An 18-month follow-up. *American Journal of Psychiatry, 158*, 36–42.

Binks, C., Fenton, M., McCarthy, L., Lee, T., Adams, C., & Duggan, C. (2009). Psychological therapies for people with borderline personality disorder. *Cochrane Database of Systematic Reviews*, Issue 1. Art. No.: CD005652. doi: 10.1002/14651858.CD005652.

Bringhurst, D. L., Watson, C. W., Miller, S. D., & Duncan, B. L. (2006). The reliability and validity of the Outcome Rating Scale: A replication study of a brief clinical measure. *Journal of Brief Therapy, 5*(1), 23–30.

Cameron, M., & Keenan, E. K. (2010). The common factors model: Implications for transtheoretical clinical social work practice. *Social Work, 55*(1), 63–73.

Campbell, A., & Hemsley, S. (2009). Outcome Rating Scale and Session Rating Scale in psychological practice: Clinical utility of ultra-brief measures. *Clinical Psychologist, 13*(1), 1–9.

Campbell, M., Fitzpatrick, R., Haines, A., Kinmouth, A., Sandercock, P., Spiegelhalter, D., et al. (2000). Framework for design and evaluation of complex interventions to improve health. *British Medical Journal, 321*, 694. https://doi.org/10.1136/bmj.321.7262.694

Chambon, A. (1994). The dialogical analysis of case materials. In W. Reid & E. Sherman (Eds.), *Qualitative research in social work* (pp. 205–215). New York: Columbia University Press.

Chorpita, B. F., Becker, K., & Daleiden, E. (2007). Understanding the common elements of evidence-based practice: Misconceptions and clinical examples. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*, 647–652.

Chorpita, B. F., Bernstein, A., & Daleiden, E. (2008). Driving with Roadmaps and Dashboards: Using information resources to structure the decision models in service organizations. *Administration Policy Mental Health, 35*, 114–123.

Cochrane, A. (1972). *Effectiveness and efficiency: Random reflections on health services*. London: Nuffield Provincial Hospitals Trust.

Davis, I. (1994). Integrating qualitative and quantitative methods in practice evaluation in clinical research. In W. Reid & E. Sherman (Eds.), *Qualitative research in social work* (pp. 423–434). New York: Columbia University Press.

Dean, R., & Reinherz, H. (1986). Psychodynamic practice and single system designs: The odd couple. *Journal of Social Work Education, 22*, 71–81.

Drisko, J. (2004). Common factors in psychotherapy effectiveness: Meta-analytic findings and their implications for practice and research. *Families in Society, 85*(1), 81–90.

Drisko, J. (2011). Researching clinical practice. In J. Brandell (Ed.), *Theory and practice in clinical social work* (2nd ed., pp. 717–738). Thousand Oaks, CA: Sage.

Drisko, J. (2013). Research evidence and social work practice: The place of evidence-based practice. *Clinical Social Work, 42*(2), 123–133.

Duncan, B., Miller, S., Sparks, J., Claud, D., Reynolds, L., Brown, J., et al. (2003). The Session Rating Scale: Preliminary psychometric properties of a "working" alliance measure. *Journal of Brief Therapy, 3*(1), 3–12.

Frank, J. D., & Frank, J. B. (1991). *Persuasion and healing: A comparative study of psychotherapy* (3rd ed.). Baltimore: Johns Hopkins University Press.

Gibbs, L. (2002). *Evidence-based practice for the helping professions: A practical guide*. New York: Brooks-Cole.

Gilgun, J. (2005). The four cornerstones of evidence-based practice. *Research on Social Work Practice, 15*(1), 52–61.

Gray, G. (2004). *Concise guide to evidence-based psychiatry*. Arlington, VA: American Psychiatric Publishing.

Greene, J., Doughty, J., Marquart, J., Ray, M., & Roberts, L. (1988). Qualitative evaluation audits in practice. *Evaluation Review, 12*(4), 352–375.

Hollis, F. (1964). *Casework: A psychosocial therapy*. New York: Random House.

Jagaroo, V., Maxwell, D., & Satake, E. (2008). *Handbook of statistical methods: Single subject design*. San Diego, CA: Plural Publishing.

Jayaratne, S. (1978). Analytic procedures for single-subject designs. *Social Work Research & Abstracts, 14*(3), 30–40.

Johnson, L., Miller, S., & Duncan, B. (2000). *The session rating scale [SRS] 3.0*. Chicago: Author.

Kazi, M. (1998). *Single-case evaluation by social workers*. Hants, UK: Avebury Publishing.

Lambert, M. (1992). Implications of outcome research for psychotherapy integration. In J. Norcross & J. Goldstein (Eds.), *Handbook of psychotherapy integration* (pp. 94–129). New York: Basic Books.

Lambert, M. J. (2010). *Prevention of treatment failure: The use of measuring, monitoring, & feedback in clinical practice*. Washington, DC: American Psychological Association Press.

Lambert, M. J., Hansen, N., & Harmon, S. (2010). Outcome Questionnaire System (The OQ System): Development and practical applications in healthcare settings. In M. Barkham, G. E. Hardy, & J. Mellor-Clark (Eds.), *Developing and delivering practice-based evidence: A guide for the psychological therapies* (pp. 141–154). New York: Wiley-Blackwell.

Lambert, M. J., Kahler, M., Harmon, C., Burlingame, G. M., Shimokawa, K., & White, M. (2013). *Administration and scoring manual: Outcome questionnaire OQ-45.2*. Salt Lake City, UT: OQMeasures.

Lambert, M. J., Smart, D., Campbell, M., Hawkins, E., Harmon, C., & Slade, K. (2006). Psychotherapy outcome, as measured by the OQ-45, in African American, Asian/Pacific Islander, Latino/a, and Native American clients compared with matched Caucasian clients. *Journal of College Student Psychotherapy, 20*(4), 17–29.

Lambert, M. J., & Vermeersch, D. (2008). Measuring and improving psychotherapy outcome in routine practice. In S. Brown & R. Lent (Eds.), *Handbook of counseling psychology* (pp. 233–248). Hoboken, NJ: John Wiley Inc.

Lang, N. (1994). Integrating the data processing of qualitative research and social work practice to advance the practitioner as knowledge builder: Tools for knowing and doing. In W. Reid & E. Sherman (Eds.), *Qualitative research in social work* (pp. 265–278). New York: Columbia University Press.

Linehan, M. (1993). *Skills training manual for treating borderline personality disorder*. New York: Guilford Press.

McDowell, T. (2000). Practice evaluation as a collaborative process: A client's and a clinician's perceptions of helpful and unhelpful moments in a clinical interview. *Smith College Studies in Social Work, 70*(2), 375–387.

Miller, S., & Duncan, B. (2000). *The outcome rating scale*. Chicago: Author.

Miller, S., Duncan, B., Brown, J., Sorrell, R., & Chalk, M. (2006). Using formal client feedback to improve retention and outcome: Making ongoing, real-time assessment feasible. *Journal of Brief Therapy, 5*(1), 5–22.

Miller, S., Duncan, B., Brown, J., Sparks, J., & Claud, D. (2003). The Outcome Rating Scale: A preliminary study of the reliability, validity, and feasibility of a brief visual analog measure. *Journal of Brief Therapy, 2*, 91–100.

National Association of Social Workers. (2016). *NASW standards for social work practice in health care settings*. Washington, DC: NASW Press.

National Association of Social Workers (NASW). (2017). *Code of ethics*. Washington, DC: NASW Press.

Nugent, W. (1992). Psychometric characteristics of self-anchored scales in clinical application. *Journal of Social Service Research, 15*(3–4), 137–152.

Nye, C. (1994). Discourse analysis methods and clinical research: A single case study. In W. Reid & E. Sherman (Eds.), *Qualitative research in social work* (pp. 216–227). New York: Columbia University Press.

Orme, J., & Combs-Orme, T. (2012). *Outcome-informed evidence-based practice*. Boston: pearson.

Percevic, R., Lambert, M. J., & Kordy, H. (2006). What is the predictive value of responses to psychotherapy for its future course? Empirical explorations and consequences for outcome monitoring. *Psychotherapy Research, 16*(3), 364–373.

PracticeWise (2018). The PracticeWise services. Retrieved from https://www.practicewise.com/#services.

Reese, R., Toland, M., Slone, N., & Norsworthy, L. (2010). Effect of client feedback on couple psychotherapy outcomes. *Psychotherapy, 47*, 616–630.

Ruckdeschel, R., Earnshaw, P., & Firrik, A. (1994). The qualitative case study and evaluation: issues, methods and examples. In W. Reid & E. Sherman (Eds.), *Qualitative research in social work* (pp. 251–264). New York: Columbia University Press.

Shaw, I., & Lishman, J. (1999). *Evaluation and social work practice*. Thousand Oaks, CA: Sage.

Thyer, B., & Myers, L. (2007). *A social worker's guide to evaluating practice outcomes*. Alexandria, VA: Council on Social Work Education.

# Part II
# Case Examples of Evidence-Based Practice

## 1.1 Introduction

In the following section, eight case studies show how practitioners *do* the evidence-based practice (EBP) process and how it is integrated with clinical decision-making. The cases also demonstrate the complexities involved in the EBP process. They illustrate how the process is dependent on the four components of EBP: (1) the client's assessed clinical presentation, (2) the client's values and preferences, (3) the best available research evidence, and (4) the professional expertise and judgment of the clinical social worker. These constitute the four elements of the EBP practice decision-making process. The impact of agency mission and context, and how it shapes the social worker's role, is also examined.

The case materials are composites closely based on actual clients in order to protect privacy. The cases are both heavily disguised and include details from other, similar, cases. The cases are all reported in the same structured format. Each case opens with a summary of the client's presentation, concerns, and strengths. In addition, each of the six steps of the EBP practice decision-making process is described, leading the reader through them in detail. In some instances, several empirically supported treatment alternatives are identified; in others, the research offers less clear guidance. The relevance of the best available research to the specific client needs varies, as does the quality of the research located during the search process. Furthermore, in some instances, treatments with strong research support are easily accessed; in others, research supported options are not readily available to the client.

The EBP process says very little about the clinical assessment process and how the clinician determines the target problem on which the entire search process is based. It is assumed that professionals have the required "clinical expertise" to complete an appropriate and thorough assessment. In clinical social work practice, the types, severity, and number of challenges faced by clients can be daunting. Traditional mental health problems warranting DSM diagnoses as well as co-occurring social problems are common among the clients that clinical social workers encounter. The cases illustrated in this text were chosen to reflect the diversity of clients that social workers see in a variety of real-world practice settings. How the social worker's role, in specific agency settings, also shapes the EBP process is illustrated. Below is a brief description of the cases and the clinical concerns raised within each case.

*Chapter* 11 – *Sam*: Sam is a 68-year-old white gay male who has suffered a series of losses in recent years and is reporting symptoms of grief and depression to an outpatient therapist.

*Chapter* 12 – *Ray*: Ray is a 27-year-old single white male who is suffering from panic attacks and is seeking agency-based outpatient services. He does not appear to have any other mental health issues, so these attacks are very distressing and confusing to him.

*Chapter* 13 – *Sally*: Sally is a 12-year-old biracial (African-American/white) girl who has been diagnosed with reactive attachment disorder. A biracial couple adopted Sally 2 years ago. Her parents are concerned about her lack of connection to them and her apparent willingness to turn to anyone for comfort and guidance.

*Chapter* 14 – *Loretta and Newman*: Loretta and Newman are the parents of Arthur, who is a 36-year-old African American male who has been diagnosed with schizophrenia and who has had a recent decline in functioning. The parents are seeking services through a hospital program for patients with schizophrenia and their caregivers and report increased feelings of stress about their own age-related health issues, the strain of caring for Arthur, and their fears of his future when they are not around to care for him.

*Chapter* 15 – *Jin*: Jin is a 16-year-old Korean-American male who was referred to an outpatient clinic after he was found, for the second time, passed out after drinking alcohol. His family is involved, and they are very concerned about his behavioral changes and his pulling away from his family and Korean community.

*Chapter* 16 – *Jennifer*: Jennifer is a 23-year-old white homeless female who has borderline personality disorder. Her immediate mental health and social service needs highlight the difficulties faced by persons with multiple challenges and few social supports.

*Chapter* 17 – *Bethany*: Bethany is a 32-year-old biracial women who has come to awareness of early trauma in the course of her work as an attorney. She seeks help from her employee assistance program since her work and home life are increasingly impacted.

*Chapter* 18 – *Gabrielle*: Gabrielle is a 24-year-old African-American female college student who has become dependent on opioids after a sports injury. She has many strengths and many social supports.

# Chapter 11
# Sam: An Older, Gay Man Who Appears Depressed

Sam identifies as a 68-year-old Caucasian, gay, cisgender male. He has bright white hair and an athletic build and stands just over 6 feet tall. Despite his apparent excellent physical health, he walked into the therapy room slowly and looked very tired. He stated his primary care doctor referred him to this small group psychotherapy practice after his doctor ruled out a physical reason for his symptoms. According to Sam, about 4–6 weeks ago, he began feeling "very tired," had difficulty concentrating, and stopped exercising, which he had done on average of five times a week "for as long as [he] could remember." Although he had stopped exercising, he had lost about 10 lbs. over the last several months, which he stated was because "I just don't have the energy to eat." In addition, Sam said that he had been staying home more, and not attending social functions or dinners with friends. He states that the activities he used to enjoy are "just not the same and it feels like such an effort to go and pretend I am having fun when I am not." When asked about any recent changes in his life, he could not think of any immediate changes. However, during the history gathering stage of the interview, he discussed several significant changes that had occurred in the last 5 years.

Five years ago, he moved his mother into a nursing home near to his home and became primarily responsible for her care. Although he has three other siblings, they are estranged from him and have been since he came out as gay almost 25 years ago. He described his family as a very conservative "Bible Belt" family. They would not accept his sexual orientation. After his father died about 10 years ago, his mother began to reconnect with Sam, and they worked on rebuilding their relationship. After only 9 months after his mother's move near him, she died quite suddenly, and he felt cheated since he felt like it was "finally [their] time together" while at the same time some relief since her care was quite exhausting.

About 8 years ago when he turned 65, Sam decided to retire. He looked forward to spending time with his partner of 17 years who was about 7 years older and who was already retired. For 2 years, they traveled and attended concerts and shows that they "had been meaning to see." They did other activities together that they had

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_11

"never gotten to because we were both working so much." However, about 2 years later, his partner suffered a stroke and went into a coma and died 2 months later.

Sam feels he coped well at the beginning. He stated that his friends and his community were a wonderful source of support for him. However, it has been over a year since his partner died, and he now is experiencing the symptoms described above that led him to seek consultation from his doctor. He and his partner, while connected to friends in their community, still lived a relatively "solitary life." They had no children, and both of their families had distanced themselves from them decades previously. Many of his peers are now not around in the same way that they 10–15 years ago. Many have retired and moved closer to their grandchildren, frequently travel, or have moved to warmer climates. Without work in his life, Sam feels like he has "no purpose." He cannot find the motivation to even get up some days, as he often questions "What is the point?"

Sam is seeking services to help him "at least feel some energy" and interest in some of his previously enjoyable activities, such as running, traveling, and enjoying the arts. He stated that this was the time he had planned to "really enjoy life," but now he states he cannot find the joy he once had.

## Applying the Six Steps of EBP to the Case

As you will recall from Chap. 2, the steps of EBP are:

1. Drawing on client needs and circumstances learned in a thorough assessment, identify answerable practice questions and related research information needs.
2. Efficiently locate relevant research knowledge.
3. Critically appraise the quality and applicability of this knowledge to the client's needs and circumstances.
4. Actively and collaboratively discuss the research results with the client to determine how likely effective options fit with the client's values, preferences, and culture.
5. Synthesizing the clinical needs and circumstances with the views of the client and the relevant research, develop a plan of intervention considering available options.
6. Implement the intervention.

We will use each of these steps as the outline for examining how to apply the EBP practice decision-making model in clinical practice.

## *Step 1: Drawing on Client Needs and Circumstances Learned in a Thorough Assessment, Identify Answerable Practice Questions and Related Research Information Needs*

In the first step of EBP, the clinician must work with the client to identify the primary clinical issue around which to focus the EBP process. As discussed in Chap. 4 on assessment, it is essential to work with your client to identify the issue that he or she feels is the highest priority. This preliminary step of assessment is the hidden foundation of the EBP practice decision-making process.

The client must be actively engaged in the assessment process. Therefore, in working with Sam, it is essential to discuss with him what his personal priorities are and what does he feel he is most motivated to address in treatment. In Sam's situation, he has several areas that could be the focus of the clinical work with him, including grief work around the losses of his partner and his mother, his depressive symptoms, his life transition from working to retirement, his estrangement from his family, and his social isolation. In conversations with Sam, he identifies that his depressive symptoms are the highest priority for him at this time. He states that while he knows that the other areas are caused by his grief, including his isolation and all of the other previously identified problem areas, he does not feel he has "the energy right now to tackle" those until he can "get some energy back." As such, he and the clinical social worker agree that the primary treatment goal will be to help him increase his coping strategies to manage more effectively his depressive symptoms. Therefore, the practice question is: What are effective treatments for depression with older gay males?

In the *PICO* model, the *Population* is older gay men with depression. The *Interventions* under consideration are psychotherapies and similar psychosocial interventions as well as medications. *Comparisons* would be between different therapies or psychosocial interventions and among medications and combinations of medications and psychosocial therapies. The *Outcomes* would be increasing Sam's energy and social involvement. The focus for Sam is on determining likely effective treatment options.

## *Step 2: Efficiently Locate Relevant Research Knowledge*

The search process began with web sites that provide summative knowledge regarding mental health and effective treatments. Starting with the Cochrane Collaboration Library (www.cochranelibrary.com), the first search used the following keywords in the search engine: older, gay, men/man, and depression. However, no results were returned by this search. A second search using just the terms depression, older adult, and males returned several unrelated articles; oddly none were specific to depression though one addressed sleep problems. While the worker attempted to conduct a search that combined the multiple aspects of Sam's identity and needs, these searches did not immediately lead to systematic reviews that directly corresponded to his situation and characteristics.

However, by broadening the search further using the terms depression, males, and older adults, numerous articles were identified by the web site's search engine that appeared to address older adults with depression, the primary clinical question. Unfortunately, many of the reviews were dated. A systematic review (SR) by Wilson, Mottram, Sivananthan, and Nightingale (2001) examined antidepressant medications for elders who have depression. They report that tricyclic antidepressants (odds ratio 0.32; 95% CI, 0.21–0.47), as well as SSRIs (OR 0.51; 95% CI, 0.36–0.72) and MAO inhibitors (OR 0.17; 95% CI, 0.07–0.39), were all more effective than were placebos. (These odds ratios indicate that placebos are 0.32 time *less* likely to help than are tricyclic medications; 0.51 times less likely to be beneficial than are SSRIs; and 0.17 times less likely to be beneficial than are MAO inhibitor medications. All the 95% confidence intervals are small compared to the OR values, indicating that the results are likely to be meaningful in the larger population.) Overall, SSRIs and MAO inhibitors were more effective than placebo. Tricyclic medications also appeared effective but often had side effects participants did not like.

The authors of this review, however, concluded there are too few studies to draw any firm conclusions about any one's superiority over another. However, the authors did say that there is some preliminary support for the use of CBT with older adults to manage depressive symptoms. Similar results in another, later, SR by Mottram, Wilson, and Strobl (2006) lead the social worker to consider that a referral for a medication consult would be one possible course to offer Sam for consideration.

Also regarding medication, there is a third Cochrane SR regarding extended maintenance use of antidepressant medications. Wilkinson and Izmeth (2016) found that:

The long-term benefits and harm of continuing antidepressant medication in the prevention of recurrence of depression in older people are not clear and no firm treatment recommendations can be made on the basis of this review. Continuing antidepressant medication for 12 months appears to be helpful with no increased harms; however, this was based on only three small studies, relatively few participants, use of a range of antidepressant classes, and clinically heterogeneous populations. Comparisons at other time points did not reach statistical significance. (Authors' conclusions)

Extended use of antidepressants does not seem optimal but again would have to be determined by Sam and his prescribing physician.

Another systematic review by Stek, van der Wurff, Hoogendijk, and Beekman (2001) found that there is not enough research on electroconvulsive therapy (ECT) to recommend it as a treatment of depression in older adults.

Finally, there was a systematic review of the literature on psychosocial treatments for depression in older adults. Gay men were not specifically addressed in this review. Wilson, Mottram, and Vassilas (2008) included nine trials in their SR that compared cognitive-behavioral therapy (CBT) and psychodynamic psychotherapies. These two types of therapies were the only ones included as there were no available studies on other forms of psychotherapy to include in the review. Seven studies compared CBT versus controls, but none of the psychodynamic trials used untreated control groups:

> Based on five trials (153 participants), cognitive behavioural therapy was more effective than waiting list controls (WMD -9.85, 95% CI -11.97 to -7.73). Only three small trials compared psychodynamic therapy with CBT, with no significant difference in treatment effect indicated between the two types of psychotherapeutic treatment. Based on three trials with usable data, CBT was superior to active control interventions when using the Hamilton Depression Rating Scale (WMD -5.69, 95% CI -11.04 to -0.35), but equivalent when using the Geriatric Depression Scale (WMD -2.00, 95% CI -5.31 to 1.32). (Wilson et al., 2008, para 9)

The Wilson et al. (2008) review indicates that there is good research support for both CBT and psychodynamic intervention with older depressed males. The weighted mean differences are all quite large. However, the 95% confidence intervals are also large, indicating that results may not be the same in the larger population. These are important options to discuss with the client.

A second search using the SAMHSA web site led to toolkits created by SAMHSA ((2011), p. 10) to address depression in older adults that can be downloaded for free (https://store.samhsa.gov/product/Treatment-of-Depression-in-Older-Adults-Evidence-Based-Practices-EBP-KIT/SMA11-4631CD-DVD). Among these resources, the first document called “Depression in older adults: Key issues” highlights the following interventions to address depression in this population: (1) psychotherapy interventions including cognitive-behavioral therapy, behavioral therapy, problem-solving treatment, interpersonal psychotherapy, reminiscence therapy, and cognitive bibliotherapy; (2) antidepressant medications; (3) multidisciplinary geriatric mental health outreach services; and (4) collaborative and integrated mental and physical health care. Again, the studies on which this conclusion is based are not fully detailed and differ somewhat from the later Cochrane Library SR results for psychological treatments for depression.

Neither of these research summaries directly explored any potential differences for gay men. It is not clear whether psychological treatments would, or would not, be differentially effective for gay men. However, the impact of societal oppression for gays is evident in Sam’s family life and may influence the psychosocial sources of resilience and risk even in his later life. These earlier studies most likely used less stringent review standards than do current Cochrane Collaboration systematic reviews.

A general search on the web site Google Scholar using the keywords depression older gay males brings up several books that address this question, such as Gay and Lesbian Aging: Research and Future Directions by Herdt and De Vries (2004). However, if these books are not easily accessible, they may not be as immediately useful. In addition, without very careful review, the quality of the evidence on which such books base their conclusions is unclear. Therefore, it appears that the core EBM/EBP summative web sites are the most fruitful in the search for information on how to best help Sam address his depression.

## *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

In conducting step 3 of the EBP process, it is essential to go back and see if the clinician can look to see the quality of the research provided in these summative studies. The Wilson et al. (2008) systematic review on the Cochrane Library site provides full details on all included and excluded studies – in the full review (which in the United States requires a paid subscription to access). For the psychotherapy interventions, the authors state that their findings are based on a meta-analysis of seven studies, yet the meta-analysis included a small number of trials and that the "review shows that there is relatively little research in this field and care must be taken in generalising what evidence there is to clinical populations" (para. 7). Samples sizes are also small, and there is no mention if any older gay men were included in the studies.

The information from the SAMHSA web site is less specific. The report lists recommendations but does not provide details on each included study. As a result, there is not much information on which to base a critical appraisal about the quality of the studies included in the report. It is an expert summary of research, compiled by a credible source, and includes a large number of studies, but it is not fully transparent in its methodology. Such summaries might be considered Level 5 expert opinion, the lowest grade of evidence in the EBM/EBP hierarchy. On the other hand, the conclusions of these experts are at least partly based on research. The lack of full detail undermines their credibility and makes them less useful as guides for clinical practice. Transparency and detail are real strengths of systematic reviews.

While it is difficult to find specific information on the design quality of some of these studies, the participants included in the studies are similar to Sam in terms of age and primary presenting issue. On the other hand, they do not specifically identify unique characteristics or challenges associated with being gay. That is, the populations included in these studies are not an exact fit with Sam's personal characteristics. Given what is available, it appears that this research may be a relatively good fit for Sam, albeit limited in the number of studies and in information on gay older adults.

## *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

In the next session with Sam, the clinical social worker had a conversation with Sam about the located research results. This conversation would include sharing with him with a summary of the information found and offer some approaches for consideration. The two forms of psychotherapy and medications found in the searches would need to be described in sufficient detail for Sam to understand his options, their likely benefits, and their potential costs and side effects. The plain language summaries of the Cochrane Collaboration systematic reviews provide useful language to help share this information with the client for their consideration.

In addition to the information on psychotherapy research, the clinician would also want to share with him the information on the use of medication and discuss his feelings and thoughts about this type of intervention. With regard to medication and psychotherapy, the clinician should be prepared to discuss the pros and cons of each approach and how those align with Sam's wishes, values, and circumstances and be ready to answer any questions that he might have. During this conversation, Sam stated that he was willing to try medication. He added that he would rather work with his current primary care doctor rather than starting over with a new psychiatrist.

Finally, although support groups and social supports were not specifically listed in the research, based on the clinical social worker's experiences, she believes that expanding his social network in an effort to decrease his isolation would be helpful to him in further alleviating his depressive symptoms. This is consistent with Sam's concerns about social isolation, although this issue was not specifically addressed in the outcome research. The clinical social worker therefore suggests a group therapy or support group intervention, providing him with an array of options regarding the focus and/or composition of the group. For example, he may want to have a support group that is focused on grief and loss or one that is specifically targeted toward individuals who identify as GLBTQI or one that is aimed at older adults in general or a combination of any of the above. Sam says that he is open to this idea, and the clinical social worker and Sam agree that both will do some searching for group options. After further discussion, Sam can then decide which one feels is the best fit for him.

It would be important to point out that the studies did not include gay men and to ask Sam what he thinks of this omission. The goal is to be sure the client views the best evidence as truly applicable to him or her. It is not clear that the effectiveness of these treatments is different for gay men or lesbians, but one of the points of EBM/EBP is that differences we may not consider important may prove to have significant impact when rigorously researched.

## *Step 5: Synthesizing the Client's Clinical Needs and Circumstances with the Relevant Research, Finalize a Shared Plan of Intervention Collaboratively with the Client*

Given the available research, it appears that psychopharmacological treatments and/or psychotherapy are the best options for helping to address Sam's depression. The next consideration is the expertise of the clinician and the availability of services one cannot personally provide. This aspect of planning involves whether to not the clinical social worker is trained and competent to provide the appropriate services or has them available within the agency or through consultation arrangements. If the services are available, treatment may begin immediately. Clinicians must make a referral to a provider with appropriate expertise if such services are not directly available. In some cases, making such a referral will involve locating providers of the service.

In Sam's case, the assessing clinical social worker has expertise in both cognitive-behavioral therapies and in psychodynamically based psychotherapies. She also has experience working with individuals around depression and loss.

Based on this conversation, the following treatment plan emerges and is agreed upon by both Sam and the clinical social worker.

1. Sam will attend weekly brief psychodynamically oriented psychotherapy, contracting for 3 months. Within the therapy, the focus will be initially on his depressive symptoms, his understanding of their origins and helping him to develop more effective strategies to cope with the depressive feelings.
2. Sam will set up an appointment with his doctor and discuss the potential of starting him on an antidepressant, taking into consideration his age and the side effect profile. The social worker will consult with the doctor on a regular basis regarding possible side effects, medication efficacy, and changes in symptoms. (Sam signs the consent forms to authorize this communication.)
3. Sam and the social worker will both ask others they know about group therapy or support group options in the community. From the available options, Sam will pick one of the groups that he feels would most suit his personality and comfort level.

### *Step 6: Implement the Intervention*

Sam and the clinical social worker identified a start date for the interventions to begin and the parameters around the treatment, including a targeted termination date. Sam and his clinical social worker agreed to monitor his energy level and social involvement on a session-by-session basis. They agreed that if progress is not apparent in a month, a more formal tracking of his progress would be initiated.

Alternately, Sam's depression could have been quantitatively assessed using a standardized measure of depression completed at regular intervals. This would allow for quantitative evaluation of progress using a single-case evaluation approach. Sam was comfortable with an ongoing, narrative assessment of his situation.

## References

Herdt, G., & De Vries, B. (2004). *Gay and lesbian aging: Research and future directions*. New York: Springer.

Mottram, P. G., Wilson, K., & Strobl, J. J. (2006). Antidepressants for depressed elderly. *Cochrane Database of Systematic Reviews, 2006*(1), CD003491.

Stek, M. L., van der Wurff, F., Hoogendijk, W., & Beekman, A. (2001). Electroconvulsive therapy for the depressed elderly. *Cochrane Database of Systematic Reviews, 2003*(2), CD003593.

Substance Abuse and Mental Health Services Administration [SAMHSA]. (2011). *The treatment of depression in older adults: Depression and older adults: Key issues* (HHS Pub. No. SMA-11-4631). Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. Retrieved from https://store.samhsa.gov/product/Treatment-of-Depression-in-Older-Adults-Evidence-Based-Practices-EBP-KIT/SMA11-4631CD-DVD

Wilkinson, P., & Izmeth, Z. (2016). Continuation and maintenance treatments for depression in older people. *Cochrane Database of Systematic Reviews, 2016*(9), CD006727.

Wilson, K., Mottram, P. G., Sivananthan, A., & Nightingale, A. (2001). Antidepressants versus placebo for the depressed elderly. *Cochrane Database of Systematic Reviews, 2001*(1), CD000561.

Wilson, K., Mottram, P. G., & Vassilas, C. (2008). Psychotherapeutic treatments for older depressed people. *Cochrane Database of Systematic Reviews, 2008*(1), CD004853.

# Chapter 12
# Ray: A Man Fearful of Panic Attacks

Ray is a 27-year-old single, white, cisgender, heterosexual man. He sought mental health services due to panic attacks and increasing concern that they would reoccur. This is despite the fact that he has had only four attacks in all, each occurring in the past 6 months. “The attacks are horrible, but now I am even more worried that they will come back.” He has only had panic attacks in his apartment. He notes no precipitant or sensations that might warn of an oncoming attack. “It’s such a mystery–they just come on me–this just makes it harder.” During the attacks he sweats and trembles; he says he feels “like there’s electricity running through me.” He feels faint but only once felt that he was choking. “Only one time did I fear I was going to die… I couldn’t really catch my breath. It was the worst. That’s why I’m here today.” He denies any numbness during or after the attacks, any chest pains, or any fears he is going crazy. “It just takes me over.”

Ray is a computer and network installer and repair technician. He is college-educated. He runs a small business with a college friend, begun 4 years ago. Their business has been successful, and his income is “good enough” and “steady.” He has no legal issues. Still, his concern about more panic attacks is making it harder for him to do on-site service work for customers. “I’m doing the work visits, but I am worrying more and more. I can’t get the fear out of my head.” Despite the attacks, he has done his work appointments. “Recently it has become harder, ‘cause I worry more and more about having an attack, but I still do my job.” He shows only hints of potential agoraphobia.

Ray has had no prior mental health concerns and has had no medical issues, including a physical exam 2 months ago which revealed no cause for concern. He denies changes in mood other than his growing concern about more panic attacks. He denies changes in weight, eating, or sleeping habits. Ray denies any suicidal ideation other than wondering if he’d have been better off dead after his worst attack in which he thought he would die. This ideation did not continue. He has no identified plans for suicide or passive self-harm and seemed truly puzzled when he was asked about this. He notes no family history of mental health issues or undue

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*, Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_12

anxiety, which makes him feel even more different. His parents run a family florist business that employs his older brother and sister; he says, “I can always work there if I want to.” He likes his sibs and knows he could work in the family business but instead wanted to try his hand at his own business. The family was supportive of his decision but teases him at times about “going his own way.” Ray says it is only teasing: “there is no doubt I’d be there if they really needed me. But they have too many people working for the work they do.” His beloved grandfather died 18 months ago, which was a significant loss of a lifelong caregiver and source of support, but Ray does not see this as related to his panic attacks. Ray has a circle of friends from work and college, with whom he plays softball and “sometimes drinks too much.” He says he used cannabis and tried cocaine in college but denies current use. He has had two relatively long-term sexual relationships with women, including an engagement that did not work out just after college. He wishes he could “find the right girl” but is not worried it will happen.

Ray can identify his own strengths as persistent, “pretty smart,” willing to take risks (such as in starting the business), loyal—always there for my family and friends—having a sense of humor, and being tolerant of different ideas. He sees himself as well supported by family and friends, who have both attributes he likes and enjoys as well as small flaws that bug him at times.

Beyond the panic attacks, which he says, “are only recent,” Ray thinks his limitations are “I’m kind of sloppy,” “I should put more time into learning the technical side of the business, but instead I watch sports on my own or with my friends,” and “my mother says I should be around more.” He does not seem overly self-doubting or unable to view himself and other people in a flexible and balanced manner.

## Applying the Six Steps of EBP to the Case

### *Step 1: Drawing on Client Needs and Circumstances Learned in a Thorough Assessment, Identify Answerable Practice Questions and Related Research Information Needs*

Ray fits DSM criteria for a panic disorder. Ray was actively involved in his assessment and appeared to be forthcoming if sometimes a bit puzzled by questions about his family and history. He has had unexpected panic attacks and over a period of about 6 months, and his worry about them has become persistent and intensified. His behavior has not (yet) changed due to the attacks, but this has become a source of some concern for Ray. His panic attacks do not appear related to substance use or medication use. He does not appear to fit criteria for either social or specific phobia, obsessive-compulsive disorder, or post-traumatic stress disorder as alternative source of his symptoms. Ray does not appear to fit the criteria for a personality disorder, nor does he appear to have a medical condition which might be the source of the panic attacks. He reports that he has had a recent physical exam showing no medical concerns.

Ray's life circumstances have not changed significantly in the past few years beyond the death of a beloved grandparent. His overall social and employment functioning appears essentially unchanged over the past few years, though his panic attacks are raising the possibility of future withdrawal which might impact on both areas. He has several sources of support and resilience and very few other challenges.

Panic disorder is associated with increased risk for agoraphobia and for depression. Onset for panic disorder often occurs in young adulthood, specifically during the 20s. It is a low prevalence disorder at 2–3% of the population but common in prevalence for mental health disorders.

In the PICO model, the *Population* is adult males with panic attacks or, more formally, panic disorder. The *Interventions* under consideration are psychotherapies and similar psychosocial interventions as well as medications. *Comparisons* would be between different therapies or psychosocial interventions as well as among medications and combinations of medications and psychosocial therapies. The *Outcomes* would be reducing the frequency of Ray's panic attacks and worries about them, as well as ideally ending the panic attacks.

## *Step 2: Efficiently Locate Relevant Research Knowledge*

A visit to the Cochrane Collaboration web site (www.cochranelibrary.com) reveals at the time of writing seven systematic reviews (SRs) related to panic disorder. All are studies of adults, and five involve medication. Two SRs focus on psychotherapy, alone or in combination with medication. One review examines anxiety and comorbid alcohol abuse, so is not relevant to Ray's needs. Another focuses on repetitive transcranial stimulation but found too little evidence to support any conclusions at this time. These reviews were completed between 2007 and 2018 (the year in which this chapter was written). The reviews note that panic disorder can be treated with pharmacotherapy, with psychotherapy, or with both in combination. However, the systematic review abstracts indicate that the relative merits of combined therapies were previously not well established through research results. Further, the advantages of the different types of therapy might vary over time. That is, while one therapy might be most helpful initially, another might prove more helpful over an extended period of time. Thus, both short- and long-term effectiveness should be appraised.

In regard to psychotherapy, Pompoli et al. (2016) sought to examine if any specific psychotherapy had better effect than did other therapies or control conditions. They found research on eight different psychotherapies: behavioral therapy, cognitive therapy, cognitive-behavioral therapy [CBT], third-wave CBT, psychodynamic therapies, supportive psychotherapy, physiological therapies, and psychoeducation. They included 54 relevant studies in their analysis, 32 of which addressed CBT. They report that "the quality of the evidence for the entire network [of all the studies] was found to be low for all outcomes. The quality of the evidence for CBT vs control, CBT vs supportive therapy, and CBT vs psychodynamic therapy was low to very low, depending on the outcome. The majority of the included studies were at unclear risk of bias with regard to the randomisation process" (Abstract, main results).

Overall, Pompoli et al. (2016) conclude that:

> There is no high-quality, unequivocal evidence to support one psychological therapy over the others for the treatment of panic disorder with or without agoraphobia in adults. However, the results show that CBT–the most extensively studied among the included psychological therapies–was often superior to other therapies, although the effect size was small and the level of precision was often insufficient or clinically irrelevant. In the only two studies available that explored PD [psychodynamic therapy], this treatment showed promising results, although further research is needed in order to better explore the relative efficacy of PD with respect to CBT. Furthermore, PD appeared to be the best tolerated (in terms of [short-term] dropouts) among psychological treatments. (Abstract, author's conclusions)

In their plain language summary, intended to help clients understand this material, they state that:

> The results of the review show that in general talking therapies are more effective than no treatment. There was no strong evidence to support one talking therapy over the others for the treatment of panic disorder with or without agoraphobia in adults. However, there was some low-quality evidence in favour of cognitive behaviour therapy (CBT), psychodynamic therapy and supportive psychotherapy over other talking therapies for short-term remission and short-term reduction in symptoms… (Plain language summary, what does the evidence from this review tell us?)

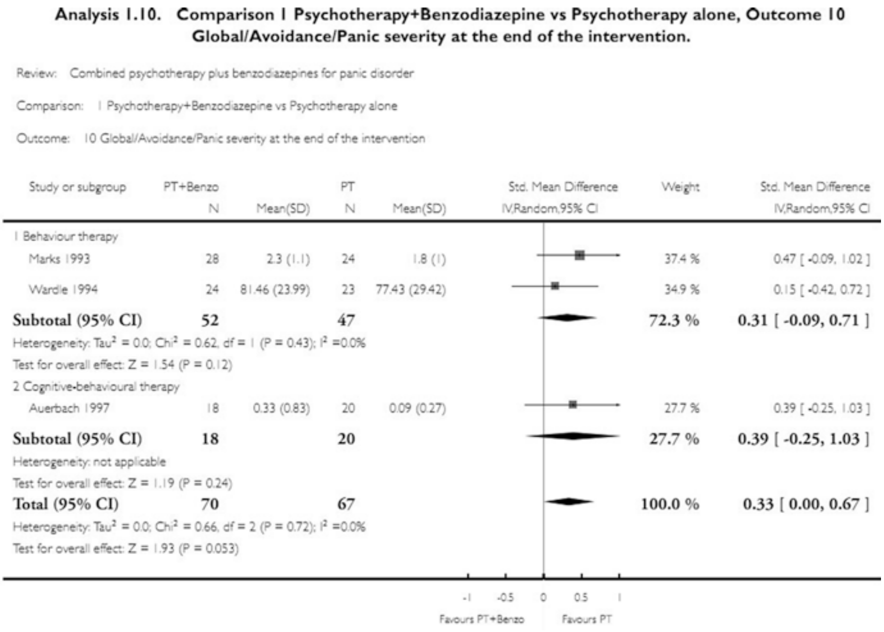
Psychotherapy for panic disorder is more effective than no treatment, and several forms of therapy may be useful.

In another systematic review, Watanabe, Churchill, and Furukawa (2009) studied treatment combining both psychotherapy and benzodiazepines. They found only three studies meeting their inclusion and quality standards. There was no statistically significant difference between combined use of benzodiazepines and therapy compared to therapy alone during the intervention period (relative risk (RR) for combined therapy 1.25, 95% CI 0.78 to 2.03, $p = 0.35$). Nor was there any difference at the end of intervention (RR 0.78, 95% CI 0.45 to 1.35, $p = 0.37$). Both conclusions were based on two studies involving 166 patients. There was also no statistically significant difference between combined therapy compared to treatment by benzodiazepines alone during the intervention (RR 1.57, 95% CI 0.83 to 2.98, $p = 0.17$) in one study involving 66 patients. There was also no statistically significant difference at the end of treatment (RR 3.39, 95% CI 1.03 to 11.21, $p = 0.05$) or at 7 month follow-up (RR 2.31, 95% CI 0.79 to 6.74, $p = 0.12$).

The relative risk values indicate that medication and therapy did yield somewhat better results than did therapy alone, but statistically these results were not significant (p values were less than 0.05) and may be due to chance alone. The 95% confidence intervals were also large compared to the RR value, suggesting the results may not be consistent with those likely to be found in the larger population.

Watanabe, Churchill, and Furukawa (2009, Plain language summary) state there is a "paucity of high quality evidence investigating the efficacy of psychotherapy combined with benzodiazepines for panic disorder. Currently, there is inadequate evidence to assess the clinical effects of psychotherapy combined with benzodiazepines for patients who are diagnosed with panic disorder." Yet this preliminary evidence, to Cochrane Collaboration standards, indicates that *either* behavioral therapy alone *or* in conjunction with benzodiazepines has empirical support for use with panic disorders.

Figure 12.1 displays a forest plot of the comparative effectiveness of behavioral and cognitive-behavioral therapies, with and without benzodiazepine medication, on global anxiety scores at the end of treatment from the Watanabe et al. (2009) SR. Note that the box and whisker plots are largely on the right-hand side of the dividing line. This indicates that the results favor psychotherapy alone. The key to this interpretation is provided at the bottom of the chart ("favors PT" = favors psychotherapy alone). However, each of the box and whisker plots and the summary diamond plots touches the dividing line. This indicates that the advantage of psychotherapy over combined psychotherapy and medication is a relatively small one. Both treatments can be effective as noted in the plain language summary reported above. Note, too, that the plain language summary also incorporates effectiveness on other outcomes, not only reduction in global panic severity at the end of treatment. As stated, Ray might consider either psychotherapy alone or in combination with benzodiazepine.



**Analysis 1.10. Comparison 1 Psychotherapy+Benzodiazepine vs Psychotherapy alone, Outcome 10 Global/Avoidance/Panic severity at the end of the intervention.**

Review: Combined psychotherapy plus benzodiazepines for panic disorder

Comparison: 1 Psychotherapy+Benzodiazepine vs Psychotherapy alone

Outcome: 10 Global/Avoidance/Panic severity at the end of the intervention

| Study or subgroup | PT+Benzo N | Mean(SD) | PT N | Mean(SD) | Std. Mean Difference IV,Random,95% CI | Weight | Std. Mean Difference IV,Random,95% CI |
|---|---|---|---|---|---|---|---|
| 1 Behaviour therapy | | | | | | | |
| Marks 1993 | 28 | 2.3 (1.1) | 24 | 1.8 (1) | | 37.4 % | 0.47 [ -0.09, 1.02 ] |
| Wardle 1994 | 24 | 81.46 (23.99) | 23 | 77.43 (29.42) | | 34.9 % | 0.15 [ -0.42, 0.72 ] |
| **Subtotal (95% CI)** | **52** | | **47** | | | **72.3 %** | **0.31 [ -0.09, 0.71 ]** |
| Heterogeneity: Tau² = 0.0; Chi² = 0.62, df = 1 (P = 0.43); I² =0.0% | | | | | | | |
| Test for overall effect: Z = 1.54 (P = 0.12) | | | | | | | |
| 2 Cognitive-behavioural therapy | | | | | | | |
| Auerbach 1997 | 18 | 0.33 (0.83) | 20 | 0.09 (0.27) | | 27.7 % | 0.39 [ -0.25, 1.03 ] |
| **Subtotal (95% CI)** | **18** | | **20** | | | **27.7 %** | **0.39 [ -0.25, 1.03 ]** |
| Heterogeneity: not applicable | | | | | | | |
| Test for overall effect: Z = 1.19 (P = 0.24) | | | | | | | |
| **Total (95% CI)** | **70** | | **67** | | | **100.0 %** | **0.33 [ 0.00, 0.67 ]** |
| Heterogeneity: Tau² = 0.0; Chi² = 0.66, df = 2 (P = 0.72); I² =0.0% | | | | | | | |
| Test for overall effect: Z = 1.93 (P = 0.053) | | | | | | | |

**Fig. 12.1** A forest plot comparing the effectiveness of psychotherapy versus psychotherapy plus benzodiazepine medication on panic severity at the end of treatment. (From Watanabe et al., 2009, p. 37)

In a third SR, Bighelli et al. (2018) studied whether antidepressants were more effective in treating panic disorder than was a no treatment control condition. Their review found 49 placebo-controlled studies of antidepressants versus placebo, including 8252 participants. No more detail about the participants is provided in the SR abstract. Bighelli and colleagues state that "the majority of studies were of moderate to low quality due to inconsistency, imprecision and unclear risk of selection and performance bias" (Abstract, main results). They continue, saying,

> We found low-quality evidence that revealed a benefit for antidepressants as a group in comparison with placebo in terms of efficacy measured as failure to respond (risk ratio (RR) 0.72, 95% confidence interval (CI) 0.66 to 0.79; participants = 6500; studies = 30). The magnitude of effect corresponds to a number needed to treat for an additional beneficial outcome (NNTB) of 7 (95% CI 6 to 9): that means seven people would need to be treated with antidepressants in order for one to benefit. We observed the same finding when classes of antidepressants were compared with placebo. (Abstract, main results)

Bighelli et al. (2016) also report moderate-quality evidence that antidepressants were slightly less likely to cause treatment dropout than were placebos (NNTB of 27; 95% CI 17 to 105) but also moderate-quality results indicating antidepressants were less well tolerated than were placebos. It appears that antidepressants have clear but modest benefit over placebo in treating panic disorder. Ray might choose an antidepressant medication over benzodiazepines, alone or in combination with psychotherapy.

Three individual studies located on PubMed also appear relevant and pointed to additional treatments for consideration. Having alternatives is important if Ray proved unwilling or uncomfortable with some potential treatments. They also allow Ray to make informed decisions about alternative treatments. Wiborg and Dahl (1996) compared a psychodynamic psychotherapy and antidepressant medication for panic attacks over an extended follow-up period. They cited prior work indicating that panic disorders, treated by medication alone, had variable but potentially very high rates of reoccurrence (20 to 30% at the low estimate, 70 to 90% at the high estimate according to Ballenger (2003)). They sought to reduce relapse rates by combining brief psychodynamic psychotherapy adapted from Davenloo (1978) as well as Strupp and Binder (1985) coupled with medication. The issue of relapse rates would be an important piece of information to communicate to Ray as part of his treatment planning process. Milrod et al. (2007) studied psychodynamic psychotherapy separately and in combination with medication for panic disorders. Berger et al. (2004) studied the effectiveness of antidepressants combined with interpersonal treatment for panic disorder, but in a population of persons with comorbid personality disorders, that did not fit with Ray.

Wiborg and Dahl (1996) studied people diagnosed using the now dated DSM-III criteria for panic disorder. They randomly assigned 20 patients to clomipramine therapy for 9 months and another 20 patients to combined clomipramine with 15 weekly sessions of brief dynamic psychotherapy. Outcomes were measured by patient reports of panic attacks and by the Hamilton Rating Scale for anxiety and the Panic Attack and Anxiety Scale. They followed the patients for numbers of panic attacks and levels of both anxiety and depression at 6, 12, and 18 months after beginning either treatment. The relapse rate was significantly higher after 9 months for patients treated with medication alone (panic attacks $M = 0.8$, sd = 0.8 versus $M = 0.0$, sd = 0.0 for the therapy and medication group; effect size $d = 2.07$ for medication alone versus $d = 3.20$ for medication and therapy). There were no significant differences on the Hamilton Anxiety Rating Scale scores between groups. Psychotherapy appears to be helpful in sustaining improvement and avoiding future relapse but not for overall anxiety.

Milrod and colleagues found that across a racially mixed sample, the 26 clients receiving panic-focused psychodynamic psychotherapy completed therapy with significantly lower Panic Disorder Severity Scale scores ($M = 5.1$, sd = 4.0 to $M = 9.0$, sd = 4.6; $t = 3.30$, df = 47, $p = 0.002$; effect size = 0.95; no CIs were reported) than did 13 clients receiving relaxation therapy. However, scores on the Hamilton Anxiety and Hamilton Depression Rating Scales did not differ significantly. One person in the relaxation group worsened significantly and was dropped from the study and offered medication. This is a point worth mentioning as a possible risk to track carefully for Ray and any other person with panic attacks. This study was impressive for its inclusion of racially diverse patients, which might prove very relevant in some clinical situations.

Overall, it appears that the combination of therapy and medication is likely to be effective in treating Ray's panic disorder. There are alternatives for Ray to consider in regard to treatment by psychotherapy alone versus psychotherapy in combination with medication. While this discussion would be between Ray and his prescribing physician, it appears that antidepressants more often generate unpleasant side effects than do anti-anxiety medications. Ray does not appear depressed, so anti-anxiety medications may also fit better with his clinical presentation. On the other hand, anti-anxiety mediations have potential for abuse and/or overuse, though Ray does not seem to have a significant history of abuse of substances or medications. Given his panic and level of desperation, however, caution is in order. It would also be a reasonable choice to consider psychotherapy without medication.

## *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

In terms of psychotherapies, cognitive-behavioral, psychodynamic and supportive therapies have been studied and demonstrate effectiveness with panic disorders. Combining medication with psychotherapy did not improve client outcomes. Notably, cognitive-behavioral therapy (CBT) has been studied more than other psychotherapies. There appear to be strong options for Ray to consider. If Ray is uncomfortable with CBT, there is some evidence in support of brief psychodynamic psychotherapy as an effective treatment for panic disorder, but the evidence base for this recommendation is less well developed than is the evidence base for CBT.

The study samples were not limited to men only, though there is no clear reason to think that these therapies would be contraindicated for Ray based on his age or gender. With only one exception, the studies examined did not state that they included people of color or other groups for whom socially structured oppressions might influence treatment effects.

## *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

The clinician used information from the plain languages summaries included in the systematic reviews to bring research information to Ray for consideration. In regard to psychotherapy, the social worker stated that "research results show that talk therapy is more effective than is no treatment. But, there is no strong evidence to support one type of talk therapy over the others. The research results are viewed as low to moderate in quality; with some evidence supporting the benefits of cognitive behavioral therapy (CBT), psychodynamic therapy, and supportive psychotherapy in terms of their short-term results." In terms of medications, the social workers stated that "a few studies found no additional benefit by combining psychotherapy with an anti-anxiety medication called benzodiazepine–called Xanax or Valium in pharmacies. These drugs are fast acting but may lead to dependence if used over time. A few other studies looked at several different types of antidepressant medications as treatments for panic disorder and found some benefit compared to no treatment. But one study showed some people disliked the side effects of taking antidepressants." The social worker offered Ray the internet URL links to the Cochrane Systematic reviews if he wanted to look at the research results more closely.

The information appeared clear enough for Ray to follow, but he had questions about some of the caveats in the SR summaries. First, he was surprised that the results were not more clear and compelling. "They sure cover their tails well. The language seems 'weaselly,' like they really aren't sure." Ray's comment is, of course, an accurate statement given the research results are low quality and show little difference across therapies. Still, some psychotherapies have been empirically demonstrated to effectively treat panic disorder.

## *Step 5: Synthesizing the Client's Clinical Needs and Circumstances with the Relevant Research, Finalize a Shared Plan of Intervention Collaboratively with the Client*

Ray chose a manualized cognitive-behavioral therapy (Clinical Research Unit for Anxiety Disorders, 2010) after discussion of these alternatives with his clinical social worker. He had only a few questions but had some clear preferences regarding medication. He was not interested in taking medication at first, though he was happy that medication could be a “backup plan” if therapy alone did not work well enough. He clearly did not like the idea of possible mediation side effects of any kind. He understood the general idea of cognitive-behavioral therapy and was open to it. He was open to doing homework outside the therapy sessions. It was clear his outlook on the therapy was positive.

Cognitive-behavioral therapy for panic disorder was immediately available for Ray through his community mental health clinic. The clinic would also make access to a psychiatric consult for medications possible should it become appropriate. Ray said he would consider medication if the therapy alone did not lead to improvement.

### *Step 6: Implement the Intervention*

The main challenge of the treatment planning was the lack of an obvious precipitant. Ray’s concerns were general and difficult for him to pin down as specific cognitions. It took some time for Ray to think of his fear of the next panic attack as a way of thinking that he could address in therapy. Once he caught on to this idea, he was able to combine relaxation techniques and breathing exercises with increasing exposure to thoughts of another panic attack. Each session included monitoring of the number of panic attacks he had had between sessions. The number reduced quickly, as did his concern about having more attacks. Ray also appeared more relaxed in sessions. He concluded therapy after eight sessions over 10 weeks. Eight weeks later he reported having no further panic attacks and much lower worry about them reoccurring.

Given the apparent effectiveness of the treatment, no additional structured evaluation of outcome was undertaken. Ray’s descriptions of the reduction in both number of panic attacks and worries about them were formally documented in his clinic record. His reports on the frequency of his panic attacks over the 10 weeks were also recorded. This would have allowed for a single-case evaluation, but the clarity of his improvement did not make such a formal evaluation model appear necessary. Ray was quite satisfied with his treatment and its results.

## References

Ballenger, J. (2003). Selective serotonin reuptake inhibitors in the treatment of anxiety disorders. In D. Nutt & J. Ballenger (Eds.), *Anxiety disorders* (pp. 339–361). Malden, MA: Blackwell.

Berger, P., Sachs, G., Amering, M., Holzinger, A., Bankier, B., & Katschnig, H. (2004). Personality disorder and social anxiety predict delayed response in drug and behavioral treatment of panic disorder. *Journal of Affective Disorders, 80*, 75–78.

Bighelli, I., Castellazzi, M., Cipriani, A., Girlanda, F., Guaiana, G., Koesters, M., et al. (2018). Antidepressants versus placebo for panic disorder in adults. *Cochrane Database of Systematic Reviews, 2018*(4), CD010676.

Bighelli, I., Trespidi, C., Castellazzi, M., Cipriani, A., Furukawa, T. A., Girlanda, F., et al. (2016). Antidepressants and benzodiazepines for panic disorder in adults. *Cochrane Database of Systematic Reviews, 2016*(9), CD011567.

Clinical Research Unit for Anxiety Disorders (CRUFAD) of St Vincent's Hospital, Sydney, Australia. (2010). *Anxiety and panic disorder patient treatment manual*. Retrieved from https://crufad.org/wp-content/uploads/2017/01/crufad_Panicmanual.compressed.pdf

Davenloo, H. (Ed.). (1978). *Basic principles and techniques of short-term dynamic psychotherapy*. New York: Jason Aaronson.

Milrod, B., Leon, A., Busch, F., Rudden, M., Schwalberg, M., Clarkin, J., et al. (2007). A randomized controlled clinical tail of psychoanalytic psychotherapy for panic disorder. *American Journal of Psychiatry, 164*, 265–272.

Pompoli, A., Furukawa, T. A., Imai, H., Tajika, A., Efthimiou, O., & Salanti, G. (2016). Psychological therapies for panic disorder with or without agoraphobia in adults: A network meta-analysis. *Cochrane Database of Systematic Reviews, 2016*(4), CD011004.

Strupp, H., & Binder, J. (1985). *Psychotherapy in a new key*. New York: Basic Books.

Watanabe, N., Churchill, R., & Furukawa, T. A. (2009). Combined psychotherapy plus benzodiazepines for panic disorder. *Cochrane Database of Systematic Reviews, 2009*(1), CD005335.

Wiborg, I., & Dahl, A. (1996). Does brief dynamic psychotherapy reduce the relapse rate of panic disorder? *Archives of General Psychiatry, 53*(8), 689–694.

# Chapter 13
# Sally: A 12-Year-Old Who May Have Disinhibited Social Engagement Disorder

Sally is a 12-year-old, biracial (African-American/white), cisgender child. She is tall and lanky with very neat cornrows. Her adoptive parents, in conjunction with her adoption social worker, referred her for services. Sally seems comfortable living in her adoptive home, with her African-American father, her white mother, and her younger biracial biological sibling. Sally has been in the home for just over 2 years, and her adoption was legally finalized 8 months ago. She interacts smoothly with the family, but her parents say that "something's missing." Sally does not turn to her parents for comfort or guidance when upset or hurt. Her parents have offered considerable daily life structure to help her become more connected, but she does not seem to look for their care and support. They fear she will turn to "just anyone," and as a near teenager, this could mean others might take advantage of her. "She doesn't think at all about her safety." From the parent's perspective, it is difficult "to get so little response" from Sally, though they are quite aware they are "in it for the long haul." "We are committed to her." They find it difficult to understand her nonverbal cues, and, even after they encourage her to talk, Sally seems puzzled about her feelings and needs.

Protective services had placed Sally in several different foster homes due to parental neglect between ages 4 and 9. They returned Sally to her mother after each out-of-home placement, some lasting of up to a year. Her single-parent biological mother worked long hours and, at times, left Sally alone for extended periods. During the foster placements, she was described as "a very eager to please child," who "treated everyone as a friend," was "very open," and "had lots of friends." There was no evidence of physical or sexual abuse during the placements, though other children would sometimes verbally tease Sally. Her first child protective worker noted she was "attractive and pleasant" but also noted she "did not seem to discriminate among people, seeking what contact she could get from just about anyone." She has limited self-care skills and would "get lost" in TV shows if given the chance. She loved "Disney movies" which it seemed had been used as surrogate babysitters. Sally was 2 years behind academically in school at age 9 and had a

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_13

limited vocabulary and limited math and reading skills. None of these learning issues had any apparent organic basis based on physical and neurological exams. She behaved well in school and “was never a behavior problem.” “People like her.”

The local courts terminated parental rights after the mother’s boyfriend got into several fights with Sally. The final straw was that he hit Sally in the back of the head with a frying pan, which seemed to be a one-time occurrence. Sally was unconscious for several minutes and had a very small laceration where she was hit. She was treated for swelling around her brain over the next few days. She was diagnosed with a closed head trauma from the incident. The organic effects of the incident are unclear, both in terms of any learning-related challenges or changes in self-regulatory functions. Still, her neurological and learning testing did not indicate any significant issues beyond lagging beyond grade level. Her biological mother said she seemed “different” after the trauma but was never able to pin point just how Sally had changed.

Sally’s adoptive parents have a biological child and wanted to adopt. They were “taken” with Sally immediately upon seeing her: she had the skin tone and hair color of their biological daughter. “She seemed to fit right in” her father said. Early visits and her moving in seemed to go well. Sally showed no hesitancy in engaging with the family, which was a pleasant surprise. “We knew she should be more careful, but we were glad she seemed to accept us.” “There was no honeymoon; she was just part of the family.”

The problems emerged when Sally got involved in school and in activities beyond the core family. “She treated everyone like family!” In consultation with the adoption worker, the family increased their daily structure and actively kept Sally within defined limits. “This wasn’t hard, and we only seldom got upset, but it took vigilance.” The limits seemed to provide some order for Sally but did not decrease the indiscriminate reaching out to others, including passersby, the delivery man, and dog walkers. “We weren’t sure she’d always be safe, you know, and she’s almost a teenager.” Her parents also noted they did not understand how Sally got care when she seemed down or hurt. They would have to seek her out and actively question Sally about her emotional state, which seemed to confuse Sally. “At first, we thought we were too pushy, but then we realized she didn’t really know how she felt or at least wouldn’t easily share it.”

Sally has lots of acquaintances, but no real friends. She easily connects with people but does not sustain interactions and most are brief. She makes good eye contact. She displays a wide range of emotion. Though physically capable, she has been oddly resistant to organized sports activities or clubs. Her parents thought these activities might be of interest to her. Her concern is that “the kids will tease me.” She has never stuck with a sport or club for more than a few weeks, though her parents are now encouraging her to pick one activity to pursue based on her skills and interests.

Sally appears to meet some DSM-5 criteria for a reactive attachment disorder (RAD) diagnosis and also some criteria for disinhibited social engagement disorder (DSED). She displays diffuse attachments, as evident through indiscriminate sociability and a marked lack of selective attachments (to her biological mother or foster caregivers in the past and to her adoptive parents currently). She often does not look back at her parents when moving into new social situations. She does not seek care and support from her parents when hurt or upset and is often not much consoled when care and succor are provided. This pattern apparently began before age 5 and can be reasonably viewed as the cause of her current attachment problems (called "pathogenic care" in DSM-IV-TR terminology or "social neglect" in DSM-5). The attachment issues do not appear to be related to specific trauma as neither physical nor sexual abuse was reported in the past. Neglect predominated. (Given her multiple placements, the possibility of such abuse is real, but it had not been substantiated by her caregivers or by Sally herself at this point.) There is no evidence of autism spectrum disorder or pervasive developmental delay; in fact, Sally has very good motor skills and eye-hand coordination even after her head trauma. The effects of her head trauma are unknown but do not appear to account for the attachment challenges. Alexithymia is also a rule out given Sally's difficulty identifying her feelings.

Attachment is an interpersonal process that occurs between people (Drisko, 2018). It is quite unlike a bacterial infection or depression that may be viewed as "located" within a person. The consequences of a lack of attachment, or a disinhibited attachment, may be observed in social behaviors such as indiscriminately turning to unknown people for care and support and failing to use a known caregiver for support when hurt or emotionally upset. These behaviors require at least two people in interaction, and the quality of their interaction is crucial to identifying attachment problems.

The interactive quality of attachment disorders make evident some of the shortcomings of medical model diagnosis. The lack of attachment opportunities before age 5 is assumed to have a significant internalized effect on a child's development, but for attachment to develop, other people must offer "good enough" sources of care on a consistent basis. Diagnosing reactive attachment disorder and/or disinhibited social engagement disorder is a difficult endeavor. Clinicians use different diagnostic standards and protocols for children of different ages (Zilberstein, 2006). Children who have received poor care from adults are expected to respond appropriately to any unknown adult, across a variety of contexts, as if such interactions should not be expected to be untrustworthy and stressful.

Due to the interpersonal nature of attachment problems, it is difficult to develop valid standardized measures for them (Drisko, 2018). For nonclinical populations of preschoolers, the Ainsworth Strange Situation Test (1978) is often used to identify different types of attachment. However, the Strange Situation Test is not a scaled measure and is not intended to be used as an outcome measure. It is used to define categorical attachment styles. For school-age children and teenagers, there is no widely used measure of attachment. The Randolph Attachment Disorder Questionnaire [RADQ] is often used as an outcome measure, though it was intended as a general screening tool for broad attachment problems. The Randolph Attachment Disorder Questionnaire has only face validity and emphasizes problems with conduct more than attachment quality per se. Smyke and Zeanah's (1999) Disturbances of Attachment Interview also generates a typology and is rarely used in outcome research. Other measures, particularly the Achenbach Child Behavior Checklist [CBCL] (1991, 1992), are widely used as proxy outcome measures in studies of treatments for RAD, but do not include any direct measures of attachment. Instead, the CBCL's conduct and learning disorder subscales are used as proxies for attachment quality. The problem with this use of proxy measures is that conduct or learning problems may, or may not, be related to attachment quality. These conduct and learning issues may represent distinct but comorbid disorders rather than representing a core aspect of attachment.

These key problems with conceptualizing and measuring RAD have not stopped researchers from preliminary outcome studies. They do seriously limit the confidence that clinicians and researchers can put in their results. What is measured may not fairly and comprehensively reflect the dimension of RAD nor measure it effectively. The conceptual, diagnostic, and measurement problems become crucial in identifying and applying high-quality research to Sally's needs.

## Applying the Six Steps of EBP to the Case

### *Step 1: Drawing on Client Needs and Circumstances Learned in a Thorough Assessment, Identify Answerable Practice Questions and Related Research Information Needs*

Sally does not herself identify any problems with her behavior or her interactions with her parents. She says her parents and teachers are "overreacting" (a word she also says is used by her parents about her sister's behavior). Sally's parents are concerned about her disinhibited social interactions that could increasingly be unsafe and risky. They are also concerned that Sally does not turn to them for support when she is hurt or anxious, though this vulnerability is clearly a lesser concern. It does not seem to be the driving force behind their referral of Sally for assessment and possible treatment. The family's adoption worker has been a steady support since Sally's adoption and agrees that Sally's indiscriminate or disinhibited interaction has been consistent and views the parents' concerns as reasonable. Both the parents and the adoption worker believe there may be some subtle medical issue related to her head trauma, but both view her prior workup as thorough. Her parents do not report concern about possible sexual abuse, though both the adaption worker and the clinical social worker doing the assessment think it should remain an open question.

In the **PICO** model, the **P**opulation is school-age children with disinhibited social engagement disorder and/or reactive attachment disorder. The **I**nterventions under consideration are psychotherapies and similar psychosocial interventions or programs. Medication is not under consideration. **C**omparisons would be between different therapies or psychosocial interventions or programs. The **O**utcomes would be increasing Sally's attachment to her parents as most clearly demonstrated through turning to them for support when she is worried or fearful—to be her parental attachment figures. Reduced indiscriminate social interactions are another important outcome.

### *Step 2: Efficiently Locate Relevant Research Knowledge*

A search of the Cochrane Library revealed six trials (or published individual reports) on assessment of disinhibited social engagement disorder. There were no systematic reviews and no publications specifically addressing treatment outcomes for DSED. For reactive attachment disorder, 50 publications were found on the Cochrane Library, but again none were systematic reviews of treatment outcome. Many studies on RAD focused on attachment styles but were not specific to reactive attachment disorder. Those studies most specific to RAD were studies of infants (e.g., Klein Velderman, Bakermans-Kranenburg, Juffer, & van IJzendoorn, 2006) and of efforts to improve empathic maternal care (Raby et al., 2017). The closest match was a study by Bernard et al. (2012) on enhancing attachment security, but it proved to be a study of a successful intervention program for 1–3-year-old children. A similar search for programs at the Campbell Collaboration Library returned zero results for either DESD or RAD as search terms.

RAD and DSED are relatively low incidence disorders that child clinicians may not understand in depth. Limited research is available on treatment outcomes for RAD and DSED. According to O'Connor and Zeanah (2003, p. 233), "no treatment method has been shown to be effective for children with attachment disorders." Further searches of individual research studies are the next approach to locating relevant research literature.

A search on PubMed revealed a report by Zeanah, Chesher, Boris, et al. (2016) that drawing on research available through 2012 finds that RAD and DSED appear to be distinct disorders but that they are also frequently co-occurring or comorbid: "it is likely that comorbidity is the rule rather than the exception" (p. 992). They note that children with DSED "are usually affectively brighter and more social than children with RAD" (p. 993). This appears consistent with Sally's presentation and parental reports. Placement at younger age into good enough care environments is linked to a greater likelihood of functional improvement. The authors state, "Still little is known about individual differences in prognosis, as risk and protective factors have not been well delineated among children with this disorder. In fact, the available data suggest that there are significant individual differences in the course of DSED" (p. 994).

In terms of treatment, Zeanah et al. (2016) state that "The most important intervention for young children diagnosed with RAD or DSED is ensuring that they are provided with an emotionally available attachment figure" (p. 999). They call this a "Clinical Standard"—one based on strong research support and/or "overwhelming clinical consensus" (p. 996). They also state as a Clinical Standard that "clinicians should recommend adjunctive interventions for children who display aggressive and/or oppositional behavior that is comorbid with DSED" (p. 999). They state as a Clinical Opinion—a recommendation lacking strong experimental research support but having some suggestive research support—that "limiting contact with noncaregiving adults may reduce signs of the disorder in the first year of placement (p. 999). Use of medications for DSED is not recommended; and use of physical restraints or holding therapies "should not be administered because they have no empirical support and have been associated with serious harm, including death" (p. 1000).

Myeroff (1997) and Myeroff, Mertlich, and Gross (1999) report that Levy and Orlans' (n.d.) holding therapy produced significant reduction in aggression and delinquency as measured by subscales of the CBCL for 11 adolescents receiving therapy (Aggression subscale, paired $t = 4.26$, $df = 10$, $p = 0.001$; effect size by Cohen's $d = 1.33$. Delinquency subscale, paired $t = 2.37$, $df = 10$, $p = 0.04$; $d = 0.77$), while a comparison group of 9 adolescents showed no change. No significant change in RADQ scores was reported (and this information was simply missing from the 1999 article). No evidence that the adolescents met criteria for a DSM-IV-TR RAD diagnosis was offered. It is unclear if the authors or other provided the treatment. In another study, Wimmer, Vonk, and Bordnick (2009) report a single group pre-post study using a combined 10 hour therapy including family counseling, behavioral management training, and holding therapy as taught by Children Unlimited of South Carolina (2004). All the children had received diagnoses of RAD. They report significant gains on RADQ scores ($t = -3.65$, $df = 21$, $p = 001$; effect size by Cohen's $d = 0.71$) and on the Child and Adolescent Functional Assessment Scale (Hodges, Xue, & Wotring, 2004) for general behavior ($t = -2.61$, $df = 22$, $p = 0.02$; Cohen's $d = 0.65$). It is important to note that holding therapy has been explicitly condemned and prohibited on safety and ethical grounds due to deaths of several children treated with it or variants of it (American Academy of Child and Adolescent Psychiatry, 2005; Zeanah et al., 2016).

While these findings might appear promising, holding therapy (also called rebirthing therapy) has been deemed inappropriate and potentially dangerous by the American Professional Society on the Abuse of Children and the American Psychological Association, Division 37 (2006), and the American Academy of Child and Adolescent Psychiatry (2005; Zeanah et al., 2016). It should not be used due to risk of severe harm or death. Note carefully that finding significant research results does not automatically mean that the treatment is appropriate or without substantial risk of harm. Such harms are unlikely to be noted in the original articles, or necessarily, in later research reviews.

Becker-Weidman (2006a, 2006b) reports a quasi-experimental comparison of Hughes' (2004) Dyadic Developmental Therapy [DDT] versus treatment as usual. All the children included in the study met criteria for DSM-IV-TR RAD diagnosis. Pre-post comparison demonstrated significant improvement for the DDT group ($n = 34$) on five CBCL subscales for aggression, withdrawn, social problems, rule-breaking, and thought problems ($t$ values ranged from 4.38 to 12.81, $df = 33$, all $p$ values were $p < 0.001$; $d$ values ranged from 1.01 to 2.78). In addition, significant improvement on the RADQ was reported ($t = 12.82$, $df = 33$, $p. = 0.001$; $d = 2.70$). Only results on the CBCL subscale anxious-depressed were not significant. The treatment as usual group ($n = 30$) showed no significant pre-post improvement. It is also notable that Becker-Weidman (2006a) was the only provider of DDT in this study and is also the author of this study. Based on a quasi-experiment and with strong potential for attribution bias (favoring one's own work), these results must be considered moderate to low in quality despite their large effect sizes.

## *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

Research on the effectiveness of treatments for RAD is very limited, especially for school-age children and early adolescents. Further, the measures used to assess attachment are also very limited and of questionable validity. That is, measures of overall conduct may be used as a proxy measure of attachment, failing to specifically measure if the child turns to and uses adults for support and nurture. Some research findings support a therapy that has been essentially banned due to several deaths associated with its use and very high potential for harm. Overall, the best available evidence points to Hughes' (2004) Dyadic Developmental Therapy [DDT]. The evidence is not an RCT but is Level 2 quality. However, the researcher was also the provider of the therapy, which may be a source of attribution bias. Note that the effect sizes are extremely large, near their practical limits. Yet even taking into consideration that Cohen's *d* effects sizes may be inflated when applied to small samples sizes, the effect sizes are very large. In context, this treatment model includes many components also endorsed by observational studies and practice wisdom. Attribution bias may be at play in the DDT outcome studies; replication by others in other settings is needed.

A summary of a wide range of nonexperimental studies completed by Drisko (2009) documents that many studies of RAD address single treatment components or issues that might better be viewed in combination to generate a much more comprehensive treatment package. For example, one excellent clinical report stated that parents underestimate the levels of anxiety of children with RAD and might do better to take a more active and preventive or preemptive approach to caring for their children (Lieberman, 2003). On the other hand, this detailed article did not mention that without a safe, enduring, and consistent family placement, a child with RAD might have a great deal of difficulty making continued progress. It is as if the many components of RAD treatment are stated one by one, with few comprehensive models. This may reflect the interest or expertise of the many researchers. They may be knowledgeable enough to focus on specific treatment components and assume that other conditions are already in place. One comprehensive approach is Hughes' (1988) PLACE model. This model was used in the Becker-Weidman study reported above.

In the diagnosis and treatment of RAD, the clinical social work person-in-environment perspective proves very useful. Clinical social workers should consider the child's placement situation, its safety, empathy, potential longevity, and appropriateness as a foundation to child and family psychotherapy per se. Treatment is best understood as a package of many interventions. These interventions may have different purposes and even different auspices. Drisko and Zilberstein (2008) report that parents attribute improvement by their children with RAD to a combination of factors. These include the (1) constant parental presence and supervision; (2) parental bonding and strong commitment; (3) providing clear and consistent daily life structure; (4) steady behavioral management; (5) acute empathic attunement to interpret the child's often odd or confusing messages; (6) responding to an intuitive or empathic grasp of the child's needs; (7) using social supports, for the parents and for the child; (8) therapy for the child often related to managing the effects of trauma and loss; (9) promoting the child's active involvement in community life; and (10) intervening to support their social activities. Finally, parents and children both had long-term access to prolonged relationships with child welfare/adoptive workers, clinical social workers, and networks of parents of children with similar needs. Treatment of RAD might best be understood as taking an entire childhood and required extensive efforts by parents and professionals together. Yet no RCTs are available to compare such a package of interventions to alternatives. The best available evidence is still quite limited for RAD.

Sally is a biracial child with mixed race adoptive parents and a biracial biological sibling. The research literature on attachment rarely specifies the races of children and parents included in outcome studies. It is not clear that race is a major influence in Sally's situation. It was not raised as a concern by her parents, though it will surely impact her development. Still, the limited detail on sample characteristics provided in the research results offers no information on this topic.

## *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

It is difficult to provide clients with a summary of the best available research related to their needs when research results are few and perhaps of low quality. There is no specific evidence base for treatment outcomes on either RAD or DSED. Outcome studies for RAD, based on children with clear DSM-III or DSM-IV-TR diagnoses, are very few. Studies using DSM-5 criteria for RAD or DSED are not yet available though some may be underway. However, Sally's parents must be informed that holding therapy, which is widely discussed in the media and on internet sites, presents a great potential for harm and should not be undertaken. Several professional groups prohibit its use for safety reasons.

The best available evidence suggests treatment using the Hughes' (2004) Dyadic Developmental Therapy. It is important to point out to the family that these results are based on only two studies done by the same person. There is no mention in these studies that participating clients and families were biracial, or of co-occurring head trauma. The evidence base for this therapy is quite limited, but it appears to yield good results on several attachment and behavioral issues. Another important practical concern is if any professional trained in the DDT model is available in the geographic location of the family or if the clinician can be trained in this model.

Sally's limited motivation for treatment might also be an obstacle to her participation. Ironically, her lack of motivation is offset by her disinhibited attachment. Sally, like many children, may be brought for treatment "against their will" with a very strong chance that her investment will build over time. Her parents are open to being involved in treatment.

### *Step 5: Synthesizing the Client's Clinical Needs and Circumstances with the Relevant Research, Finalize a Shared Plan of Intervention Collaboratively with the Client*

After discussion with the parents and Sally, a plan centering on Hughes' DDT model was selected. Both Hughes publications, and many reports of the effective components of treatment for children with RAD and their families, indicate this will be a long-term effort. The DDT model emphasizes work with parents to provide safety and security with attention to the parent's own attachment strategies. In parent work and in conjoint work with the child, parents work to increase attunement to the child, to help understand the child's subjective experiences, and to address inevitable misattunements and interpersonal conflicts. Attachment facilitation and cognitive-behavioral interventions are also used in day-to-day interaction. Sally's parents were pleased with this plan, though they were not happy or encouraged by the limited research on effective treatments. They found the lack of strong research support for any treatment to suggest that their therapeutic work might prove ineffective. Sally was willing to be involved but her understanding of the treatment was uncertain.

No therapist trained in Hughes' DDT was found in the family's local region. However, a therapist with expertise in treating RAD, who had attended training workshops by Hughes and others, was available nearby. The family was open to a referral and understood that they might be making a long-term contract to work with a clinical social worker.

### *Step 6: Implement the Intervention*

After 18 months of treatment, Sally's parents reported she had made some progress in reducing her indiscriminate social interactions that they viewed as important. They continued to be concerned that as she entered adolescence, her lack of discrimination and social judgment might increasingly put her safety at risk.

On the other hand, their therapeutic work had helped them better interpret Sally's signs of stress and anxiety. This allowed them to intervene preventively, as well as to help from a relationship in which Sally felt them as supportive, tuned in, and nurturing. They understood this as reflecting changes in Sally's attachment to them, as well as in their own behavior toward Sally.

In individual therapy, Sally had begun to explore and mourn the loss of her biological mother. Sally's repertoire of affect remained limited, but sadness was more apparent and connected to appropriate content. No indications of sexual abuse were evident, though alexithymia remained a relevant rule out.

Sally's treating social worker asked her parents to rate her behavior using the CBCL on an annual basis. Over the course of 1 year, Sally's scores on the CBCL subscales for withdrawal increased, reflecting less disinhibited behavior. At the same time, her CBCL subscale scores on social problems decreased. Visual inspection of the scores was another source of documentation of Sally's improvement.

## References

Achenbach, T. (1991). *Manual for the child behavior checklist/4–18 and 1991 profile*. Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T. (1992). *Manual for the child behavior checklist/2–3 and 1992 profile*. Burlington, VT: University of Vermont Department of Psychiatry.

Ainsworth, M. (1978). *Patterns of attachment: A psychological study of the strange situation*. New York: Lawrence Erlbaum Associates.

American Academy of Child and Adolescent Psychiatry. (2005). Practice parameter for the assessment and treatment of children and adolescents with reactive attachment disorder of infancy and early childhood. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*(11), 1206–1219.

American Psychological Association. (2006). Evidence-based practice in psychology (A report of the APA task force on evidence-based practice). *American Psychologist, 61*, 271–285.

Becker-Weidman, A. (2006a). Treatment for children with trauma-attachment disorders: Dyadic developmental therapy. *Child and Adolescent Social Work Journal, 23*(2), 147–171.

Becker-Weidman, A. (2006b). Dyadic developmental psychotherapy: A multi-year follow-up. In S. Sturt (Ed.), *New developments in child abuse research*. Hauppauge, NY: Nova Science Publishers.

Bernard, K., Dozier, M., Bick, J., Lewis-Morrarty, E., Lindhiem, O. & Carlson, E. (2012). Enhancing attachment organization among maltreated children: Results of a randomized clinical trial. *Child Development, 83*(2), 623–636.

Children Unlimited of South Carolina, Inc. [Attachment Center of South Carolina]. (2004). Retrieved June 10, 2005 from http://www.children-unlimited.org/attachment_center_of_south_carol.htm

Drisko, J. (2009). *Effective therapeutic interventions for Reactive Attachment Disorder: A mixed-method systematic research synthesis*. Juried paper presented at the Society for Social Work and Research, New Orleans, LA.

Drisko, J. (2018). Ongoing challenges in conceptualizing and treating reactive attachment disorder. *Child and Adolescent Social Work Journal*, [online first]. https://doi.org/10.1007/s10560-018-0548-2tbd

Drisko, J., & Zilberstein, K. (2008). What works in treating reactive attachment disorder: Parent's perspectives. *Families in Society, 89*(3), 476–486.

Hodges, K., Xue, Y., & Wotring, J. (2004). The use of CAFAS to evaluate outcomes for youth with severe emotional disturbance served by public mental health. *Journal of Child and Family Studies, 13*(3), 325–339.

Hughes, D. (2004). An attachment-based treatment of maltreated children and young people. *Attachment and Human Development, 6*(3), 263–278.

Hughes, D. (1988). *The P.L.A.C.E. model*. Retrieved from http://www.danielhughes.org/html/PLACE.html

Klein Velderman, M., Bakermans-Kranenburg, M. J., Juffer, F., & van IJzendoorn, M. (2006). Effects of attachment-based interventions on maternal sensitivity and infant attachment: Differential susceptibility of highly reactive infants. *Journal of Family Psychology, 20*(2), 266–274.

Levy, T., & Orlans, M. (n.d.). *Clinical research shows corrective attachment therapy™ works*. Retrieved from http://www.attachmentexperts.com/treatment_outcome.html

Lieberman, A. (2003). The treatment of attachment disorder in infancy and early childhood: Reflections from clinical intervention with late-adopted foster care children. *Attachment & Human Development, 5*(3), 279–282.

Myeroff, R. (1997). Comparative effectiveness of attachment therapy with the special needs adoptive population. Dissertation Abstracts International: Section B: The Sciences and Engineering, Vol 58 (6-B), Dec 1997. pp. 3323. ISSN: 0419-4217 (Print) Order Number: AAM9736716

Myeroff, R. L., Mertlich, G., & Gross, G. (1999). Comparative effectiveness of holding therapy with aggressive children. *Child Psychiatry and Human Development, 29*(4), 303–313.

O'Connor, T., & Zeanah, C. (2003). Attachment disorders: Assessment strategies and treatment implications. *Attachment and Human Development, 5*(3), 223–244.

Raby, K., Yarger, H., Lind, T., Fraley, R., Leerkes, E., & Dozier, M. (2017). Attachment states of mind among internationally adoptive and foster parents. *Development and Psychopathology, 29*(2), 365–378.

Smyke, A., & Zeanah, C. (1999). *Disturbances of attachment interview*. Retrieved from http://download.lww.com/wolterskluwer_vitalstream_com/PermaLink/CHI/A/00004583-920020800-00014.doc

Wimmer, J., Vonk, M., & Bordnick, P. (2009). A preliminary investigation of the effectiveness of attachment therapy for adopted children with reactive attachment disorder. *Child & Adolescent Social Work Journal, 26*(4), 351–360.

Zeanah, C., Chesher, T., Boris, N., et al. (2016). Practice parameter for the assessment and treatment of children and adolescents with reactive attachment disorder and disinhibited social engagement disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 55*(11), 990–1003.

Zilberstein, K. (2006). Clarifying core characteristics of attachment disorders: A review of current research and theory. *American Journal of Orthopsychiatry, 76*(1), 55–64.

# Chapter 14
# Newman and Loretta: Parents of Arthur, a Man Who Has Schizophrenia

Arthur was brought to the hospital by his parents, Newman and Loretta, after Arthur reported that he was hearing voices that were telling him to hurt himself. This is not the first time that Arthur has heard such voices, but this time his parents felt that he was "taking them more seriously" than he has done in the past. They were concerned that he would listen to the voices and actually take action to hurt himself.

Arthur is a 36-year-old African-American, heterosexual, cisgender male who lives with his parents, Newman (64 years old) and Loretta (63 years old). He has an older sister, Mary (age 39) who lives out of state with her husband and three children. He attends a day treatment program in their local community where he participates in a vocational program for individuals with severe and persistent mental illnesses. Arthur was diagnosed with schizophrenia, paranoid type, approximately 15 years ago while he was attending college in another state. Since then he has had several hospitalizations. His presenting symptoms at the time of hospitalization included hearing voices, questioning the motives and actions of his close friends, ceasing to attend classes and complete required assignments, declining ability and/or interest in personal hygiene, and withdrawing from all social connections. His parents withdrew Arthur from school in the middle of his junior year after his third hospitalization, and he has been living with them since that time.

Upon his return home, his parents got him involved in a program through their local hospital for people who have been diagnosed with schizophrenia. The clinical social worker is a staff member on an interdisciplinary team that works with Arthur on an ongoing basis. Through this program, he has received medication management services through a physician, case management and vocational training referrals through a social worker, as well as individual therapy and group therapy to help manage his symptoms and increase his functioning in the community provided by different team members. Although the clinical social worker has met Arthur's parents before on several occasions, she has not worked with them lately due to Arthur's symptom stability and the fact that she is a relatively new member to this unit. The clinical social worker's role on the team is to focus on the family members, providing

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_14

a combination of case management and psychotherapy, including supportive therapy and/or family therapy, depending on the needs of the family.

Arthur's parents report that his symptoms seem to be increasing lately. They are worried about him and his future. Some of their concerns stem from the health problems Arthur has, some of which are attributed to the medications he takes to manage his delusions and hallucinations. He has developed diabetes and now has several health problems related to smoking, a habit his parents state Arthur started when he joined the day treatment program where "everyone smokes like chimneys." He has a "terrible cough that won't go away" and has high blood pressure as well. They state they have tried to talk to Arthur about changing his diet, exercise, and smoking habits but that he has not done so. (It is also clear from his chart that several team members have promoted similar efforts with Arthur with no success.)

Newman and Loretta state that their primary concern is that this is the first time Arthur has taken the voices "seriously" and that this is an indication that his symptoms are getting worse. However, upon further questioning, it is clear that other stressors are also present for the family. Newman is close to retirement age but does not feel like he can afford to retire given the care that they provide for Arthur and its costs. Although Arthur receives disability benefits, Newman states "it doesn't even come close to covering all that he needs." Loretta stopped working as a preschool teacher when Arthur came home from college, but had not worked long by that time, as she stayed home while the children were young. Loretta had just recently reentered the work force when Arthur came home. As a result, she has very little pension of her own as she has devoted much of her time to caring for Arthur.

The parents also report that they personally are facing increased medical costs as they age, leading to more financial stress. They are worried that their stress may be causing the increase in the severity of Arthur's symptoms. Their daughter lives across the country and is involved with her own family. Newman and Loretta are starting to feel more pressure to work out a long-term plan for Arthur. They feel that they have to "continue on as long as we can" since they do not think they can afford to retire or move. Another concern about moving is that Arthur's care providers and all other issues related to his care would also have to change. Loretta states she feels "trapped" and really worried about what will happen to Arthur when they are "too old to care for him or dead."

As a result of this stress, Loretta states she is having difficulty sleeping at night, spends most of her days worrying, has lost weight, and has started to separate from some of her friends, as she feels that she is becoming a "broken record" by replaying all of her worries and does not want to be "such a downer." Newman reports similar symptoms but also states that he is worried about Loretta as well. They feel very isolated and feel that they need help in managing all of the stress they are experiencing.

Despite their financial concerns and worries about Arthur's current and future care, Newman and Loretta's love and commitment to their son are obvious. They enjoy his humor and singing. Other staff members and a psychiatrist have mentioned to the social worker how fortunate Arthur is to have such devoted and caring parents.

While Arthur is having significant personal struggles that will be addressed by his individual therapist, the clinical social worker's role in this case is to focus on helping

Loretta and Newman with their identified issues. In speaking with them, they have two primary goals for coming. The first goal is to find more effective ways of managing their stress so that they can be better caregivers for Arthur and for each other. Their second goal is to identify a long-term plan for Arthur. They are worried about him, practically and physically, such as where he will live, about his health, and about his financial situation once they are gone. Given these priorities, the clinical social worker thinks that it would be most helpful in addressing their first goal to look for information on interventions for families who are experiencing stress related to a family member with schizophrenia. In regard to the long-term plan for Arthur, the social worker could take the lead in calling a team meeting so that all members can help brainstorm about resources and plans to support Arthur. The clinical social worker proposes this initial focus. Loretta and Newman agree to this plan. The clinical social worker also arranges a date for a team meeting among program staff.

## Applying the Six Steps of EBP to the Case

### *Step 1: Drawing on Practice Questions, Identify Research Information Needs*

Using the concepts outlined in the Chap. 4 on Assessment to develop your searchable question, there are many points to consider. This is the clinical social worker's first direct involvement with the family. In this case, your role is to help support the family. The family has asked for help in managing the high levels of stress they feel as they age and their son's needs simultaneously increase.

In the **PICO** model, the **P**opulation is parents of individuals with schizophrenia or stress in older adults. The **I**nterventions under consideration are psychotherapies and similar psychosocial interventions, as well as medications. In addition, interventions to help Newman and Loretta develop a plan for Arthur's long-term care is a key long-term need. **C**omparisons would be between different therapies or psychosocial interventions as well as among medications and combinations of mediations and psychosocial therapies. The **O**utcomes would be increasing Loretta and Newman's capacities to manage their stress, as well increase their hopefulness and confidence in a plan for Arthur's future.

### *Step 2: Efficiently Locate Relevant Research Knowledge*

To find effective interventions, the social worker first conducts an initial search on the Cochrane Collaboration's web site. However, there is little helpful information, as most of the materials address how family therapy can help the identified patient, rather than how different interventions may be useful in helping the family of the patient.

The social worker next searches the National Alliance on Mental Illness (NAMI) web site (www.NAMI.org). The social worker clicks on the link for "finding support." This link leads to a series of resources, including one (NAMI, 2018b) for "family members and caregivers" (https://www.nami.org/Find-Support/Family-Members-and-Caregivers/Supporting-Recovery). On this page are a series of additional links, including "Learning to help your child and your family" that provide a number of self-help guidelines for how to support the family member with a mental illness, as well as supports for caregivers themselves. There is also a link for a group treatment program called "Family to Family" that is free for family members (https://www.nami.org/Find-Support/NAMI-Programs/NAMI-Family-to-Family). However, there are no research references for any of these guidelines or support services.

Despite numerous searches on NAMI.org, the Cochrane Library, NIMH.gov, Psychiatry.org, and SAMHSA.gov, no individual treatments or family interventions were found beyond the family support groups discussed above. The searches all yielded studies discussing interventions aimed at helping the individual with schizophrenia, rather than their family members. Multiple family group interventions might be a source of support for family members, but the outcome studies located focus more on the seriously mentally ill family member rather than on other family members' needs. Searches of the Campbell Collaboration Library using several different terms also lead to no studies or reviews.

Next, in searching the same web sites for stress management, no empirical studies have been conducted around their specific issues. However, the Cochrane Library included a systematic review by Jorm, Morgan, and Ketrick conducted in 2008 on using relaxation techniques for managing depression (www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007142.pub2/epdf/abstract). While the study found that relaxation techniques were better than no intervention, they were not as effective as other therapies such as cognitive-behavioral therapy. Using Google, a Mayo Clinic site was located that discusses stress management. This site lists many different strategies and options for reducing stress (http://www.mayoclinic.com/health/stress-management/MY00435). However, this web site does not state the research support for the techniques mentioned.

## *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

After conducting this search, it appears that a support group designed for parents of children with schizophrenia is the most promising treatment option for Loretta and Newman. One such program is the Family to Family group sponsored by NAMI. The focus of these groups and the information found on the NAMI web site that discussed the topics covered in the group appear to align well with the areas that the parents would like to address in treatment, including "taking care of yourself and managing your stress" (https://www.nami.org/Find-Support/NAMI-Programs/NAMI-Family-to-Family, 2018a, para 4).

However, as stated previously, there is no research available on the web site on the effectiveness of these Family to Family groups. Given the lack of alternative interventions, the social worker views this program as fitting the EBP practice decision model's requirement to locate the best available research. No alternatives with stronger research support were located. The program appears to fit with the couple's needs and interests quite well.

In a further search of NAMI's web site, the social worker learns that there is a Family to Family group that is run by the local chapter. She prints out this information to give to the parents. While there appears to be generic information on stress reduction, very little research has been done to determine how effective these strategies are in reducing stress. However, based on the practice knowledge of the clinician who has worked on stress reduction in other settings, she feels confident in recommending stress reduction strategies to the parents. In reviewing the Mayo Clinic's web site listed above, she feels that it also provides a nice summative list and a good place for the parents to begin and printed out the Mayo Clinic's guide to stress management before meeting with Loretta and Newman.

At the present time at the hospital clinic, there is not a group running locally for parents like Loretta and Newman. While the clinic has held similar programs in the past, there is currently not one available. In addition, the social worker who is working with Loretta and Newman has never run one herself. As such, she does not feel qualified to modify such a curriculum and work with them individually and feels that this is a service that they would need to seek elsewhere. She has worked with individuals on self-care strategies and feels relatively comfortable in helping the parents learn and practice additional behavioral techniques to help manage their stress. In the past, she co-facilitated a mindfulness group intervention program at a local hospital where she worked with individuals on a psychiatric unit. While the population was different, she feels she can take those techniques and apply them to meet the needs of these parents.

### *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

In this session, the social worker's task is to have a conversation with the parents about the located service options. It is a chance to process with them, pointing out the pros and cons of each available option, as well as the limitations of the available research. It is also an opportunity for the parents to ask questions and for them to identify what they think might work given their family's unique resources, strengths, and circumstances.

In the meeting with the parents, the social worker explained the search process and the process she followed. She then presented the parents with the information about the support groups and about the research on how they appear to be effective in reducing the symptoms like theirs. Newman and Loretta state that they went to a similar group many years ago when Arthur was first diagnosed but that they can barely remember the group as it took place almost 15 years ago. They were a bit "shell shocked," and they admitted to not feeling like they were very attentive at the time. They stated they were open to attending another one as they feel that they could use some help from others who understand their struggles "in a personal way." They take the information about the next group and state that they will follow up.

In addition, the social worker gives them the information from the Mayo Clinic. They both smile and say that these are all "things that we know we should be doing," but admit that they have not been following through. The social worker and the parents talk through different ideas on how to incorporate many of the strategies into their daily routine, such as prayer or meditation and consistent exercise. They both agree that these will be important steps for them, along with trying to reconnect to their church community, which Newman firmly states that they will do, "even if I have to drag her there!"

### *Step 5: Synthesizing the Client's Clinical Needs and Circumstances with the Relevant Research, Finalize a Shared Plan of Intervention Collaboratively with the Client*

After discussing other options with them, such as exploring other therapies for depression or anxiety, they decide that they would first like to try to increase their self-care to manage their stress on their own and then attend a Family to Family style group when available. They state that if these do not help, they will return to explore what other "more intensive" interventions might be worth considering. In addition, the social worker reports back on the scheduling progress in coordinating a team meeting to help with long-term planning as well as crisis management and Arthur's acute care needs. The parents report they feel better having "a plan" and say they are committed to start working in these areas to begin to address their needs. The social worker will also actively maintain regular contact with Newman and Loretta. She will also poll other staff to see if there are other couples who might take part in a Family to Family group.

### *Step 6: Implement the Intervention*

In this situation, Newman and Loretta decided not to begin formal therapeutic services at the hospital clinic. They did agree to call the clinical social worker and "check in" after a month. The social worker also agreed to ensure they maintain regular contact. Newman and Loretta also agreed to allow her to call them in about 3 months for a second check-in session. They were pleased to know they could share this responsibility.

In this case, the social worker's role is one of providing support, case management and referral. Her increased contact with Newman and Loretta is documented. Informal monitoring and check-in session are used to evaluate the intervention. Additional services will be offered as indicated.

## References

Jorm, A., Morgan, A., & Hetrick, S. (2008). Relaxation for depression. *Cochrane Database of Systematic Reviews, 2008*(4), CD007142.

National Alliance for the Mentally Ill. (2018a). *Family to family*. Retrieved from https://www.nami.org/Find-Support/NAMI-Programs/NAMI-Family-to-Family

National Alliance for the Mentally Ill. (2018b). *Learning to help your child and your family*. Retrieved from https://www.nami.org/Find-Support/Family-Members-and-Caregivers/Learning-to-Help-Your-Child-and-Your-Family

National Alliance for the Mentally Ill. (2018c). *Supporting recovery*. Retrieved from https://www.nami.org/Find-Support/Family-Members-and-Caregivers/Supporting-Recovery

Mayo Clinic. (2018). *Stress management: Stress basics*. Retrieved from www.mayoclinic.com/health/stress-management/MY00435

# Chapter 15
# Jin: A 16-Year-Old Korean-American Male with Drinking Issues

Jin is a 16-year-old Korean-American cisgender male who was referred by his parents to your outpatient clinic after his parents found him "passed out and dead drunk" for the second time in 2 months. His parents report that they are very concerned about his drinking and that he has "changed recently," which includes a decline in his grades at school. He is also "more disrespectful" to his parents. Further, according to his parents, Jin is more interested in his friends than his family. His parents report that they have always been a close family and believe very strongly in having protected family time. Jin appears to be less interested in this and states that he would rather spend time with his friends rather than attend family gatherings.

In speaking to Jin, he is quiet and appears irritated that he is being asked to come to the clinic. When questioned about his feelings about being at the clinic, he shrugs and states, "Well I didn't have much of a choice, did I?". Jin does state that his grades have fallen but quickly adds that his parents' expectations are "over the top, so any imperfection seems like a big deal to them." When asked more specifically about the changes, he says that he used to get straight As and recently he has gotten some Cs and low Bs, which he says is "pretty typical of most kids in high school." He also states that he believes it is "normal" for kids his age to want to spend more time with his friends at 16 rather than their families. He adds that his parents "don't get that and think that we should want to spend all of our free time with family."

When asked about his drinking, he admits to those "two times" his parents found him drunk and says that the other times are not "that big of a deal." When asked to clarify what that means, he says that he drinks but those two were the times when it "got out of control." He stated that the other times are more "normal" and he defined this as "drinking 'til you feel the buzz, but not to the point of passing out." He reported that he is drinking almost every weekend but that it is "not a big deal" because he is "always around my friends and we drink at someone's house rather than at a bar somewhere." He was unable to report on average how many drinks per night he is consuming, as he is not "paying attention to that stuff." However, upon further questioning, he did state that he loses track of the number of drinks he has

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_15

each night but says that he “definitely has more than three or four” and that the number of drinks he has in an evening has increased. He denies the use of any other substances other than alcohol.

In discussing his parents’ concerns, Jin states that he thinks his parents are “making a big deal out of normal American teenage behavior.” He says that they do not understand him and his life because they did not grow up here. He says that he feels more American than Korean and “they cannot understand that reality.” He reports that he does not feel that his drinking “is a big deal or a problem” and that “it is under control.” He doesn’t believe that his drinking is a “problem” since he does not drink alone, he only drinks with friends on the weekends, and he does not drink enough to “pass out each time.” Jin does not yet drive, but he did not understand the concept of a designated driver. When questioned about his declining school grades, he replied that his GPA is “still fine” and that his parents’ expectations are “unreasonable” even though he has met them consistently in the past.

Jin, his siblings, and his parents were born in North Korea. His parents held professional-level jobs there until they fled with their family approximately 10 years ago. They are all legal immigrants in America, on their way to citizenship, and feel very thankful to be here. The parents speak English with heavy accents, although Jin has none. Since arriving in America, his parents have had to work in blue-collar jobs. They place a high value on education in raising their children. They also state that they want Jin to fit in with American culture. Jin is the middle child. He has an older sister who is a sophomore at an Ivy League college. He also has a younger brother who is 14 and has just started high school. So far, the younger brother is doing well academically, but his parents say he is a little shy socially.

Jin’s family’s immigration to the USA was supported by a Korean Presbyterian church. Their local church has an active and large congregation. Although Jin’s parents feel the loss of their country, family, and friends who remain in Korea, they state that the Korean community they have found in the USA has become their family. Most of their social and family functions revolve around individuals from the church community. They do have a few extended family members in the area who were also supported by the church in their immigration but feel supported by all the community, “blood relatives or not.”

While their financial or social status is not as high as it was in Korea, they are relatively stable financially, they live in a safe community where there are good schools, and they have no health concerns. They state that there is no history of mental illness in their families to their knowledge, nor significant health problems. They are very concerned about Jin’s alcohol use, as “drinking in our community is a sign of a serious problem.” They believe that the drinking is increasing and feel that Jin is pulling farther and farther away from the family and their community. They are also concerned that when colleges see the precipitous drop in Jin’s grades over the last year—his junior year in high school—they will not accept him as this is such an important year in college admissions process.

Jin currently meets criteria for DSM-5 Alcohol Use Disorder. He has demonstrated a maladaptive pattern of substance use leading to clinically significant impairment or distress, where he has recurrent substance use that is affecting his school work. He is continuing this alcohol use despite the interpersonal problems it is causing within his family. It is unclear at this point if he meets the criteria for dependence since Jin is not very forthcoming or clear about the increased amount of alcohol he uses and how much that has changed over time.

In addition, he does not appear to have traits of personality disorder despite his minimization of his drinking problem, and he is too young to be formally diagnosed with these disorders. In addition, he does not have any medical health concerns which could impact his drinking. While his family is not wealthy, they are stable financially, have stable housing, and have access to health insurance through their employment. In addition, they have a strong support network around them.

## Applying the Six Steps of EBP to the Case

### *Step 1: Drawing on Client Needs and Circumstances Learned in a Thorough Assessment, Identify Answerable Practice Questions and Related Research Information Needs*

This case is complicated by the fact that although Jin is technically the identified client, he does not believe that he has a problem of any kind. As such, he does not feel that he needs any sort of intervention. Jin's parents, however, believe strongly that he is drinking in excess and his drinking is causing a number of problems for him, including academic and family conflict. However, Jin's episodes of passing out clearly pose risk. As such, his drinking is a very real concern to others.

In addition, there are acculturation issues to consider. Jin is growing up in a very different culture from his parents. Although he was born in Korea, he identifies more with the American culture, while his family remains strongly connected to the Korean community in their area. Jin chooses to spend time with non-Koreans and has made references several times to what he believes is typical behavior for American teenagers. Given these differences between Jin and his parents, any intervention must be sensitive to the complexities of working with different levels of acculturation and cultural perspectives that are present in the one family.

Due to these issues, it is difficult to begin the EBP process and even to identify the initial practice question. In speaking with Jin, he is willing to agree to work with his parents "only to get them off my back and so that maybe they will ease up and start to understand that I am not them and want to have a different life from what they had growing up." Therefore, he agrees to work with the therapist in a family format only, since he sees "this whole thing as their problem, not mine." Family conflict is clearly evident.

Given Jin's views, the clinician decides to "start where the client is" and is thankful that Jin is willing to engage at all in any form of therapeutic intervention. With this discussion, the clinician now has a searchable practice question: What are effective family interventions for families with an adolescent that abuses alcohol?

Ideally, within this search, the clinician would also be able to explore cultural differences among the interventions and begin to determine which treatments might be most appropriate for Jin's family given their biculturalism.

In the **PICO** model, the **P**opulation is adolescent male with substance abuse and family conflict. The **I**nterventions under consideration are psychotherapies or similar psychosocial interventions, including individual and family therapies. **C**omparisons would be between different therapies or psychosocial interventions as well as among medications and combinations of mediations and psychosocial therapies. The **O**utcomes would be decreasing Jin's alcohol use and increasing communication and family functioning within the family unit.

## *Step 2: Efficiently Locate Relevant Research Knowledge*

In exploring the Cochrane Library (www.cochranelibrary.com) using the search terms "adolescent alcohol abuse" and "family therapy," just one systematic review (SR) was located. However, this SR focused on opioid abuse. Searching only for "alcohol abuse" and "adolescent," 12 Cochrane SRs were located but most focused on prevention rather than treatment of an existing disorder. One Cochrane SR by Carney, Myers, Louw, and Okwundu (2016) found no significant difference between brief school-based interventions for substance abuse (not only alcohol misuse) than resulted from information provision only or assessment only. They report: "We found low- or very low-quality evidence that brief school-based interventions may be more effective in reducing alcohol and cannabis use than the assessment-only condition and that these reductions were sustained at long-term follow-up. We found moderate-quality evidence that, when compared to information provision, brief interventions probably did not have a significant effect on substance use outcomes" (Abstract, Authors' conclusions).

A search of the Campbell Collaboration Library located three relevant systematic reviews using the broad search terms "adolescent" and "alcohol." Smedslund et al. (2016) report that brief computerized interventions may reduce "risky" alcohol abuse in older adolescents. Aggregating 15 studies specific to alcohol misuse among persons ages 15–25, they found that:

> For alcohol, we found moderate quality evidence that [computer based] multi-dose assessment and feedback was more effective than a single-dose assessment. We found low quality evidence that assessment and feedback might be more effective than no intervention. Assessment and feedback might also be more effective than assessment alone (low quality evidence). Short-term effects (< 6 months) were mostly larger than long-term (≥6 months) effects. (Abstract, Main results)

More specifically, they report that:

> A meta-analysis of 15 studies found that [computer based] assessment and feedback significantly reduced short-term alcohol consumption compared to no intervention… The effect size is small (SMD: -0.17, 95% CI: -0.27 to -0.08, I-squared: 52 %). The quality of the evidence was low… (Section 4.3.1.1, p. 29)

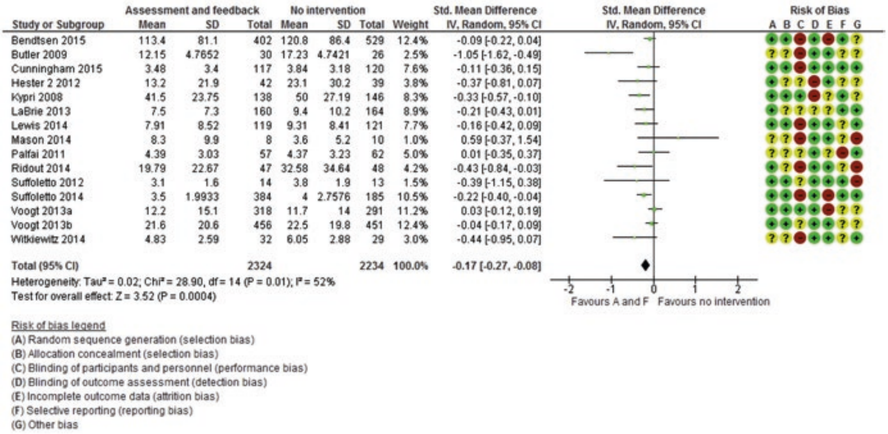
The authors also provide a figure portraying the study results and quality of research (see Fig. 15.1 below). This SR indicates that a computerized brief intervention might be suitable for Jin to consider. It would be quite private and could be helpful at least in the short term. There is no mention, however, if the intervention is culturally appropriate for a Korean-American teen and family.

In the second Campbell SR, Hennessy, Tanner-Smith, Finch, Sathe, and Kugley (2018) found insufficient evidence to determine if recovery-oriented school programs were effective in recovery from substance abuse disorders. If locally available, such a program might be an option for Jin and his family to consider, but the best available evidence does not support it.

The final Campbell Collaboration SR by Smedslund et al. (2011) on motivational interviewing for substance abuse appears closer to Jin's needs but seems to be based on adult participants and not adolescents. The authors report:

> We included 59 studies with a total of 13,342 participants. Compared to no treatment control MI showed a significant effect on substance use which was strongest at post-intervention SMD 0.79, (95% CI 0.48 to 1.09) and weaker at short SMD 0.17 (95% CI 0.09 to 0.26), and at medium follow-up SMD 0.15 (95% CI 0.04 to 0.25). For long follow-up, the effect was not significant SMD 0.06 (95% CI-0.16 to 0.28). There were no significant differences between MI and treatment as usual for either follow-up post-intervention, short and medium follow up… (Abstract, main results)

Motivational interviewing might be a treatment option for Jin, especially for his ambivalence about treatment. It is not a family-based treatment modality. Further, these research results were not based on an adolescent sample, and the SR did not address cultural differences.



| | Assessment and feedback | | | No intervention | | | | Std. Mean Difference | Risk of Bias | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Study or Subgroup | Mean | SD | Total | Mean | SD | Total | Weight | IV, Random, 95% CI | A | B | C | D | E | F | G |
| Bendtsen 2015 | 113.4 | 81.1 | 402 | 120.8 | 86.4 | 529 | 12.4% | -0.09 [-0.22, 0.04] | + | + | − | + | − | + | ? |
| Butler 2009 | 12.15 | 4.7652 | 30 | 17.23 | 4.7421 | 26 | 2.5% | -1.05 [-1.62, -0.49] | ? | ? | − | + | + | ? | ? |
| Cunningham 2015 | 3.48 | 3.4 | 117 | 3.84 | 3.18 | 120 | 7.6% | -0.11 [-0.36, 0.15] | + | + | − | + | + | + | + |
| Hester 2 2012 | 13.2 | 21.9 | 42 | 23.1 | 30.2 | 39 | 3.8% | -0.37 [-0.81, 0.07] | + | ? | ? | − | + | ? | ? |
| Kypri 2008 | 41.5 | 23.75 | 138 | 50 | 27.19 | 146 | 8.3% | -0.33 [-0.57, -0.10] | + | + | + | − | ? | + | ? |
| LaBrie 2013 | 7.5 | 7.3 | 160 | 9.4 | 10.2 | 164 | 8.9% | -0.21 [-0.43, 0.01] | + | ? | ? | ? | ? | + | + |
| Lewis 2014 | 7.91 | 8.52 | 119 | 9.31 | 8.41 | 121 | 7.7% | -0.16 [-0.42, 0.09] | + | + | − | + | + | ? | + |
| Mason 2014 | 8.3 | 9.9 | 8 | 3.6 | 5.2 | 10 | 1.0% | 0.59 [-0.37, 1.54] | ? | ? | − | + | + | ? | − |
| Palfai 2011 | 4.39 | 3.03 | 57 | 4.37 | 3.23 | 62 | 5.0% | 0.01 [-0.35, 0.37] | ? | ? | ? | + | ? | − | + |
| Ridout 2014 | 19.79 | 22.67 | 47 | 32.58 | 34.64 | 48 | 4.2% | -0.43 [-0.84, -0.03] | + | ? | − | + | + | ? | − |
| Suffoletto 2012 | 3.1 | 1.6 | 14 | 3.8 | 1.9 | 13 | 1.5% | -0.39 [-1.15, 0.38] | + | + | ? | + | + | + | − |
| Suffoletto 2014 | 3.5 | 1.9933 | 384 | 4 | 2.7576 | 185 | 10.5% | -0.22 [-0.40, -0.04] | + | + | − | + | − | + | + |
| Voogt 2013a | 12.2 | 15.1 | 318 | 11.7 | 14 | 291 | 11.2% | 0.03 [-0.12, 0.19] | + | + | + | + | − | ? | ? |
| Voogt 2013b | 21.6 | 20.6 | 456 | 22.5 | 19.8 | 451 | 12.4% | -0.04 [-0.17, 0.09] | + | + | ? | + | + | ? | ? |
| Witkiewitz 2014 | 4.83 | 2.59 | 32 | 6.05 | 2.88 | 29 | 3.0% | -0.44 [-0.95, 0.07] | ? | ? | − | + | + | ? | + |
| Total (95% CI) | | | 2324 | | | 2234 | 100.0% | -0.17 [-0.27, -0.08] | | | | | | | |

Heterogeneity: Tau² = 0.02; Chi² = 28.90, df = 14 (P = 0.01); I² = 52%

Test for overall effect: Z = 3.52 (P = 0.0004)

Risk of bias legend

(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

**Fig. 15.1** Results of brief computerized interventions on alcohol misuse from Smedslund et al. (2016). (Note that all but two of the 95% confidence intervals (CIs) in the line chart touch the "0" value, indicating no difference between treated and control conditions. Study quality is summarized in 'stop light' fashion, with green indicating good study quality, and yellow and red indicating research quality concerns.)

Another resource is Substance Abuse and Mental Health Services Administration (SAMHSA) web site (http://www.samhsa.gov). This organization specializes in substance abuse issues and mental health services. The US government runs this web site. By typing into the search box "family therapy + alcohol abuse," a booklet was located, called *What Is Substance Abuse Treatment? A Booklet for Families* (https://store.samhsa.gov/system/files/sma14-4126.pdf). This Center for Substance Abuse Treatment (2014) booklet can be downloaded for free. Within this booklet, there is information about substance use in families, cultural considerations, as well as information about the range of treatments that are available to individuals and families. However, there are no research-based citations provided as to which types of treatments might be most effective or for the research supporting these recommendations.

Additional resources on the SAMHSA web site included a link to the Center for Substance Abuse Treatment's (2004) *Substance Abuse Treatment and Family Therapy,* a Treatment Improvement Protocol (TIP). This material is free and provides best practice guidelines for practitioners. In this book-length TIP, there are chapters exploring substance abuse and its many impacts on families. The TIP states that different models of family therapy have been shown to be effective in working with families where there is substance abuse, though few citations to research-based studies are provided. Chapter 5 on "Specific Populations" includes sections on adolescents and also addresses cultural differences in detail. One of the sections in Chap. 5 is dedicated to working with individuals who are from an Asian culture. Stated in the Executive Summary (http://www.ncbi.nlm.nih.gov/books/NBK14505/) regarding cultural issues, the TIP reports:

> Although a great deal of research has been conducted related to both family therapy and culture and ethnicity, little research has concentrated on how culture and ethnicity influence core family and clinical processes. One important requirement is to move beyond ethnic labels and consider a host of factors—values, beliefs, and behaviors—associated with ethnic identity. Among major life experiences that must be factored into treating families touched by substance abuse is the complex challenge of determining how acculturation and ethnic identity influence the treatment process. (para. 17)

Another search using the terms "Asian" and "substance use" on the SAHMSA web site leads to a page that is dedicated to substance use and mental health issues within the Asian and Pacific Islander communities (https://www.samhsa.gov/behavioral-health-equity/aanhpi). On this page are many links to studies, resources, referral sources, and materials in different languages. Among these resources is a link to the National Asian Pacific Association of Families Against Substance Abuse (http://napafasa.org/#top) that provides still more resources. However, like several other resources, they do not provide specific research-based studies on what works to treat alcohol misuse. Instead, they provide referral resources and other educational materials to help Asian and Pacific Islander families understand issues around substance abuse.

While these web sites offer a great deal of information about the issues related to substance abuse among adolescents and its impact on the family, with some attention to cultural issues, the searches did not identify a particular model or intervention that appears to be more effective than any other to treat Jin's and his family's concerns. Citations to specific studies and their results were limited.

A quick Google search identified a resource through National Institute on Drug Abuse (NIDA) (2014) entitled "Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide" (https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/principles-adolescent-substance-use-disorder-treatment). This web page describes individual therapy, family therapy, medical interventions, as well as support services for substance abuse treatment. While NIDA does report on the effectiveness of different forms of intervention, they do not compare the different options. However, the report does state that research shows that family-based treatments are highly efficacious; some studies even suggest they are superior to other individual and group treatment approaches. Yet, details on the research supporting these conclusions are limited.

The Google search also identified some additional specific models of intervention, such as Multidimensional Family Therapy, that have undergone randomized controlled clinical trials (RCTs) and have shown promising results for working with families with individuals who have abused substances. Six percent of the adolescents included in one of the studies identified as Asian, but the report did not state from what countries or their acculturation status (Liddle et al., 2001). However, the Liddle study included both marijuana abusers and alcohol abusers and did not break down results by type of substance use. Liddle is also the originator of the multidimensional family theory model found to be effective in this single RCT. (In the meta-analysis examined next, Liddle is the only researcher to study the effectiveness of MDFT across 64 included publications. Attribution bias may be a concern.)

The Google search further located a meta-analysis of adolescent substance abuse treatments that indicates that individual treatments are more effective than family treatments for adolescents who abuse alcohol, with behavioral interventions having the highest long-term effects (Tripodi, Bender, Litschge, & Vaughn, 2010). Based on 16 studies, the authors found that interventions significantly reduce adolescent alcohol use (Hedges' $g = -0.61$; 95% confidence interval [CI], −0.83 to −0.40). Stratified analyses revealed larger effects for individual treatment ($g = -0.75$; CI, −1.05 to −0.40) compared with family-based treatments ($g = -0.46$; CI, −0.66 to −0.26) (Abstract).

They conclude that "individual-only interventions had larger effect sizes than family-based interventions and effect sizes decreased as length of follow-up increased. Furthermore, behavior-oriented treatments demonstrated promise in attaining long-term effects" (Abstract).

A Google Scholar search including cultural competency located a meta-analysis by Steinka-Fry, Tanner-Smith, Dakof, and Henderson (2018) not found by any of the prior searches. These researchers found that:

> The results from the meta-analysis indicated that culturally sensitive treatments were associated with significantly larger reductions in post-treatment substance use levels relative to their comparison conditions ($g = 0.37$, 95%CI [0.12,0.62], [based on 7 studies with]

> n = 723). The average time between pretest and posttest was 21 weeks (sd = 11.79). There was a statistically significant amount of heterogeneity across the seven studies ($Q = 26.5$, $p = 0.00$, $\tau 2 = 0.08$, $I^2 = 77.4\%$). (p.22, Abstract)

Yet the authors also state that "strong conclusions from the review were hindered by the small number of available studies for synthesis, variability in comparison conditions across studies, and lack of diversity in the adolescent clients served in the studies" (p.22, Abstract). Most of the seven included studies addressed mixed substance abuse; only one was specific to alcohol abuse alone. Notably, none of the seven studies included in this review evaluated treatment of Koreans or Asians. The review does suggest that cultural sensitivity is very important to effective substance abuse treatment services for nonwhite clients.

There appear to be several treatment options for Jin and his family, from individual treatments including motivational interviewing to family treatments such as MDFT and even a computerized treatment model. Information specific to adolescents abusing alcohol is limited, and information specific to Korean-Americans or Korean emigrants is rare and limited.

## *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

In this case, the clinician thinks that while the research supports taking an individual behavioral approach to Jin's alcohol abuse, the client factors in this case reduce the potential for positive outcomes that such as motivational interviewing might have. Jin's refusal to participate in individual therapy reduces the likelihood that such an approach will be effective under the current circumstances. Yet motivational interviewing might prove effective to increase his awareness of his self-harming behavior. Also, as his parents are very concerned about Jin's recent withdrawal from the family as a unit, the clinician believes that by focusing on the family several important issues related to this case can also be addressed. The first is that while individual treatment has been shown to be more effective, family therapy does have some empirical support and by using the TIPs from SAMHSA, the clinician will be able to include research and best practice guidelines into the treatment approach. Second, Jin has stated that he will not participate in individual therapy but has agreed to family therapy. In keeping with the adage of starting where the client is, having Jin participate in treatment at all is a first step in the engagement process and may eventually lead to his willingness to participate in an individual treatment later. Family work would also allow information about alcohol misuse to be shared with the entire family. In this case, client factors partially trumps the research, as the client refuses to participate in the potentially superior form of treatment. Third, Jin's family is very concerned about the family conflict that has arisen and Jin's withdrawal from the family. By focusing on the family as a unit, there will be time each week when Jin and his parents will be together. This will also increase their time together, and the clinician can focus on the family conflict while working to address Jin's alcohol abuse.

A family-oriented plan will also allow for issues of migration and acculturation to be examined. Jin appears to feel under some pressure to follow the family's Korean practices and may feel stressed to also have to be part of American culture in school and with many peers. This may be an influence that exacerbates his drinking.

### *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

The clinician now has the task of taking this information back to the clients: Jin and his family. In the discussion with the clients, Jin confirms that he has only agreed to do family therapy. While it appears from the recent 2010 meta-analysis that individual therapy is more effective than family therapy, Jin's refusal to participate in individual therapy limits the choices that are options for Jin and his family. However, the research information must be shared with the family, and together the clinician and the clients make a decision. As Jin does not believe that his drinking is an issue, he does not feel that the individual therapy targets the primary issues concerning him or his family. While this viewpoint is in conflict with his parents who would like him to reduce his alcohol use, they all agree that they would like to improve their family functioning and communication among all members of the family. Given this focus, the family and the clinician agree to focus on family therapy at this time.

Additionally, the social worker discusses with the family whether they would be more comfortable to work with a therapist who is from Korea or from an Asian culture, should they be able to find one in their community. Jin strongly states that he does not want a therapist from Korea, as he wants someone who "will help my parents understand me as an American! We already are surrounded by Koreans and we need a different perspective." While his parents state that they would prefer to have someone from their own culture, they also state that they would prefer not to share the details of their life with someone who they might interact with socially in community events. They believe that the spiritual leaders at the church are different but would worry that it would be awkward to work with someone from their community in such a capacity. Cultural sensitivity, to the views of both Jin and of his parents, will be important in their treating clinician.

### *Step 5: Synthesizing the Clinical Needs and Circumstances with the Views of the Client and the Relevant Research, Develop a Plan of Intervention Considering Available Options*

Based on the previous conversation, the family, including Jin, agrees to contract for 3 months of weekly family sessions. The clinical social worker has provided family therapy in the past, although not with individuals from Korea. Therefore, the clinician obtained permission from the parents to contact one of the leaders of the church they attend to ask additional questions about their culture. This will include both the Korean culture and their spiritual culture as well. The parents state that since they have already sought help with these leaders, they are comfortable with these conversations and give permission for the therapist to speak with these individuals. In addition, the therapist is part of a peer supervision group and is planning on seeking consultation from the group members, many of whom have worked cross-culturally throughout their careers.

The clinician located and read the full reports of the two TIPs from SAMHSA. The clinician also read the abstracts of two articles on family therapy interventions by Liddle found on Google. This helps ensure that the essential components of effective family therapy are incorporated into the intervention with Jin and his family. The clinician hopes that Jin will eventually agree to participate in additional or adjunctive behavioral therapy to address his alcohol abuse as described by Tripodi et al. (2010). The clinician is working with a friend who has university library privileges to obtain a copy of the full Tripodi meta-analysis. For now, the client's views shape the current treatment plan.

## *Step 6: Implement the Intervention*

Before the treatment began, the clinical social worker asked to have releases signed authorizing him to speak with a few of the leaders of the church. The clinician was able to have a meeting with two of the church leaders and learned a bit more about the community in which Jin's family is a member. The clinician also learned about the church and some of the teachings, as well as about some of the struggles that other families in their congregation have reported with their children of a similar age. The conversations helped the clinical social worker have a clearer contextual view of the family's world and begin to place some of the conflicts reported by the family. The conversations were particularly useful in helping the social worker understand how differences in level of acculturation manifest in this community.

For Jin's family, the main challenge was to have Jin be an active participant and begin to address some of the concerns raised by his parents. Simultaneously, the clinical social worker also needed to help his parents understand the cultural influences that Jin is exposed to that differ from their own adolescent experiences. It was difficult for the clinical social worker to accomplish both of the tasks described above. The initial goals agreed on by the family were to (1) identify structured time for the family to have time together, (2) increase an understanding of the different cultural norms between America and Korea, and (3) create a plan for addressing the school concerns. While the goals originally set on the initial treatment plan appeared to be modest at first, after a month of treatment, the clinical social worker realized that the goals needed to scaled back and revisited them. After the first month, the focus of treatment shifted to simply increasing effective communication between the family members. There was so much conflict that the other goals could not be addressed. Therefore, the clinical social worker moved to very basic communication skills, such as reflective listening, active listening, and "I statements."

By the third month of treatment, the family was able to begin to target the second of the original goals, which was to help members understand the cultural differences in which they experience(d) their adolescent years. Through their increased capacity for listening to each other, the family was able to have moments where they laughed about differences between their adolescent experiences. Both the parents and Jin were able to ask questions to each other in a non-defensive manner about these experiences. This shift allowed the family members begin to appreciate more what was important for each of them during adolescence. This new understanding allowed them to work on a plan with the clinical social worker to help the family identify some activities and events that would meet both what the parents wanted but allow Jin some independence.

During the third month of treatment, the family began to address some of the school concerns, which led into concerns about Jin's friendships and other activities. It was during this time that the clinical social worker brought up the end of their 3-month contract. All members of the family agreed that they were willing to work a bit longer and contracted again for another 3 months, which also "maxed out" the psychotherapy benefits offered by the parents' insurance companies.

While there was definitely progress on the goals, especially around the conflict within the family, the clinical social worker remained somewhat frustrated about his inability to address the alcohol abuse. Jin continued to deny that there was a problem, and it remained difficult to determine how much he was actually drinking. However, the parents reported that they now felt more confident in knowing where Jin was and who he was with when he was out with his friends. Jin said he did not feel he needed to be as secretive since his parents seemed to be more accepting of his need to be with his friends. So, while there was progress, the clinical social worker still remained concerned that he was not addressing this important issue and hoped to offer Jin some individual sessions in the next month.

## References

Carney, T., Myers, B. J., Louw, J., & Okwundu, C. I. (2016). Brief school-based interventions and behavioural outcomes for substance-using adolescents. *Cochrane Database of Systematic Reviews, 2016*(1), CD008969.

Center for Substance Abuse Treatment. (2004). *Substance abuse treatment and family therapy* (Treatment Improvement Protocol (TIP) Series, No. 39. DHHS Publication No. (SMA) 04-3957). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Center for Substance Abuse Treatment. (2014 revision). What is substance abuse treatment? A booklet for families. HHS Publication No. (SMA) 14-4126. Rockville, MD: Substance Abuse and Mental Health Services Administration.

National Institute on Drug Abuse. (2014). Principles of adolescent substance use disorder treatment: A research-based guide. Retrieved from https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/principles-adolescent-substance-use-disorder-treatment

Liddle, H., Dakof G., Parker, K., Diamond, G., Barrett. K., & Tejeda, M. (2001). Multidimensional family therapy for adolescent substance abuse: Results of a randomized clinical trial. *American Journal of Drug Alcohol Abuse, 27*, 651–687.

Smedslund, G., Wollscheid, S., Fang, L., Nilsen, W., Steiro, A., & Larun, L. (2016). Effects of early, computerized brief interventions on risky alcohol use and risky cannabis use among young people. *Campbell Systematic Reviews, 2017*(6), 30.

Steinka-Fry, K., Tanner-Smith, E., Dakof, G., & Henderson, G. (2018). Culturally sensitive substance use treatment for racial/ethnic minority youth: A meta-analytic review. *Journal of Substance Abuse Treatment, 75*, 22–37.

Tripodi, S. J., Bender, K., Litschge, C., & Vaughn, M. G. (2010). Interventions for reducing adolescent alcohol abuse: a meta-analytic review. *Archives of Pediatric and Adolescent Medicine, 164*(1), 85–91.

# Chapter 16
# Jennifer: A Young Homeless Woman Who Has Borderline Personality Disorder

Jennifer is a 23-year-old white cisgender, questioning female. She was referred for mental health services by a staff member at a community homeless shelter. They arrived together, with the staffer doing most of the talking initially. Jennifer had been involved in several verbal and physical altercations with other residents at the shelter and was finally asked not to return. Jennifer has no job or income and no family or friends to ask for help. A recent boyfriend "kicked her out" a few weeks ago and then left the area. He did not return texts or calls friends made on Jennifer's behalf. She has resided at the local shelter since his departure and has now lost her chance to stay at the shelter.

Jennifer is tall, large framed, and muscular. She can be physically intimidating. Her clothes could use some washing, but she is clean and her hair neat. She says she "never got along well with anybody" and has been on her own for several years. She says her only living relative is her father, who is in jail on a 15-year sentence for sexually assaulting her as a young teenager. She has been in touch with him on and off, wanting to have "somebody" but always becoming upset as "he makes more promises he can't keep." "It's just filling the time for him." She doesn't mention his sentence has only 2 years left.

Jennifer was asked not to return to the shelter after pulling an old pay telephone from the wall and throwing it at another resident. She says it reminded her of the last call she got from her boyfriend, where everything "was sweet and wonderful" the day before he kicked her out and disappeared. The other person had a disagreement with Jennifer about a book that "got all out of proportion." This man had "tried to hit on me before" and got angry and insulting when she didn't give him "what he wanted." Staff said she flew into a rage and a number of people had to break them up and separate them. Jennifer also threw punches at the man who, they said, "mainly covered up and tried to get away." Several less intense episodes had preceded this one, with different people involved.

Jennifer was born in the Midwest to parents who both worked in retail. "They were always busy and out." She is an only child and very quickly learned to take

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_16

care of herself. She says that at age 4, she was making breakfast for everybody. Her parents had loud arguments and some fights followed by "making up and making love." Jennifer saw this as a pattern. She says she was pretty much ignored until she reached puberty and then her father began to sexually abuse her. She says she enjoyed feeling important to him and the physical contact they had. When her mother literally walked in on them together, she turned around, walked to the phone, called the police about the abuse, and left. "I guess she was so mad she dropped a dime on him. He deserved it. But I think she forced him out…the one good thing in my life." Still, her mother seems quite idealized at times despite her role in breaking up the family and abandoning Jennifer. Jennifer saw her father only a few more times as she went to foster care and her father went to jail. It is unclear what led him to move so quickly through the legal system, especially since the mother's whereabouts were unknown almost immediately after the "call." She also recalls her mother saying, "You even had him taken away." Sometimes she thinks what happened is her fault. There seemed to be no extended family involvement, and only a neighbor babysitter was recalled as a source of pleasure. "Mrs. Jones would play with me and do my hair."

Jennifer next lived in four different foster homes, each of which was "pretty good," but none of them "wanted me." A good home meant food, shelter, and clothing. Jennifer could not describe the characteristics of her foster parents beyond that they "took good care of me." She was moved several times and no plans for adoption proved viable. Still she said once, in a whisper, "each new place was like a wound." She dropped out of high school at 16, left foster care, and "ran away." Jennifer thought about going to the area where her father was in jail but learned that it was small and isolated. Instead, she went to a moderate-sized urban area where she lived on the streets prostituting and "living on others people's generosity." It was not clear if this generosity was a gloss over for the coercion she actually experienced. She was able to do food service work but ended up quitting or being fired for disputes with other workers or her bosses. She seems both intelligent and quite verbal. She knows she is "moody" and has a "quick temper, like my father." She enjoys other people's humor but almost never jokes.

Jennifer said she had "tried about every drug you can imagine" but found most of them made her feel "worse." She said pot and most pills made her "feel crazy" and that she avoided them. She said she liked "downers" and that drinking "made her forget." She acknowledged some binges but said she didn't drink much. However, she was not very specific about when and how much she drank. A long-time shelter staffer had said "it was a point in her favor that she wasn't 'big' into alcohol or drugs."

Jennifer has been briefly hospitalized on several occasions for suicidal threats and gestures. Most of these involve cutting her legs and wrists but did not appear to emergency workers as life-threatening. She denied during assessment that she had been using drugs or alcohol. She denied any current suicidal ideation or plans. She says her cutting was always brought on "by being left" despite her very independent presentation. Even hints of sadness and loss are rare and took several sessions to emerge. Her nonverbal presentation makes one feel like there is a veritable pool of sadness inside her. She has been connected with therapists several times by hospital staff and says, “I mainly blew them off.” She truly seemed to doubt that other people are trustworthy.

When she was reminded she had “been left” just a short while before (the apparent precipitant of the phone incident), she became angry and loud but insisted she did not want to hurt herself. “Him... well, that might be different. But he’s gone.” This little emotional storm passed quickly. When asked if the time in the hospital helped, Jennifer said it was good to be cared for but mentioned nothing specific. “Those doctors and social workers kept asking me who I am. I don’t really know... It gets worse when I am alone.” Her wish: “to have a home where I am loved and taken care of.” Her range of affect was very constricted and heavily weighted to the negative. People who were against her were “bad”; only two shelter staffers were rated as “good.” “It’s hard enough bein’ on the streets... it takes so much effort.”

When asked where she might stay, she mentioned “the streets” or a shelter in a nearby town. “It’s just starting to get really cold now; but it ain’t so bad,” she said. Both Jennifer and the shelter worker said she was on a subsidized housing waiting list—with a 5-year wait. When asked if she’d consider being part of a residential program, she said “Sure... you think they’d even take me?”. The worker told her she would search for “what works” for people with her kind of needs, including worries about loss and a quick temper who were homeless. The worker was not sure that there were programs locally, and they would probably take some work to make sure they could be funded.

## Applying the Six Steps of EBP to the Case

### *Step 1: Drawing on Client Needs and Circumstances Learned in a Thorough Assessment, Identify Answerable Practice Questions and Related Research Information Needs*

Jennifer meets criteria for a borderline personality disorder (BPD) diagnosis. Her history of sexual abuse, loss, and multiple foster placements also suggest a significant trauma history. She does not, however, meet criteria for post-traumatic stress disorder, though she has lived through significant trauma. Her lack of attachment, impulsivity, self-harm, and coercive interpersonal relationships appear to replicate her family of origin’s style of interaction at great social cost. She has very limited social support and few marketable skills for employment. It is unclear she could make, and sustain, a commitment to enter a treatment program. Her homelessness and lack of current insurance make finding services still more difficult. In her state, she would qualify to reapply for public insurance. Another dimension to her situation is that she has “aged out” of services for teens under age 21 and yet has many of the issues they confront. In the service world, she is just another adult.

In the PICO model, the **P**opulation is people who have borderline personality disorder along with people who are homeless. Given Jennifer's circumstances, it was not immediately clear where she would stay, and no additional resources to serve her needs were immediately apparent. She could be long-term homeless. The **I**nterventions under consideration are psychosocial interventions and possibly medication with the goals of reducing aggressive outbursts and more broadly to help Jennifer regulate her emotions and reduce suicidal ideation, gestures, and self-harm. In addition, the issues of her prior trauma and her relationship with her father are clearly of interest to Jennifer, though they are not immediate treatment priorities. Finding ongoing shelter or an apartment and gainful employment to support it are also clear needs. **C**omparisons would be across different therapies and perhaps medication alone or in combination with therapy. **O**utcomes would include reducing aggressive outbursts, improved emotional regulation, reduced suicidal ideation and self-harm, and finding ongoing shelter. Interventions to help with her personality disorder may not necessarily coincide with her needs for shelter.

### *Step 2: Efficiently Locate Relevant Research Knowledge*

PubMed revealed only three incidence studies for "borderline personality disorder" + "homelessness," including one German field study indicating high levels of comorbid disorders and a common motive of flight from violent situations among these women (Torchalla, Albrecht, Buchkremer, & Langue, 2004). Using the same search terms in Google yielded quite a bit of information, mainly from the United Kingdom (i.e., http://handbooks.homeless.org.uk/hostels/individuals/pd/rjapd). These sources ranged from efforts to create "low key" structured housing programs, to personal narratives, to a description of a program in Colorado to engage homeless persons who have BPD with mental health services by building an ongoing presence at soup kitchens. The connection between BPD and homelessness is common given how it can interfere with employment and, in turn, obtaining and maintaining housing. A major focus was on gaining housing and government support to get a "starting point" for other kinds of efforts. Though there was no large-scale research cited to support this point of view, the literature repeatedly pointed to having a place to live as the first order of business in helping people who have BPD. Organizations focused on homelessness are also looking for the connection between homelessness and treatment once they are in shelters or in some form of residential care. For example, the United Kingdom's Homeless Link web site (http://handbooks.homeless.org.uk/hostels/individuals/pd) specifically cited Bateman and Fonagy's partial hospitalization program as a potentially effective treatment program for persons who have BPD.

A search of the Cochrane Library for the term "borderline personality organization" revealed five systematic reviews (SRs), one of which was not relevant. Regarding psychotropic medication for BPD, Stoffers et al. (2010) found 28 trials involving 1742 participants examining 4 classes of antipsychotic, mood stabilizing and antidepressant drugs. They report that:

> The available evidence indicates some beneficial effects with second-generation antipsychotics, mood stabilisers, and dietary supplementation by omega-3 fatty acids. However, these are mostly based on single study effect estimates. Antidepressants are not widely supported for BPD treatment, but may be helpful in the presence of comorbid conditions. Total BPD severity was not significantly influenced by any drug. No promising results are available for the core BPD symptoms of chronic feelings of emptiness, identity disturbance and abandonment. Conclusions have to be drawn carefully in the light of several limitations of the RCT evidence that constrain applicability to everyday clinical settings (among others, patients' characteristics and duration of interventions and observation periods). (Authors' conclusions)

Another SR by Huband, Ferriter, Nathan, and Jones (2010) examine the use of antiepileptic medications for treating aggression and associated impulsivity. They summarized 14 studies of 5 medications including 672 participants. Huband et al. conclude that:

> the body of evidence summarized in this review is insufficient to allow any firm conclusion to be drawn about the use of antiepileptic medication in the treatment of aggression and associated impulsivity. Four antiepileptics (valproate/divalproex, carbamazepine, oxcarbazepine and phenytoin) were effective, compared to placebo, in reducing aggression in at least one study, although for three drugs (valproate, carbamazepine and phenytoin) at least one other study showed no statistically significant difference between treatment and control conditions. Side effects were more commonly noted for the intervention group although adverse effects were not well reported. Absence of information does not necessarily mean that the treatment is safe, nor that the potential gains from the medication necessarily balance the risk of an adverse event occurring. Further research is needed. (Authors' conclusions)

Medication might be one treatment for Jennifer to consider but is unlikely to impact core BPD feelings of identity disturbance and abandonment.

Borschmann, Henderson, Hogg, Phillips, and Moran (2012) did an SR on crisis interventions for persons who have BPD. They found only two RCTs and conclude that "currently there is no RCT-based evidence for the management of acute crises in people with BPD and therefore we could not reach any conclusions about the effectiveness of any single crisis intervention" (Authors' conclusions).

Stoffers-Winterling et al. (2012) found 28 RCT studies of psychological treatments for BPD involving 1804 participants. They found RCTs on 15 types of therapy for BPD, including both models that involved individual psychotherapy and other models that centered on interventions without individual therapy. Overall, they report that:

> Data were sparse for individual interventions and allowed for meta-analytic pooling only for Dialectal Behavior Therapy (DBT) compared with treatment as usual (TAU) for four outcomes. There were moderate to large statistically significant effects indicating a beneficial effect of DBT over TAU for anger ($n = 46$, two RCTs; standardized mean difference (SMD) −0.83, 95% confidence interval (CI) −1.43 to −0.22; $I^2 = 0\%$), parasuicidality ($n = 110$, three RCTs; SMD -0.54, 95% CI −0.92 to −0.16; $I^2 = 0\%$), and mental health ($n = 74$, two RCTs; SMD 0.65, 95% CI 0.07 to 1.24 $I^2 = 30\%$). There was no indication of statistical superiority of DBT over TAU in terms of keeping participants in treatment ($n = 252$, five RCTs; risk ratio 1.25, 95% CI 0.54 to 2.92).

> All remaining findings were based on single study estimates of effect. Statistically significant between-group differences for comparisons of psychotherapies against controls were observed for BPD core pathology and associated psychopathology for the following interventions: DBT, DBT-PTSD, Mentalization-based treatment [MBT] in partial hospitalization and outpatient, MBT-[Partial hospital], MBT-out[patient], transference-focused psychotherapy (TFP), and interpersonal therapy (IPT). IPT was only indicated as being effective in the treatment of associated depression… Statistically significant superiority was demonstrated for DBT over Client-centered therapy [CCT] (core and associated pathology) and for Schema-focused therapy over TFP… No data were available for adverse effects… (Main results)

In several studies, treatment with DBT showed reduction in anger and parasuicidality and improvement in overall mental health. In single studies, DBT and several other treatments empirically demonstrated better outcomes than did controls for core BPD pathology and associated challenges (e.g., Giesen-Bloo et al., 2006). There are several treatment options for Jennifer to consider, with DBT having the largest number of studies. The best research evidence suggests either entry into a DBT program fully using Linehan's model or a psychodynamically oriented mentalization-focused or transference-based program. However, no mention is made of the effectiveness of any of these programs for the treatment of homeless people. McNeill (2005) refers to "adaptations" of DBT to better serve the needs of homeless people, but just what these adaptations are is not specified. (No follow-up article was located.) A partial hospital program *might* provide temporary shelter as part of the program.

A search of the Campbell Collaboration Library located several resources for the search term "homelessness." Most related to reviews registered but still not completed or reported. A PowerPoint style report of a presentation by Antilla (2009) indicates that across several studies, a number of programs reduced mean days of homelessness. The target population was persons with mental illness (not further specified) and substance abuse. Assertive community treatment (ACT) proved very effective by visual inspection over a year to a year and a half after start of services. Case management services also appear appropriate. The search also revealed an abstract on a pilot study by Cavanaugh, Gelles, and Solomon (2009), provided descriptive information about a pilot program adapting DBT to a psychoeducational workshop to prevent interpersonal violence. Results of the study were not reported in the abstract.

## *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

The best available research for Jennifer's concerns was limited, but the full-model DBT or transference-based or mentalization-focused programs appear to fit her concerns well in general. However, neither program's research data included any information about people who were homeless. Both programs appeared to presume clients had relatively stable and ongoing living satiations. The lack of such living situations might be viewed as making Jennifer quite different from the people included in these study results.

No partial hospitalization program similar to Bateman and Fonagy's (1999) was available regionally. One DBT program was found but had an 8-month or longer waiting list. This left no available therapeutic resources based on the best evidence possibilities for further discussion with Jennifer. Similarly, it was clear that she had "burned her bridges" with the available local shelters. She would likely be accepted at another shelter in a nearby town, but this left unresolved how she would be helped to avoid future aggressive incidents, as well as to find more permanent housing. It would also require yet another move and change, excluding her from the few local supports she trusted in.

Jennifer did not qualify for case management or assertive community treatment. Both programs are available in her community for persons with severe and persistent mental illness. Despite her earlier hospitalizations, Jennifer does not meet criteria for such services in her local area. Severe and persistent mental illness does not lead to any priority in publicly subsidized housing. It might lead to access to housing programs for persons who have mental illness, but again, Jennifer does not qualify for such services.

## *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

It was challenging to simply present these complicated research results. The full DBT model has been demonstrated to reduce anger and parasuicidality. Jennifer did not view either as a primary concern of her own. Mentalization-based and transference-based programs reduced core BPD symptomatology, but could not assure no future feelings of isolation, abandonment, or emptiness.

When these research supported treatment options, and their practical limitations were discussed with Jennifer, she was very interested in a partial hospitalization program. Her interest had little to do with the program philosophy or its preliminary support as an effective program. Instead, she viewed the structure and support of a partial hospital program as useful to help "organize" her. Her response is consistent with a research summary on effective relationships for persons with personality disorders (Castonguay & Beutler, 2006). A working group of clinicians and researchers, including Marsha Linehan, found considerable empirical support for intensive initial intervention for persons with personality disorders. They noted that regular mental health care, with weekly sessions and low intensity support for people who have personality disorders, was often ineffective. Nonetheless, access to such a program was not immediately available through a partial hospital or an intensively structured program. Neither access to empirically supported treatments nor access to long-term of immediate shelter was available.

## *Step 5: Synthesizing the Client's Clinical Needs and Circumstances with the Relevant Research, Finalize a Shared Plan of Intervention Collaboratively with the Client*

With no access to interventions supported by the best available evidence, Jennifer agreed to a plan of weekly sessions and some telephone contact if a crisis occurred. She endorsed a focus on planning to locate shelter and to, over time, look at how her "touchiness" (her word) kept her from housing, employment, and more fulfilling relationships. The clinical social worker noted in her record that she had a substantial and unexamined sexual trauma history and that her father was nearing likely release from prison. Having a regular place to live would be a vital foundation for doing the psychological and interpersonal work facing Jennifer.

## *Step 6: Implement the Intervention*

Jennifer left the office and headed for the streets. The lack of resources and her "burnt bridges" with several shelters left few immediate shelter or housing options. She did not seem overwhelmed by this result. She agreed to keep in touch and to drop in after 3 days. At the 3-day check-in, Jennifer had decided to move to a larger nearby city and stay at their shelter. She was unwilling to sign releases to allow staff to speak with staff at the new shelter about her needs. A week later she returned, unexpectedly, and said things were going well, "so far." She had changed her mind and agreed to sign releases, allowing sharing of information with the new shelter and its mental health consultant. Many of her needs remain unmet.

# References

Antilla, S. (2009). *Housing programs and case management for reducing homelessness*. Paper presented at the Campbell Collaboration Colloquium, Oslo, May 18, 2009. Retrieved from http://www.campbellcollaboration.org/artman2/uploads/1/Anttila_housing_programs.pdf

Bateman, A., & Fonagy, P. (1999). The effectiveness of partial hospitalization in the treatment of borderline personality disorder: A randomized controlled trial. *American Journal of Psychiatry, 156*, 1563–1569.

Borschmann, R., Henderson, C., Hogg, J., Phillips, R., & Moran, P. (2012). Crisis interventions for people with borderline personality disorder. *Cochrane Database of Systematic Reviews, 2012*(6), CD009353.

Castonguay, L., & Beutler, L. (Eds.). (2006). *Principles of therapeutic change that work*. New York: Oxford University Press.

Cavanaugh, M., Gelles, R., & Solomon, P. (2009). *A pilot RCT exploring the effectiveness of the DPEW in decreasing potential risk of violence of IPV*. Paper presented at the Campbell Collaboration Colloquium, Oslo, May 18–20, 2009. Retrieved from http://www.campbellcollaboration.org/artman2/uploads/1/Conference_Abstracts_v2.pdf

Giesen-Bloo, J., van Dyck, R., Spinhoven, P., van Tilburg, W., Dirksen, C., Van Asselt, T., et al. (2006). Outpatient psychotherapy for borderline personality disorder: Randomized trial of schema-focused therapy vs transference-focused psychotherapy. *Archives of General Psychiatry, 63*(6), 649–658.

Huband, N., Ferriter, M., Nathan, R., & Jones, H. (2010). Antiepileptics for aggression and associated impulsivity. *Cochrane Database of Systematic Reviews, 2010*(2), CD003499.

McNeill, C. (2005, December 13). *Dialectical behavioral Therapy for homeless patients with Borderline Personality Disorder*. Paper presented that the American Public Health Association 133rd annual meeting, Philadelphia, PA. Abstract retrieved from http://apha.confex.com/apha/133am/techprogram/paper_103492.htm

Stoffers, J., Völlm, B. A., Rücker, G., Timmer, A., Huband, N., & Lieb, K. (2010). Pharmacological interventions for borderline personality disorder. *Cochrane Database of Systematic Reviews, 2010*(6), CD005653.

Stoffers-Winterling, J. M., Völlm, B. A., Rücker, G., Timmer, A., Huband, N., & Lieb, K. (2012). Psychological therapies for people with borderline personality disorder. *Cochrane Database of Systematic Reviews, 2012*(8), CD005652.

Torchalla, I., Albrecht, F., Buchkremer, G., & Langue, G. (2004). Homeless women with psychiatric disorders -- a field study. *Psychiatric Praxis, 31*(5), 228–235. [Article in German.].

# Chapter 17
# Bethany: A Woman Recalling Her Traumatic History

Bethany is a 32-year-old biracial cisgender female. She is a lawyer by training and has been working at the same law firm since graduating law school 5 years ago. The law firm handles primarily estate law but has a strong commitment to pro bono work, so each lawyer is expected to take on 1–2 pro bono cases that could range from traffic charges to sexual assault charges to custody disputes. The lawyers only know a small amount of information about the case before agreeing to take on the case. The pro bono cases are referred to the firm through a special office that coordinates these cases and within the community in which the firm is housed; they are known for this service to get referrals from a variety of sources, including medical providers, mental health practitioners, other lawyers, and teachers. Bethany comes to her Employee Assistance Program (EAP) soon after she started working on a particular case.

In the first meeting, Bethany describes that 6 weeks ago she agreed to represent a gentleman who was referred by his children's pediatrician who was concerned about the level of conflict between the parents as they were trying to divorce and resolve their custody dispute without attorneys. In her first meeting with the client, Bethany said that when she walked in the door she felt like she "could not breathe" and felt like the "wind had been knocked out" of her. When asked to elaborate, she said that the client (Gary) looked and acted just like her uncle. Here she stopped talking and began crying and wringing her hands. After a pause, she said that her uncle had molested her when she was in middle school and seeing Gary "brought it all back." She stated, "It was so weird. I mean he looked just like my uncle. Same haircut, build, and general demeaner. I knew intellectually it was *not* my uncle, but in that moment, it really felt like I was back in middle school and trapped in the room with him. I told him I was feeling sick and left the room, where I went to bathroom and actually did get sick."

After this initial meeting, she referred him to someone else and gave "some lame excuse as to why" she could not continue with him. She stated she quickly took on a traffic misdemeanor case so that she was "at least carrying one pro bono

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_17

case to keep up with the firm's policy." However, since that meeting, she has been experiencing a range of issues, which include difficulty concentrating, trouble falling and staying asleep due to nightmares, flashbacks, and episodes of panic where she cannot breathe and feels trapped. In addition, she has begun to isolate herself from others, and she has lost about 5 pounds, even though she is already quite thin.

In the assessment Bethany states that her mother is originally from Nigeria and met her father (Caucasian American) when she came to the United States for college. Bethany was born here and has one older brother. It was during her visits to see her father's family that her father's brother molested her. These events took place over approximately 2 years during each trip to see her extended family. This time period corresponded with her maternal grandmother's illness and death, so Bethany and her family saw this uncle quite often during this time period. She cannot recall the exact number of times that her uncle molested her, but she estimates it was about ten over the course of the 2-year period. She never told anyone, and once she entered high school, she argued that she was too busy in sports and other activities so that she could no longer go on the family trips. She did not want to tell anyone because "they were all dealing with my grandmother's death and it was just too much."

However, now she is struggling with the symptoms she is having and is concerned about her "inability to just turn it all off." She feel like she has been able "to lock everything up into a box over the last 20 years but now the box has been opened" and she "cannot get all of the feelings and memories back into the box."

## Applying the Six Steps of EBP to the Case

As you will recall from Chap. 2, the steps of EBP are:

1. Drawing on practice questions, identify research information needs.
2. Efficiently locate relevant research knowledge.
3. Critically appraise the quality and applicability of this knowledge to the client's needs and situation.
4. Actively and collaboratively discuss the research results with the client to determine how likely effective options fit with the client's values, preferences, and culture.
5. Synthesizing client needs and views with relevant research and professional expertise, develop a plan of intervention.
6. Implement the intervention.

## *Step 1: Drawing on Practice Questions, Identify Research Information Needs*

In the initial step of EBP, the clinician must work with the client to identify the primary clinical issue around which to focus the EBP process. As discussed in Chaps. 4 and 9, it is essential to work with your client to identify the issue that he/she feels is the highest priority for him/her. However, it is also essential to understand the role you have with clients and what is within the scope of this role. Your role as an EAP provider is to provide time-limited (three sessions maximum) supportive services or crisis management. Therefore, you must approach this case with this perspective and recognize that you may not be the person who is most likely to work with Bethany around these issues. It will be important to explain this limitation to her and to clarify whether she is interested in working on the issues related to her childhood trauma beyond the three sessions you can offer. Still, it is clear from talking with Bethany that she feels that she is in immediate crisis and that her symptoms feel debilitating and are impacting her current ability to function. Therefore, the practice question is for now: What are effective treatments for managing symptoms of acute traumatic reactions?

In the PICO model, the *P*opulation is adult biracial women who have experienced childhood sexual assault. The *I*nterventions under consideration are psychosocial interventions and possibly medication with the goals of reducing her acute trauma symptoms. *C*omparisons would be across different therapies and perhaps medication alone or in combination with therapy. *O*utcomes would include reducing PTSD symptoms, including nightmares, hypervigilance, and intrusive thoughts.

## *Step 2: Efficiently Locate Relevant Research Knowledge*

To begin, the EAP worker began by visiting the Cochrane Library (https://www.cochranelibrary.com/) and searched for the phrase "effective treatments for managing symptoms of acute traumatic reactions." One result that came up was Roberts, Kitchiner, Kenardy, and Bisson (2010) "Early psychological interventions to treat acute traumatic stress symptoms" (https://www.cochrane.org/CD007944/DEPRESSN_early-psychological-interventions-to-treat-acute-traumatic-stress-symptoms). Here the summary states that trauma-focused cognitive and behavioral therapy (TF-CBT) had promising results:

> Fifteen studies (two with long term follow-up studies) were identified examining a range of interventions. In terms of main findings, twelve studies evaluated brief trauma focused cognitive behavioural interventions (TF-CBT). TF-CBT was more effective than a waiting list intervention (6 studies, 471 participants; SMD −0.64, 95% CI −1.06, −0.23) and supportive counselling (4 studies, 198 participants; SMD −0.67, 95% CI −1.12, −0.23). Effects against supportive counselling were still present at 6 month follow-up (4 studies, 170 participants; SMD −0.64, 95% CI −1.02, −0.25). There was no evidence of the effectiveness of a structured writing intervention when compared against minimal intervention (2 studies, 149 participants; SMD −0.15, 95% CI −0.48, 0.17). (Abstract, main results)

Not many treatment approaches have been carefully researched. However, the summary also reports that there were some concerns regarding researcher bias and that the research results should be evaluated with caution. Roberts et al. (2010) state that "The quality of trials included was variable and sample sizes were often small. There was considerable clinical heterogeneity in the included studies and unexplained statistical heterogeneity observed in some comparisons" (Abstract, Authors' conclusions). Furthermore, the EAP therapist is familiar with TF-CBT and knows that it was developed for and has been predominately tested with children and adolescents, and Bethany is neither. This SR seemed a bit off target for this client but may point to a useful treatment option to further explore.

At the bottom of this SR, there is a link to another SR by Roberts et al. (2010) entitled "Multiple session early psychological interventions for prevention of post-traumatic stress disorder" (https://www.cochrane.org/CD006869/DEPRESSN_multiple-session-early-psychological-interventions-for-prevention-of-post-traumatic-stress-disorder).

The authors report that:

> Eleven studies with a total of 941 participants were found to have evaluated brief psychological interventions aimed at preventing PTSD in individuals exposed to a specific traumatic event, examining a heterogeneous range of interventions. Eight studies were entered into meta-analysis. There was no observable difference between treatment and control conditions on primary outcome measures for these interventions at initial outcome (k = 5, n = 479; RR 0.84; 95% CI 0.60 to 1.17). (Abstract, main results)

Here the authors conclude that single sessions "may have an adverse effect on some individuals" (Abstract, Authors' conclusions). The authors recommend that multiple sessions may not just be more beneficial but may be necessary in the recovery process. Bethany's trauma was also several years in the past, though it has returned acutely and significantly due to her work.

Hetrick, Purcell, Garner, and Parslow (2010) completed a Cochrane systematic review (SR) examining the combined effectiveness of medication and psychotherapy for treating PTSD—though the kinds of trauma leading to the PTSD were not stated. Very few studies were located, all using SSRIs as the medication, and only three focused on adults. They conclude that "There is not enough evidence available to support or refute the effectiveness of combined psychological therapy and pharmacotherapy compared to either of these interventions alone. Further large randomised controlled trials are urgently required" (Abstract, Author's conclusions).

SAHMSA's website provides a self-help information sheet prepared by Copeland (n.d.) for people who have experienced trauma (https://store.samhsa.gov/shin/content/SMA-3717/SMA-3717.pdf). This sheet provides the individual with psychoeducation regarding typical signs of trauma and different techniques for addressing it, such as seeing a professional counselor. It also provides a number of resources, including hotlines and trauma centers around the country. The information sheet, however, provides no direct research support for any of its recommendations.

SAHMSA (2014) also has a free guide for practitioners called "SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach (https://store.samhsa.gov/shin/content//SMA14-4884/SMA14-4884.pdf) that outlines their

"Six Key Principles of a Trauma-Informed Approach," which are (1) safety; (2) trustworthiness and transparency; (3) peer support; (4) collaboration and mutuality; (5) empowerment, voice, and choice; and (6) cultural, historical, and gender issues (p. 10). Within this guide, the authors emphasize that successful treatment must include a relationship and context in which these principles are followed. All seem useful and appropriate though quite general and lacking in details of how to implement these principles. Research support for these quite reasonable principles is noted but not detailed.

Oddly, a search of SAMSHA's National Registry of Evidence-based Programs and Practice (https://knowledge.samhsa.gov/ta-centers/national-registry-evidence-based-programs-and-practices) yielded links to assessment tools for professionals working with clients who have experienced sexual violence, but did not point to research on treatments for sexual violence in adults, literally yielding zero results.

## *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

The information and limited research that was identified in this search fit with the EAP social worker's view of trauma treatments; trauma needs to be addressed carefully over multiple sessions with a skilled clinician. Given the acuity of Bethany's symptoms and her willingness to talk about her abuse now, the social worker concludes that it is imperative that Bethany enter in to a therapeutic relationship with someone who is trained in trauma interventions and maintains a trauma-informed approach. This is a key recommendation for the client to consider. It is surprising that so little research on treatment outcomes specific to sexual abuse concerns among adults are available.

## *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

Given the amount of time that the EAP therapist has with Bethany and after reading information gathered in the search process, the EAP therapist feels strongly that Bethany should be referred to someone immediately who can work with her on her acute symptoms as well as help her process the trauma she experienced as a child. While the social worker does have expertise in trauma treatments, she does not believe that in her role as an EAP provider, it would be appropriate for her to begin to address the trauma with Bethany because of the short-term nature of the EAP contract. As such, she discusses with Bethany how important it is for her to get support to help her manage the current symptoms and begin to address the childhood trauma. She explains that in her current role, based on the research, she is most likely better off meeting with someone who can see her long-term over multiple sessions. In addition, she recommends to Bethany that she begin to work with a provider who has some experience and expertise in trauma survivors, specifically TF-CBT with adults, or is at least informed in trauma-informed principles. This treatment approach has some research support. Bethany says she understands the options and why the social work is making this recommendation. The social worker asks if this fits with Bethany's personal views and preferences. Bethany states the recommendation seems appropriate to her.

The social worker also notes that she is now referring Bethany, as Bethany referred her own precipitating referral of her client, Gary. Bethany laughed and said, "Yes, but your excuse is not lame. But it is ironic."

## *Step 5: Synthesizing Client Needs and Views with Relevant Research and Professional Expertise, Develop a Plan of Intervention*

While Bethany was disappointed to have told her story for the first time, she said she understood and was willing to look for someone else. The social worker offered to help her in the search process and help her identify potential providers that she could talk to in order to see if they would be a good fit for Bethany at this time. Based on this conversation, the following treatment plan emerged and was agreed upon by both Bethany and the EAP social worker.

1. Bethany and the social worker will work together to find a trauma informed therapist using (1) her insurance panel names, (2) local trauma centers, and (3) the social worker's own network.
2. Bethany will take the self-help information from SAHMSA and review it and call the social worker with any questions.
3. As Bethany still has two more sessions left, they will use that time to answer questions and to identify appropriate providers. In the meantime, using her own expertise, the social worker also offered to teach Bethany some relaxation techniques as outlined in the SAHMSA self help guide.

## *Step 6: Implement the Intervention*

Consistent with her role as an Employee Assistance Program social worker, the clinicians and Bethany work together over the next 2 weeks to find an appropriate therapist.

## References

Copeland, M. E. (n.d.). *Dealing with the effects of trauma-A self-help guide*. SAMHSA's Center for Mental Health Services. Retrieved from https://store.samhsa.gov/shin/content/SMA-3717/SMA-3717.pdf

Hetrick, S. E., Purcell, R., Garner, B., & Parslow, R. (2010). Combined pharmacotherapy and psychological therapies for post traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews, 2010*(7), CD007316.

Roberts, N., Kitchiner, N., Kenardy, J., & Bisson, J. (2010). Early psychological interventions to treat acute traumatic stress symptoms. *Cochrane Database of Systematic Reviews, 2010*(3), CD007944.

Substance Abuse and Mental Health Services Administration [SAMHSA]. (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach*. HHS Publication No. (SMA) 14-4884. Rockville, MD: Author.

# Chapter 18

# Gabrielle: A Young Woman in Pain Who Is Opioid Dependent

Gabrielle is a 23-year-old, cisgender female, African-American, college student and has been a very successful athlete. Although she does well in school, with an A-average, she says she is not sure why she is in school. Still, she is a journalism major with an interest in television reporting. Gabrielle has many friends, is socially active, and is a well-regarded track athlete. In addition, she regularly attends a Baptist church at college and at home with her family. She says that "Church is a big part of my life." She has no previous mental health history or involvement with school or legal discipline. Eighteen months ago, she was seriously injured during a track meet, involving a knee and leg injuries. Her injuries have healed, but she still experiences serious leg, hip, and lower back pain.

Gabrielle was treated with OxyContin for her pain, and the medication was continued for over a year. She still finds it effective for pain but now needs larger doses to achieve the same relief. She developed opioid-related constipation and also now has frequent headaches, as she became dependent on the OxyContin. Recently, her family, her coach, and her family practitioner recommended that she reduce her opioid use. Her pastor at the college area church also recommended she seek treatment for her opioid use. They referred her for treatment of opioid dependence. Her college health service did not provide this treatment. Gabrielle's family is very concerned about her, but she is not sure she needs treatment since she still needs the medication for her pain. Gabrielle, saying she was uncertain about stopping the pain medication, nonetheless came for treatment.

Gabrielle denies use of nonprescription drugs vehemently, saying she'd rather not be taking any drugs. "They're easy to find at the gym, but I do not use them. This is just about serious pain." She reports she has had a recent general physical exam and no concerns were identified.

The social worker practices in an outpatient agency that serves both substance abuse and mental health concerns but does not provide initial detoxification services. The agency does, however, provide medication-assisted therapy [MAT] for persons seeking to end opioid use. There is, however, an ongoing waiting list for

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_18

these services. During the initial assessment, the social worker identified many strengths in Gabrielle. These include her good overall health, a strong and supportive family, her coach and teammates, her pastor and congregations both at college and at home, friends at school, and few other stressors. She is continuing to do well in college despite her opioid dependence.

While Gabrielle is ambivalent about treatment, she does not like taking medications. “I wish I could be off all of them; I don’t like them at all,” she says. “Sometimes, now, I feel like a junkie.”

Gabrielle is clear that her functioning, other than on the track and in terms of some physiological symptoms, has not changed due to the opioid use. She does not show signs of compulsive drug-taking, nor has she changed her lifestyle and goals to increase her access to opioids. She states she only uses prescribe medications but is concerned that they are less effective against her pain as she has developed tolerance to them over time. Her prescribing physician is aware of her tolerance concerns. She appears dependent but not addicted (O’Brien, Volkow, & Li, 2006).

After assessment, the steps of the EBP process guide clinicians in incorporating the best available research results into practice decision-making.

## Applying the Six Steps of EBP to the Case

### *Step 1: Drawing on Practice Questions, Identify Research Information Needs*

Gabrielle’s stated needs center on ending her use of pharmaceutical opioids. She is quite clear that this is a circumscribed need. After an assessment which affirms her opioid dependence and identifies her many strengths, the social worker decided to search for treatments and services to end or reduce opioid dependence.

### *Step 2: Efficiently Locate Relevant Research Knowledge*

A search of the Cochrane Library using the keywords “opioid dependence” yielded 24 titles. Some were off topic, such as those involving opioid agonists for smoking cessation or problem cocaine use. More on target, Nielsen et al. (2016) completed a systematic review (SR) of the effects of maintenance agonist pharmacotherapy for the treatment of *pharmaceutical* opioid dependence. This is a type of medication-assisted treatment (MAT) and is specific to the prescription type of opioid use Gabrielle presents, rather than heroin use. The authors state that “People dependent on pharmaceutical opioids appear to differ in important ways from people who use heroin, yet most opioid agonist treatment research has been conducted in people who use heroin” (Abstract, Background). Bethany fits this profile precisely having no heroin use.

Nielsen et al. (2016) included RCTs examining full opioid agonist maintenance medication versus other opioids including methadone and full or partial opioid agonist maintenance versus placebo, detoxification only, or psychological treatment (without opioid agonist treatment. They found 6 RCT studies involving 607 participants. They report:

> moderate quality evidence from two studies of no difference between methadone and buprenorphine in self reported opioid use (risk ratio (RR) 0.37, 95% confidence interval (CI) 0.08 to 1.63) or opioid positive urine drug tests (RR 0.81, 95% CI 0.56 to 1.18). There was low quality evidence from three studies of no difference in retention between buprenorphine and methadone maintenance treatment (RR 0.69, 95% CI 0.39 to 1.22). There was moderate quality evidence from two studies of no difference between methadone and buprenorphine on adverse events (RR 1.10, 95% CI 0.64 to 1.91). (Abstract, main results)

"Buprenorphine is used in medication-assisted treatment (MAT) to help people reduce or quit their use of heroin or other opiates, such as pain relievers like morphine" (SAMSHA, 2016, para 1). Buprenorphine, also called Suboxone or Zubsolv when combined with naloxone, can be prescribed on an outpatient basis by physicians. This is in contrast to methadone, which requires initial detoxification "treatment in a highly structured clinic" (SAMSHA, 2016, para 3). The social worker's clinic provides these services.

Mattick, Breen, Kimber, and Davoli (2014) in a Cochrane Library SR report that "Buprenorphine is an effective medication in the maintenance treatment of heroin dependence, retaining people in treatment at any dose above 2 mg, and suppressing illicit opioid use (at doses 16 mg or greater) based on placebo-controlled trials" (Abstract, Authors' conclusions). MAT is an effective treatment for opioid dependence. Indeed, MAT is called the "gold standard" treatment for opioid dependence by Food and Drug Administration Commissioner Gottlieb (2017). Note, however, that the samples considered in this SR is persons using heroin, rather than prescription pharmaceuticals.

Comparing medication-assisted treatments such as buprenorphine to psychosocial interventions, Nielsen et al. (2016) report:

> We found low quality evidence from three studies favouring maintenance buprenorphine treatment over detoxification or psychological treatment in terms of fewer opioid positive urine drug tests (RR 0.63, 95% CI 0.43 to 0.91) and self reported opioid use in the past 30 days (RR 0.54, 95% CI 0.31 to 0.93). There was no difference on days of unsanctioned opioid use (standardised mean difference (SMD) −0.31, 95% CI −0.66 to 0.04). There was moderate quality evidence favouring buprenorphine maintenance over detoxification or psychological treatment on retention in treatment (RR 0.33, 95% CI 0.23 to 0.47). There was moderate quality evidence favouring buprenorphine maintenance over detoxification or psychological treatment on adverse events (RR 0.19, 95% CI 0.06 to 0.57).

In these few studies, MAT reduced self-reported opioid use, reduced positive urine tests for opioids, and led to better retention in treatment than did psychosocial treatment alone. MAT also had fewer adverse effects than did detoxification or psychosocial treatments. The 95% confidence intervals (CI) were small, and each included the RR (relative risk) values; this indicates that the SR results are likely to fit other persons needing treatment. However, the research was rated as of low to moderate quality.

Another SR located in the Cochrane Library completed by Minozzi et al. (2011) drawing on 13 studies including 1158 participants found no statistically significant differences between naltrexone versus placebo or no pharmacological treatments. However, they conclude that the studies they reviewed did not provide an adequate evaluation of oral naltrexone. Naltrexone alone does not appear to be part of an effective MAT.

Looking specifically at psychosocial treatment for opioid *detoxification*, Amato, Minozzi, Davoli, and Vecchi (2011a) reviewed 11 studies with 1592 participants. Questioning if psychosocial treatment could improve outcomes of MAT mainly for persons using heroin, they found that:

> Compared to any pharmacological treatment alone, the association of any psychosocial with any pharmacological was shown to significantly reduce dropouts RR 0.71 (95% CI 0.59 to 0.85), use of opiate during the treatment, RR 0.82 (95% CI 0.71 to 0.93), at follow up RR 0.66 (95% CI 0.53 to 0.82) and clinical absences during the treatment RR 0.48 (95% CI 0.38 to 0.59). Moreover, with the evidence currently available, there are no data supporting a single psychosocial approach. (Abstract, Main results)

That is, combining any of five psychosocial interventions with MAT reduced treatment dropouts, opioid use, and absences from treatment *during detoxification*. However, no specific type of psychosocial treatment was preferable to any other.

In another SR, Amato, Minozzi, Davoli, and Vecchi (2011b) examined the effectiveness of psychosocial treatment combined with MAT in *maintenance* opioid dependence treatment provided after detoxification. They reviewed 35 studies with 4319 participants who were involved in 13 different psychosocial treatment combined with MAT. In these ongoing services, they found that:

> Comparing any psychosocial plus any maintenance pharmacological treatment [MAT] to standard maintenance treatment, results do not show benefit for retention in treatment, 27 studies, 3124 participants, RR 1.03 (95% CI 0.98 to 1.07); abstinence by opiate during the treatment, 8 studies, 1002 participants, RR 1.12 (95% CI 0.92 to 1.37); compliance, three studies, MD 0.43 (95% CI −0.05 to 0.92); psychiatric symptoms, 3 studies, MD 0.02 (−0.28 to 0.31); depression, 3 studies, MD −1.70 (95% CI −3.91 to 0.51) … and participants abstinent by opioid, 3 studies, 181 participants, RR 1.15 (95% CI 0.98 to 1.36). Comparing the different psychosocial approaches, results are never statistically significant for all the comparisons and outcomes. (Abstract, Main results)

In ongoing, maintenance MAT, adding a psychosocial treatment showed no additional benefit.

Despite these differing Cochrane SR results, the US National Institute on Drug Abuse argues that “Medications should be combined with behavioral counseling for a “whole patient” approach” (2016, para 2).

SAMSHA states that “ideal candidates for opioid dependency treatment with buprenorphine have been objectively diagnosed with an opioid dependency, are willing to follow safety precautions for the treatment,” have been medically cleared for any health conflicts with using buprenorphine, and understand alternative treatment options (SAMSHA, 2016, para 15). These recommendations fit well within the EBP process.

### *Step 3: Critically Appraise the Quality and Applicability of This Knowledge to the Client's Needs and Situation*

The results of the Nielsen et al. (2016) SR fit Gabrielle very well, though there is no information regarding gender or race in the SR report abstracts. Locating such information often requires one to review the individual articles on which the SR is based to identify specific characteristics of the study sample. In many reports this information is simply not provided. The other SRs are based on somewhat different populations, mainly heroin users. Other SR results suggest that psychosocial services may be helpful in competing MAT, which may be a lengthy process, though the research support for these services is limited. For Gabrielle, it is unclear how long the treatment might take.

The social worker's clinic administratively requires that all persons in MAT have a therapist or a case manager. The clinic's perspective is that such services enhance treatment effectiveness and are also a practical way to ensure clients are followed and supported.

### *Step 4: Actively and Collaboratively Discuss the Research Results with the Client to Determine How Likely Effective Options Fit with the Client's Values, Preferences, and Culture*

Gabrielle is both smart and well educated. Still, the technical details of the SR's include statistics and research design commentary that may be unfamiliar to her. The plain language summaries of the SRs can provide a useful starting point for informing the client about the research results. Yet even the plain language summaries may include unfamiliar terms and concepts for many clients.

Gabrielle was disappointed that the best treatment option appeared to be another medication. Given the limited support for psychosocial services alone as being effective for reducing opioid use, she was open to trying them.

Gabrielle asked for information about the Cochrane SRs and was provided their URLs for access. She said in the next session that the materials made sense but did not seem to say much about individual differences. She also wondered how treating ongoing pain would fit with MAT or any other treatment, noting this was not addressed by the SRs.

## *Step 5: Synthesizing Client Needs and Views with Relevant Research and Professional Expertise, Develop a Plan of Intervention*

Gabrielle was open to trying MAT though she hoped it was not just "switching one medicine for another." She asked that a schedule to taper off be part of her treatment plan, which appeared wise. She was open to counseling and noted that "many people" in her life would be watching how she did. A referral for MAT was made, and a roughly 2 month wait for starting treatment was the initial reply. Gabrielle was willing to continue in counseling but disappointed.

## *Step 6: Implement the Intervention*

While the social worker's clinic provides MAT services, there is often a waiting list for services. (In many parts of the country, access to MAT may require an extended wait or be unavailable.) Gabrielle says she is willing to wait—"a short while"—so she and the social worker agreed to stay in telephone contact during the waiting period.

## References

Amato, L., Minozzi, S., Davoli, M., & Vecchi, S. (2011a). Psychosocial and pharmacological treatments versus pharmacological treatments for opioid detoxification. *Cochrane Database of Systematic Reviews*, *2011*(9). Art. No.: CD005031.

Amato, L., Minozzi, S., Davoli, M., & Vecchi, S. (2011b). Psychosocial combined with agonist maintenance treatments versus agonist maintenance treatments alone for treatment of opioid dependence. *Cochrane Database of Systematic Reviews*, *2011*(10). Art. No.: CD004147.

Gottlieb, S. (September 20, 2017). *Statement from FDA Commissioner on the agency's continued efforts to promote the safe adoption of medication-assisted treatment for opioid addiction*. Retrieved from https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm576752.htm

Mattick, R. P., Breen, C., Kimber, J., & Davoli, M. (2014). Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane Database of Systematic Reviews*, *2014*(2). Art. No.: CD002207.

Minozzi, S., Amato, L., Vecchi, S., Davoli, M., Kirchmayer, U., & Verster, A. (2011). Oral naltrexone maintenance treatment for opioid dependence. *Cochrane Database of Systematic Reviews*, *2011*(4). Art. No.: CD001333.

National Institute on Drug Abuse. (2016). *Effective treatments for opioid addiction*. Retrieved from https://www.drugabuse.gov/publications/effective-treatments-opioid-addiction/effective-treatments-opioid-addiction

Nielsen, S., Larance, B., Degenhardt, L., Gowing, L., Kehler, C., & Lintzeris, N. (2016). Opioid agonist treatment for pharmaceutical opioid dependent people. *Cochrane Database of Systematic Reviews*, *2016*(5). Art. No.: CD011117.

O'Brien, C., Volkow, N., & Li, T.-K. (2006). What's in a word? Addiction versus dependence in DSM-V. *American Journal of Psychiatry, 163*(5), 764–765.

SAMSHA. (2016). *Buprenorphine*. Retrieved from https://www.samhsa.gov/medication-assisted-treatment/treatment/buprenorphine

# Part III

# Evidence-Based Practice in Clinical Social Work Education and Ongoing Issues

# Chapter 19
# Evidence-Based Practice: Teaching and Supervision

A key goal of this book is to examine evidence-based practice (EBP) in a balanced and thorough manner. We have detailed the EBP decision-making process in several prior chapters. We have also pointed out several implementation challenges or controversies related to EBP in clinical practice. We view EBP as having both important strengths and important unresolved limitations. Working backward, one could argue that part of the reason these controversies exist in practice is because those who educate social workers also struggle with EBP. In effect, these differences and struggles are transmitted to social work trainees and graduate professionals in continuing education. This chapter will provide readers with an overview of some of the challenges to educating social workers in EBP. It will also examine different views on EBP among social work educators.

## Teaching EBP

Recent national surveys indicate that social work educators support EBP (Bellamy, Fang, Bledsoe, Manuel, & Mullen, 2013; Bledsoe et al., 2007; Rubin & Parrish, 2007). Yet there remains a great deal of controversy regarding how EBP should be integrated into social work education programs (Drisko, 2014; Drisko & Grady, 2018; Grady, Werkmeister-Rozas, & Bledsoe, 2010; Howard, Allen-Meares, & Ruffolo, 2007; Jenson, 2007; Mullen, Bellamy, Bledsoe, & Francois, 2007; Shlonsky & Gibbs, 2004; Springer, 2007). Differences remain regarding the very definition of EBP (Grady et al., 2018; Powell, Abrefa-Gyan, Williams, & Rice, 2010; Rubin & Parrish, 2007; Wike et al., 2014; Wike et al., in press). To address and process these debates, a group of social work educators organized a conference over 10 years ago in 2006 called the Symposium for Improving the Teaching of Evidence-Based Practice at the University of Texas at Austin (Springer, 2007). Although the Symposium was an attempt to bring together social work educators to find a place

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_19

of consensus among these issues, it appears that more questions than answers resulted from the conference. This may be typical of new and complex social movements.

Out of this Symposium, five major areas of debate regarding the training of social work students in EBP emerged that continue to be evident among social work educators today (Springer, 2007). These themes are (1) defining EBP, (2) modeling the complexity of EBP in teaching, (3) examining social work curriculum, (4) coordinating social work professional organizations, and (5) shifting the culture of social work (Springer, 2007, p. 619). Clinical social workers might raise additional questions about supports for EBP in agencies and in private practice. Further, some critical perspectives on EBM and EBP might be added (Drisko & Grady, 2018). Some social work researchers have questioned the EBP evidence hierarchy, noting it can be unduly restrictive and may devalue many useful forms of research (Black, 1994; Popay & Williams, 1998; Trinder, 2000). Other social work researchers have called for the inclusion of more diverse voices and perspectives in EBP research (Petr, 2009; Zayas, Drake, & Jonson-Reid, 2011). Like any social movement, EBP has both merits and limitations. The following section will address some salient issues within Springer's five themes.

## *Defining EBP*

As we have stated throughout this book, EBP is a term that authors have used in many different ways, leading to a great deal of confusion among social work educators, clinicians, and the general public. Part of the reason that this confusion exists may be because social work educators—and authors of EBP textbooks and articles—still do not use a consistent definition of EBP. This results in social work graduates having different definitions and meanings associated with the term (Grady et al., 2018; Springer, 2007; Wike et al., in press). Indeed, as we have discussed in Chap. 1 of this book, though there is a standard definition of EBP, some authors do not use it. Instead they reconfigure the meaning of "EBP" for different purposes, emphases, and perspectives. These are often driven by economics or views about research, rather than individual client needs and preferences. Results from a national survey of faculty members in MSW programs indicate that there remains a significant disparity among the faculty members regarding how EBP is defined (Rubin & Parrish, 2007). We support the use of the Haynes, Devereaux, and Guyatt (2002) four-part model of the EBP practice decision-making process. The use of this definition in social work is endorsed by Gibbs and Gambrill (2002), Mullen and Shlonsky (2004), and Rubin (2008). Consistent use of the standard definition of EBP would be very useful for orienting social work education.

In another survey, faculty members reported that although they view EBP as important, they do not necessarily use its core concepts to determine what they teach in the classroom (Grady et al., 2010). This adds further confusion about what is essential to teach about EBP and what is not. Such varying views mean that what is taught about EBP, and how it is taught, will vary significantly among social work programs. Using research evidence to guide practice is the common thread throughout EBP definitions, but what kinds of research are valued differ. Standards for research appraisal many also differ. Client preferences may be affirmed or completely omitted as a vital part of the EBP practice decision-making process. Clinical expertise may also be affirmed and emphasized or minimized. Such differences will result in varying levels of knowledge and skill regarding EBP with which social work practitioners enter the field. The risk is that EBP will be used as a "catchphrase for anything that is done with clients that can somehow be linked to an empirical study, regardless of the study's quality, competing evidence, or consideration of clients' needs" (Shlonsky & Gibbs, 2004, p. 137).

Regardless of the formal education a clinical social worker receives, it is critical that active clinicians become educated about the EBP process and begin to apply it in all practice settings. It is especially important to understand the definition of EBP and the steps of the EBP practice decision-making process. Quality education requires clear thinking about EBP and its components.

As we have stated throughout this book, the clinician's professional expertise is the lynchpin bringing the EBP process together. Regardless of the type of training a clinician has had regarding EBP during formal social work education, clinical social workers have a responsibility to use the EBP process to identify client needs, strengths, and circumstances and to locate treatments with the best available research support. This includes careful assessment and the application of critical thinking during each phase of practice.

## *Modeling the Complexity of EBP in Teaching*

This theme covers several aspects of social work education and the teaching of EBP. EBP is a complex and multifaceted social process. We have shown EBM and EBP to be multifaceted social movements. Academic, economic, and political forces are all evident within the larger EBP movement and its social context. This raises issues of *what* to teach about EBP. To describe it simply as a practice decision-making process without attention to larger economic, political, and research community forces omits attention to growing pressures clients and clinicians feel acutely. Such narrow descriptions strip EBP from its social and economic context.

Similarly, while the EBM/EBP hierarchies of evidence have merit, they may also serve to limit attention to ways of knowing that are important to practice and to our clients. To solely emphasize experimental or RCT-based research may erode education on exploratory and descriptive approaches to research that allow for discovery and innovation. It may also limit the kinds of voices and perspectives valued in social work research and practice. Other important ways of knowing and research methods that can inform practice receive reduced attention in social work education (Drisko et al., 2019). We believe education about EBP should not come at the expense of attention to multiple ways of knowing and critical thinking. Each perspective on EBP is valuable and important to social work education.

Teaching EBP in depth requires additional content in practice and in research classes as well as in the field practicum. Students would also need to be educated more extensively in literature search skills. Programs would need to expand EBP-related search content directed to sources such as PubMed and both the Cochrane Collaboration and Campbell Collaboration systematic review libraries. Appraising research knowledge on a selected clinical topic could link research and practice courses. In practice courses, the EBP practice decision-making process would need to be added to existing course content. To help students understand the methods on which EBP choices are made would require much more extensive teaching about large-scale statistical methods, of specific epidemiological statistical methods (such as standardized mean differences, odds ratios, numbers needed to treat, etc.). How to interpret meta-analysis statistics would also be important. How to read a systemic review and to appraise its overall quality would be necessary content. Learning to summarize complex research findings in order to state them clearly to clients of many different backgrounds would also be a new and difficult practice skill. Documenting use of the EBP model may also require specific content in client records. Finally, in the spirit of a holistic understanding of EBP, its impact on social and economic policy, on the administration of practice, on supervision, and on the research debate over the merits and worth of different ways of knowing would all be important content for social work education at all levels. Critical thinking skills are applicable to each of these content areas.

Another issue is *how* to teach EBP. According to Springer (2007), one controversy surrounds whether to teach the process of EBP or to teach specific treatments (empirically supported treatments or ESTs). Springer asks the question: should social work educators teach students to be critical thinkers or feed them with "pearls of wisdom" (p. 620)? To teach EBP in depth would require a major expansion of social work's curriculum content. This is in addition to an already crowded set of curriculum requirements. Addressing specific ESTs provides one option to limit the curricular burden. We argue, however, that teaching only about specific ESTs would not help students understand the EBP process adequately. The focus on teaching ESTs emphasizes learning a limited set of treatments (which is worthy!) but shifts away from learning to engage with, assess, and treat unique and socially diverse individuals. A focus on ESTs may also shift attention away from empowering clients to make their own informed treatment choices. This focus addresses a standardized model of EBP rather than an individualized client-centered one. Such an approach would ultimately limit student's preparation for practicing EBP in a changing social environment.

EBP has clear implications for teaching practice, for teaching research, for teaching human behavior theories, and for teaching social policy. While the Council on Social Work Education's (CSWE) 2015 accreditation standards do not currently specifically require EBP content, social work programs must teach about "research informed practice" and "practice informed research." Teaching EBP would be just one way to address how research informs practice. Practice evaluation would appear to be another. It is less clear that EBP is an appropriate way to address how practice informs research.

Unfortunately, the broad phrases “research informed practice” and “practice informed research” are not well defined. The full text of the CSWE (2015) Educational Policy competency 4 reads:

> Social workers understand quantitative and qualitative research methods and their respective roles in advancing a science of social work and in evaluating their practice. Social workers know the principles of logic, scientific inquiry, and culturally informed and ethical approaches to building knowledge. Social workers understand that evidence that informs practice derives from multi-disciplinary sources and multiple ways of knowing. They also understand the processes for translating research findings into effective practice. Social workers:
>
> - use practice experience and theory to inform scientific inquiry and research;
> - apply critical thinking to engage in analysis of quantitative and qualitative research methods and research findings; and
> - use and translate research evidence to inform and improve practice, policy, and service delivery. (p. 8)

This competency requires content on both qualitative and quantitative research methods, scientific knowledge building, ethical issues, and practice evaluation. Multiple ways of knowing must be addressed (Drisko et al., 2019) along with interdisciplinary sources of knowledge. This broad research competency also addresses the use of these methods “to improve practice, policy and social service delivery,” implying critical analysis and application at micro-, meso-, and macro-levels of scale. Only wide-ranging engagement with EBP content would fully address these standards. An exclusive focus on specific ESTs would not appear to fully address the EPAS research standard.

Still another aspect issue is the *quality* of instruction in social work programs. In other words, how well do faculty members model EBP in the classroom by incorporating evidence regarding what makes an effective instructor? Springer (2007) states that there is great emphasis on, and more rewards for, those faculty members who succeed in research and publication. On the other hand, there is not as much emphasis on, nor rewards for, those faculty members who are successful teachers. Because of the reward structure in the academy, faculty members may not spend as much time learning about effective teaching strategies. This leads to varying levels of investment and quality among classroom instructors (Grady, Powers, Naylor, & Despard, 2011). Educators can teach about EBP as a simple process or as a complex social phenomenon. It can be taught in ways that engage students and make its merits apparent or in ways that make EBP just another form of research experience to be endured.

We believe it is essential to teach—in depth—the clinical assessment and critical thinking skills that are required in the EBP decision-making process (Drisko & Grady, 2018; Grady & Drisko, 2014). This process requires clinicians to think carefully and holistically about the needs and goals of the client, the environmental context, and the research on potentially effective interventions that are appropriate for that client’s unique needs and characteristics. As such, we believe that the focus in social work programs, both in the classroom and in field internships, needs to be on helping students examine critically the multitude of factors used in making a clinical decision *and* how to deliver the selected services using effective clinical skills. Determining what interventions have strong research support is only one part of the EBP process. Effective clinical social work requires more knowledge, values, and skills.

While the focus of this book is not to discuss effective clinical skills, we do want to emphasize that if educators only teach the process of EBP and exclude the importance of teaching assessment and other clinical skills, then clinical social workers will not be effective in delivering any service, even if it has strong research support. EBP does not replace good assessment and clinical practice skills (Grady & Drisko, 2014). EBP seeks to guide clinicians in identifying several alternative options that are likely to be effective for a given client. Therefore, social work programs must focus on both the critical thinking skills and values needed to conduct the EBP process *and* simultaneously teach students how to be effective clinicians. Ideally, clinical social workers can deliver several different kinds of treatments or services based on client need.

One approach that we have proposed elsewhere (Drisko & Grady, 2018) uses a case-based method to set forth and explore all of these potentially complex issues related to EBP. (Of course, this is also consistent with the cases and methods provided by this book as a whole.) In short, the students in a practice and/or research class are given detailed case examples. Then, in small groups, they work through each of the steps of EBP, including identifying the primary presenting issue, thereby integrating several areas of their education into the process. By practicing the EBP process in class, students are able to explore different research sites and resources, evaluate the available research on their chosen question, and discuss the merits and limitations of the located research. They can also practice discussing research results with mock clients in plain and clear language. Our experiences show that many ethical issues are raised in this exercise by social work students. Feedback indicates that students feel much more confident in their ability to engage in the full EBP process following these classes. The main goal of any educational approach should be to increase students' knowledge, skills with, and confidence in using EBP in their practices.

## Examining the Social Work Curriculum

The literature on EBP and social work education focuses primarily on the content of social work curricula. Scholars have debated numerous issues regarding EBP in MSW programs. The broad issues include where in the curriculum EBP should be located (Howard et al., 2007; Jenson, 2007; Mullen et al., 2007; Pollio & MacGowan, 2010) and whether to emphasize lifelong learning and critical thinking (Gambrill, 2006; Mullen et al., 2007; Springer, 2007). More specific issues include (a) whether to focus only on discrete empirically supported treatments (Howard et al., 2007); (b) how best to teach the specific skills needed for each step of the EBP process, such as literature reviews (Drisko & Grady, 2018; Howard et al., 2007; Shlonsky & Gibbs, 2004); and (c) whether social work educators should work across disciplines to emphasize EBP in the classroom (Bellamy et al., 2013). No clear consensus educational approach has emerged. All these approaches have relevance to understanding and doing EBP, at least in part.

In addition to these valuable points, we believe that there are a few additional issues regarding EBP in social work education programs. One of these is the critical importance of an assessment (Grady & Drisko, 2014). As we emphasized in Chap. 4, a thorough and accurate assessment of the client's needs is critical to the EBP process but is not an explicit part of it. (The EBP process appears to assume clinicians can do assessments and have adequate agency and economic supports to do so well.) We are concerned that in the rush to emphasize the need to use the best available evidence in treatment decisions, educators may not emphasize the importance of a solid clinical assessment. Such an assessment informs the entire EBP and treatment process for each client. We believe that for the EBP process to work effectively as intended, a clinician must be well trained in how to conduct a thorough assessment. Strong assessment skills allow clinical social workers to understand fully the complex needs of their client, the client's personal values and preferences, and whether it is internal capacities or environmental conditions to which treatment will be directed, or both in combination.

We also think that the social work curriculum should include multiple practice theories. Further, students should be well supervised in the practice application of multiple theories. The EBP practice decision-making process encourages the identification of several alternatives that may help the client. Strong theoretical knowledge allows students to explore a wider range of intervention options. From these alternatives, client and clinician can collaboratively finalize a treatment plan based on research knowledge as well as the values and preferences of the client. Since treatments and services draw on many different theories, clinical social workers should learn and apply several different models in depth and detail.

## *Field Education*

Another area that deserves more attention in the EBP curriculum debate is field education. The Council on Social Work Education has identified field education as social work's "signature pedagogy" (CSWE, 2008, 2015, EP 2.2). Much of the clinical training that social workers receive occurs in the field practicum. As a result, social work educators should spend more time on helping field instructors (i.e., supervisors) and field advisors learn about and become comfortable with EBP. To help bridge this gap, Grady (2010) outlined specific steps schools of social work can take to integrate EBP into the field. Some of these recommendations include trainings for field instructors on the EBP process, allowing field instructors greater access to electronic databases, offering trainings on conducting literature searches, offering trainings on research methods, and offering trainings on evaluating and interpreting EBP publications. Field instructors must be well trained and familiar with the EBP practice decision-making process to apply it as educators.

It is well documented in the literature that clinicians in the field struggle with EBP (Bellamy, Bledsoe, Mullen, Fang, & Manuel, 2008; Grady et al., 2018; Nelson, Steele, & Mize, 2006; Pollio, 2006; Proctor et al., 2007; Wike et al., in press). These same clinicians are often (or quickly become) the field instructors or supervisors of students and newly employed clinicians. It is therefore essential that social work educators make a strong effort to engage and partner with field clinicians so that they are well versed in EBP and can reinforce the learning that should be taking place in the classroom regarding EBP. Joining classroom and field to enhance EBP education requires additional conceptualization and effort.

### *Coordinating Social Work Professional Organizations*

Springer (2007, p. 623) states:

> It is not enough to discuss EBP within the confines of our ivory towers. It seems critical that we partner with key stakeholders representing and working in our communities to address some of the muddier issues (e.g., preparing social workers for practice in rural communities) facing the social work profession and the development of its workforce.

Springer identifies ways in which different social work organizations, such as Society for Social Work Research, the National Association of Social Workers, and others, have helped to contribute to the profession's movement toward the adoption of EBP. He also provides some examples of how smaller local organizations can play significant roles in educating about EBP. However, Springer also states that professional social work organizations can and should do more to help promote EBP within the profession. We further argue that they have a role to play in educating nonsocial workers about social work and EBP (Grady, 2010). These organizations can be valuable resources for promoting and providing postgraduate continuing education on EBP.

As social workers, we think about problems and practice on multiple levels of scale. We should apply our skills to improving practice effectiveness at several levels. How can our macro organizations partner with both individual clinicians and with the profession as a whole? How can the local or state clinical society help clinicians in EBP? Are there trainings they can sponsor? Are there resources they can make available, such as computer databases or the expertise of some members? How can practitioners who are more comfortable with EBP partner with local, state, and national organizations to help clinicians better understand EBP and offer effective services to their clients? These are all questions social work's professional organizations can address.

In comparison to other mental health professionals, MSW level clinical social workers have stronger professional organizations than do masters-level psychologists or masters in marital and family therapy. In many states, social workers have more flexibility with insurance panels and higher reimbursement rates due to the efforts of social workers on the macro policy level. However, payers and policy makers perceive other professionals as being more open to and more trained in EBP that are social workers. Those same privileges may be questioned if our profession is not seen as current or “evidence based.” Already, some other professionals view social workers as generally less knowledgeable about EBP. Other professions may argue that social workers do not base their practice decisions on research evidence (Murphy & McDonald, 2004). Our professional organizations have the opportunity and responsibility to help educate within the profession, as well as beyond the profession, about social work and its relationship with EBP.

### *Shifting the Culture of Social Work*

More than a full decade ago, Gambrill and Gibbs (2002) argued that:

> Social workers want their physicians to rely on scientific criteria when they make recommendations for treatment, but [social workers] rely on weak evidentiary ground such as tradition when working with clients…what’s good for the goose is not viewed as good for the gander. (p. 39)

Changing the attitudes of social workers who are already in the field toward adopting a more evidence-based approach is beyond the scope of what educational programs can do. However, educational programs can, and should, make the shift toward EBP with the early career social workers they are training. We encourage incorporating evidence-based attitudes and perspectives into every training they conduct in community-based settings. We also encourage critical thinking and critical perspectives on EBP and excellence in assessment and practice skills.

To further assist in this aim, Springer (2007) asserts that social work educators need to discard the dichotomous view of EBP as *either* “all good” *or* “all bad.” Stated another way that EBP is *either* focused on the clinical relationship *or* using a manual. EBP is more complex than the image many authors have commonly promoted. Yet this message is not getting across to students (Wike et al., in press). As we have attempted to show throughout this book and illustrated in the case examples, EBP is a multifaceted process and may be variously described and enacted. When professionals apply any process to unique individuals, complexity is magnified. However, EBP is a process that can help to orient and guide clinicians as they navigate the complexity of bringing together multiple sources of information to identify the most appropriate and informed treatment options for any given client. It seems that many social workers have yet to embrace this shift. Yet, it is vital for our profession to be viewed as one that uses evidence to make decisions, just as we expect other professions to do. We should hold ourselves to the same level of standards and accountability to which we hold our own physicians. We expect our own providers to offer us options that work. Shouldn’t we do the same for our clients?

At the same time, clinical social workers should advocate for appropriate reimbursement policies and appropriate agency supports. Reimbursement rates for clinical social work services should reflect the additional time, knowledge, and effort the

EBP process requires. The tension between limiting health-care costs and providing appropriate compensation to providers can be framed as a difficult endeavor or as a hostile argument. Support for EBP in social work is likely to grow if it is implemented in ways that do not shift costs to providers nor limit client options. Shifting the culture of social work to support EBP may also require attention and advocacy in support of clinical social worker's compensation and working conditions. The administrative and policy dimensions of EBP can strongly impact its acceptance and use in clinical practice.

## Supervision and EBP

The courses taken in any MSW program are only a portion of the training a clinical social worker receives. Yet any clinical social worker knows that the field experiences and supervision received during internships are a critical component in gaining competence. Supervision is also seen as essential to social workers postgraduation, not only because all states require it before a clinical social worker can be independently licensed but because it is seen as a core component of a clinician's professional development (Osborn & Davis, 2009; Rothstein, 2001; Willer, 2009). Supervision and consultation are lifelong parts of good clinical practice.

One of the most commonly used definitions of supervision comes from Bernard and Goodyear (2009) who define supervision as:

> an intervention provided by a more senior member of a profession to a more junior member or members of that same profession. This relationship is evaluative, extends over time, and has the simultaneous purposes of (1) enhancing the professional functioning of the more junior person(s), (2) monitoring the quality of the professional functional services offered to the client(s) she, he or they see(s), and (3) serving as a gatekeeper of those who are to enter the particular profession. (p. 7)

However, as Osborn and Davis (2009) note when the supervision is using an EBP framework, there are additional issues that should be considered beyond the definition provided above.

First, if an early career clinician using the EBP process identifies a particular model of intervention to use with a client, there may be an assumption that the supervisor is competent in that model as well and can adequately supervise that individual. This assumption may not always be accurate. In other words, how do we assure that the supervisor is knowledgeable and skilled in the selected type of practice? Or does that supervisor need to be trained in this, and other, models in order to provide adequate supervision? Can the supervisor still be an appropriate guiding resource if not trained in the specific treatment model? Supervisors will face a number of new challenges in overseeing EBP practice learning.

Second, Osborn and Davis (2009, p. 66) raise the issue of the "splintering of clinical practice." Here they refer to the tension between helping a supervisee with a set of prescribed skills needed for a particular model and broader professional development issues for the supervisee that may not be specific to any single model.

Such issues include, among others, ethical challenges, social diversity, self-reflection, and differential use of self. By focusing too much on a particular practice model and the skills related to that model, supervisors may miss the larger professional development needs of the supervisee. This is a concern parallel to one that is often raised in the field by social workers: if a clinician focuses too much on a model, then the larger issues facing a client may be missed or not adequately addressed (Bellamy et al., 2008; Pollio, 2006).

Finally, Osborn and Davis (2009) raise an issue similar to one identified by Springer (2007) around competence. Supervisors "increasingly need to supply evidence that their work with clinicians yields beneficial results for clients" and that this evidence needs to "demonstrate effectiveness beyond supervisee satisfaction or even supervisee competence" (p. 66). In effect, they apply the logic of EBP to evaluating the effectiveness of supervision. This is an area for further conceptual development and research. We note that it is very much like the use of practice outcomes to evaluate teachers discussed in Chap. 3. The EBP logic may be increasingly used to appraise the effectiveness of professionals, supervisors, and teachers in social work.

The topic of clinician competence is the primary focus of much of the literature concerning EBP and supervision (see Henggeler, Schoenwald, Liao, Letourneau, & Edwards, 2002). Many articles focus mainly on how to increase the competence of clinicians in a particular model of intervention, such as multisystemic therapy (Henggeler et al., 2002). Yet, we agree with Osborn and Davis' (2009) concern about the potential for splintering in supervision and losing sight of the larger professional development aspects that clinicians cite as being an essential part of their supervisory experiences (Altoma-Mathews, 2001; Rothstein, 2001).

Unfortunately, while there is an increased need for strong supervision, there appears to be less of it available to social workers (Borders, 2005; Crespi & Dube, 2005), and the quality of supervision may also be declining. In an effort to address these issues, the Yale School of Medicine began the Yale Program on Supervision focused on the delivery of mental health services in the community that has "a focus both on staff development and on organizational change to support the staff in delivering effective care and supervising the provision of that care" (Hoge, Migdole, Cannata, & Powell, 2014, p. 173). This model strongly emphasizes the need to work with agency leadership to develop policies and standards surrounding supervision to ensure that supervision is provided consistently and with high quality (Hoge et al., 2014). They state:

> Within this context, supervisors teach, guide and encourage frontline staff in the use of basic clinical skills and ESTs and other best practices that organizational leaders have selected and endorsed for use within the service setting. Thus, this comprehensive model differs from traditional, unstructured supervision of general clinical skills and from reliance solely on EST clinical processes without regard to broader organizational structures and change. (p. 173)

Note, however, that Hoge and colleagues focus heavily on supervision drawing on empirically supported treatments (ESTs) selected by "organizational leaders" rather than by clients' needs and the best available treatments identified through the

EBP process. Here we see (again) how the lack of a consensus definition of EBP can lead to efforts that seek to improve practice but that obfuscate what EBP is. Organizational and supervisory goals are necessary but should also support client self-determination in EBP practice. EBP is not a "top-down" model, but it does deserve strong agency and administrative support for supervision.

Regardless of whether supervisors use a specific model of supervision, all should encourage their supervisees to learn and apply the EBP process. This may lead supervisors and supervisees to have to increase their competence and skill level in many empirically supported treatments. At the same time, supervisors must simultaneously attend to the professional needs of the supervisee, such as focusing on ethical dilemmas, use of self, boundaries, self-disclosure, countertransference, theoretical knowledge, human diversity, and environmental and systemic factors. An effective supervisory relationship is one that simultaneously helps clinicians learn and improve knowledge, values, and skills while focusing attention on the larger clinical and professional developmental needs of the practitioner.

## Summary

It is possible that social workers educators hold the key to changing the way EBP is viewed within the social work profession and outside of it as well. These individuals have the privilege and responsibility of training future practitioners who will eventually become educators and supervisors. Through the educational process, these individuals will disseminate their views as to the definition and importance of EBP. Their actions will shape whether or not EBP is viewed as an approach with "potential as a way to guide social workers in delivering effective services" to clients (Springer, 2007, p. 623). Yet, as is clear in the literature, there remains disagreement among those who teach and supervise social workers about what should be taught about EBP and how to go about teaching it effectively.

Through its consideration of the multiple factors that must be evaluated before making a treatment decision, we view the EBP decision-making process as part of a holistic approach to working with clients. Therefore, we encourage educators and supervisors to bring that same approach to their work with social work students. We encourage a holistic approach to teaching EBP. Social workers must gain a range of knowledge, value, and skills. These must include how to conduct a thorough assessment, how to engage clients in the treatment planning process, and how to identify the best available evidence. Social workers must also learn how to be open and flexible and to consider the complexities of clinical work beyond the skills that are associated with any one intervention. Effective clinical work is more than technique (Norcross, 2011; Wampold, 2010). Educators and supervisors need to communicate that EBP involves a multitude of skills and to find effective strategies to help their students and supervisees gain competence and confidence in their ability to translate those skills to their clinical work with clients.

## References

Altoma-Mathews, C. (2001). On my own: My experiences finding supervision. *Reflections, 7*, 73–79.

Bellamy, J., Bledsoe, S., Mullen, E., Fang, L., & Manuel, J. (2008). Agency-university partnerships for evidence-based practice in social work. *Journal of Social Work Education, 44*, 55–75

Bellamy, J., Mullen, E., Satterfield, J., Newhouse, R., Ferguson, M., Brownson, R., et al. (2013). Implementing evidence-based practice education in social work: A transdisciplinary approach. *Research on Social Work Practice, 23*(4), 426–436.

Bellamy, J., Fang, L., Bledsoe, S., Manuel, J., & Mullen, E. (2013). Agency-university partnership for evidence-based practice in social work. *Journal of Evidence-Based Social Work, 10*(2), 73–90.

Bernard, J. M., & Goodyear, R. K. (2009). *Fundamentals of clinical supervision* (4th ed.). Upper Saddle River, NJ: Pearson Education.

Black, N. (1994). Why we need qualitative research. *Journal of Epidemiology and Community Health, 48*, 425–426.

Bledsoe, S. E., Weissman, M., Mullen, E., Ponniah, K., Gameroff, M., Verdeli, H., et al. (2007). Empirically supported psychotherapy in social work training programs: Does the definition of evidence matter? *Research on Social Work Practice, 17*, 449–455.

Borders, L. (2005). Snapshot of clinical supervision in counseling and counselor education: A five-year review. *The Clinical Supervisor, 24*, 69–113.

Council on Social Work Education (CSWE). (2008). *Educational policy and accreditation standards*. Alexandria, VA: Author.

Council on Social Work Education (CSWE). (2015). *Educational policy and accreditation standards*. Alexandria, VA: Author.

Crespi, T., & Dube, J. (2005). Clinical supervision in school psychology: Challenges, considerations, and ethical and legal issues for clinical supervisors. *The Clinical Supervisor, 24*(1–2), 115–135.

Drisko, J. (2014). Split or synthesis: The odd relationship between clinical practice and research in social work and in social work education. *Clinical Social Work Journal, 42*(2), 182–192.

Drisko, J., Corbin, J., & Begay, P. (2019). Multiple ways of knowing: Teaching research under EPAS 2015. *Journal of Ethnic & Cultural Diversity in Social Work*. https://doi.org/10.1080/15313204.2019.1590887

Drisko, J., & Grady, M. D. (2018). Teaching evidence-based practice using cases in social work education. *Families in Society, 99*(3), 269–282.

Gambrill, E. (2006). *Critical thinking in clinical practice: Improving the quality of judgments and decisions* (2nd ed.). New York: Wiley.

Gambrill, E., & Gibbs, L. (2002). Making practice decisions: Is what's good for the goose good for the gander? *Ethical Human Sciences and Services, 4*, 31–46.

Gibbs, L., & Gambrill, E. (2002). Evidence-based practice: Counterarguments to objections. *Research on Social Work Practice, 12*(3), 452–476.

Grady, M. D. (2010). The missing link: The role of social work schools and evidence-based practice. *Journal of Evidence-Based Social Work, 7*, 400–411.

Grady, M. D., & Drisko, J. (2014). Thorough clinical assessment: The hidden foundation of evidence-based practice. *Families in Society, 95*(1), 5–14.

Grady, M. D., Powers, J., Naylor, S. M., & Despard, M. (2011). Measuring the implicit program: Initial development and results of a MSW survey. *Journal of Social Work Education, 47*, 463–487.

Grady, M. D., Werkmeister-Rozas, L., & Bledsoe, S. E. (2010). Are curriculum decisions based on the evidence? How social work faculty members make choices in curriculum decisions. *Journal of Evidence-Based Social Work, 7*, 466–480.

Grady, M. D., Wike, T., Putzu, C., Field, S. E., Hill, J., Bellamy, J., et al. (2018). Recent social work practitioners' understanding and use of evidence-based practice and empirically supported treatments. *Journal of Social Work Education, 54*(1), 163–179.

Haynes, R., Devereaux, P., & Guyatt, G. (2002). Clinical expertise in the era of evidence-based medicine and patient choice. *Evidence-Based Medicine, 7*, 36–38.

Henggeler, S. W., Schoenwald, S. K., Liao, J. G., Letourneau, E. J., & Edwards, D. L. (2002). Transporting efficacious treatments to field settings: The link between supervisory practices and therapist fidelity in MST programs. *Journal of Clinical Child Psychology, 31*, 155–167.

Hoge, M., Migdole, S., Cannata, E., & Powell, D. (2014). Strengthening supervision in systems of care: Exemplary practices in empirically supported treatments. *Clinical Social Work Journal, 42*(2), 171–181.

Howard, M. O., Allen-Meares, P., & Ruffolo, M. C. (2007). Teaching evidence-based practice: Strategic and pedagogical recommendations for schools of social work. *Research on Social Work Practice, 17*, 561–568.

Jenson, J. (2007). Evidence-based practice and the reform of social work education: A response to Gambrill and Howard and Allen-Meares. *Research on Social Work Practice, 17*(5), 569–573.

Mullen, E., Bellamy, J., Bledsoe, S., & Francois, J. (2007). Teaching evidence-based practice. *Research on Social Work Practice, 17*(5), 574–582.

Mullen, E., & Shlonsky, A. (2004, September 24). From concept to implementation: The challenges facing evidence-based social work. Powerpoint from the Faculty Research & Insights: A Series Featuring CUSSW Faculty Research. Retrieved from www.columbia.edu/.../Mullen%20&%20Shlonsky%20no%20notes%209-26-04.ppt

Murphy, A., & McDonald, D. (2004). Power, status, and marginalisation: Rural social workers and evidence-based practice in interdisciplinary teams. *Australian Social Work, 57*, 127–136.

Nelson, T., Steele, R., & Mize, J. (2006). Practitioner attitudes toward evidence-based practice: Themes and challenges. *Administration and Policy in Mental Health, 33*, 398–409.

Norcross, J. (Ed.). (2011). *Psychotherapy relationships that work: Evidence-based responsiveness* (2nd ed.). New York: Oxford.

Osborn, C., & Davis, T. (2009). Ethical issues in the clinical supervision of evidence-based practices. In N. Pelling, J. Barletta, P. Armstrong, N. Pelling, J. Barletta, & P. Armstrong (Eds.), *The practice of clinical supervision* (pp. 56–80). Bowen Hills, QLD Australia: Australian Academic Press.

Petr, C. (Ed.). (2009). *Multidimensional evidence-based practice: Synthesizing knowledge, research, and values*. New York: Routledge.

Pollio, D. (2006). The art of evidence-based practice. *Research on Social Work Practice, 16*, 224–232.

Pollio, D., & Macgowan, M. (2010). The andragogy of evidence-based group work: An integrated educational model. *Social Work with Groups, 33*(2–3), 195–209.

Popay, J., & Williams, G. (1998). Qualitative research and evidence-based healthcare. *Journal of the Royal Society of Medicine, 91*(Supp 35), 32–37.

Powell, K., Abrefa-Gyan, T., Williams, C., & Rice, K. (2010, October 15). Perceptions and realities in evidence-based practice: Implications for social work education. Paper presented at the Annual Program Meeting of the Council on Social Work Education, Portland, Oregon.

Proctor, E., Knudsen, K., Fedoravicius, N., Hovmand, P., Rosen, A., & Perron, B. (2007). Implementation of evidence-based practice in community behavioral health: Agency director perspectives. *Administration and Policy in Mental Health, 34*, 479–488.

Rothstein, J. (2001). Clinical supervision–then and now: The professional development of social workers. *Reflections, 7*, 61–71.

Rubin, A. (2008). *Practitioner's guide to using research for evidence-based practice*. Hoboken, NJ: John Wiley & Sons.

Rubin, A., & Parrish, D. (2007). Views of evidenced-based practice among faculty in master of social work programs: A national survey. *Research on Social Work Practice, 17*, 110–122.

Shlonsky, A., & Gibbs, L. (2004). Will the real evidence-based practice please stand up? Teaching the process of evidence-based practice to the helping professions. *Brief Treatment and Crisis Intervention, 4*(2), 137–153.

Springer, D. W. (2007). The teaching of evidence-based practice in social work higher education – Living by the Charlie Parker Dictum: A response to papers by Shlonsky and Stern, and Soydan. *Research on Social Work Practice, 17*, 619–624.

Trinder, L. (2000). A critical appraisal of evidence-based practice. In L. Trinder & S. Reynolds (Eds.), *Evidence-based practice: A critical appraisal* (pp. 212–241). Ames, IA: Blackwell Science.

Wampold, B. (2010). *The basics of psychotherapy: An introduction to theory and practice*. Washington, DC: American Psychological Association.

Wike, T., Bledsoe, S., Manuel, J., Despard, M., Johnson, L., Bellamy, J., et al. (2014). Evidence-based practice in social work: Challenges and opportunities for clinicians and organizations. *Clinical Social Work Journal, 42*(2), 161–170.

Wike, T., Grady, M. D., Stim, H., Massey, M., Bledsoe, S. E., Bellamy, J., & Putzu, C. (in press). Newly-trained MSW social workers' use of evidence-based practice and evidence-supported interventions: Results from an online survey. *Journal of Social Work Education.*

Willer, J. (2009). The supervisor-supervisee relationship. In *The beginning psychotherapist's companion* (pp. 13–24). Lanham, MD: Rowman & Littlefield Publishers, Inc.

Zayas, L., Drake, B., & Jonson-Reid, M. (2011). Overrating or dismissing the value of evidence-based practice: Consequences for clinical practice. *Clinical Social Work Journal, 39*(4), 400–405.

# Chapter 20
# Continuing Issues Regarding Evidence-Based Practice in Practice

In the preceding chapters, we have attempted to show how social workers can use evidence-based practice (EBP) to enhance practice with their clients and how to incorporate the principles and steps of EBP into clinical decision-making processes. We think that the EBP process is a "public idea" that is actively shaping public opinion about health-care practices (Tanenbaum, 2003). It is also shaping funding and administrative practices, research funding priorities, and even research education for mental health professionals. Evidence-based medicine (EBM) and EBP have many supporters. For example, the Open Clinical (undated) organization states that:

For supporters, EBM has three main advantages:

> (1) It offers the surest and most objective way to determine and maintain consistently high quality and safety standards in medical practice; (2) It can help speed up the process of transferring clinical research findings into practice; (3) It has the potential to reduce health-care costs significantly.The approach, however, is not without its opponents. These consider that EBM risks downplaying the importance of clinical experience and expert opinion, and that the conditions under which clinical trials used to define best practice take place are hard to replicate in routine practice. (Benefits section)

Despite many potential advantages, there are also continuing issues regarding the use of EBP in clinical social work practice.

In this chapter, we summarize and review several of the unresolved issues and challenges raised about EBM and EBP. We hope that this review prompts the reader to think critically about EBP and social work. We also hope that this review will prompt discussions with others in the profession and promote solutions that make EBP more optimally useful in practice.

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_20

## Challenges to EBP in Practice

There are several challenges to the EBP movement. There are also challenges within the social work profession regarding the adoption and acceptance of EBP. In fact, EBP has been met with resistance by many social workers working in various settings (Bellamy, Bledsoe, Mullen, Fang, & Manuel, 2008; Murphy & McDonald, 2004; Nelson, Steele, & Mize, 2006; Pollio, 2006; Proctor et al., 2007; Rosen, 2003; Trinder, 2000a, 2000b).

Yunong and Fengzhi (2009) point out three preconditions for social workers to accept the EBP model. They state:

> First, research evidence must be relevant to social work practice; otherwise, it is meaningless and a waste of practitioners' time to use it. Second, social work practitioners should have adequate time and financial resources…Third, the benefits for using evidence for social workers should outweigh or at least be equal to the costs of using it… Accordingly, after adopting EBP, their salaries should be increased and their workloads decreased. Otherwise, it would not be reasonable to expect them to accept the EBP approach. (p. 178)

That is, (1) EBP research and practice must be consistent with social work purposes and values and useful in practice, (2) payers and administrators must provide resources and time to implement it fully, and (3) social workers should be compensated for learning and undertaking EBP practice. What follows is a discussion of some of the everyday challenges that social workers and other mental health professionals have documented that they face in using EBP in practice.

### *Social Justice and EBP*

As discussed previously in Chaps. 2, 3, and 4, for many social workers, EBP appears to be at odds with some of the core values of social work. These include inadequately addressing structural issues that may contribute to social justice concerns and further pushing social work toward a limited medical model orientation rather than promoting biopsychosocial and interdisciplinary models (Baines, 2006; Cristofalo, 2013; Murphy & McDonald, 2004; Rosen, 2003; Trinder, 2000a). With a heavy reliance on the medical model to orient practice questions and literature searches, systemic, cultural, and other social diversity issues are not given priority equal to individual pathology. This seems inconsistent with core social work value on social justice. It also devalues social work's unique person-in-environment worldview. Since most EBM/EBP research projects are aimed at individual interventions rather than the systemic causes of mental health problems, the focus of most research remains on the resolution of an individual's deficits rather than on the broader social structures that also contribute to human suffering, such as poverty, racism, or homophobia (Caputo & Mason, 2009). Similarly, EBP research rarely examines sources of strength and resilience in clients. This medical model approach may fail to address needs and practices in many "safety net" settings in which social workers practice to serve vulnerable populations (Cristofalo, 2013). Both Wells, Merritt, and Briggs (2009) and Mapp, Boutte-Queen, Erich, and Taylor (2008) note a racial bias in the lack of attention to populations of color in child welfare research. Social work's person-in-environment perspective and attention to the needs of diverse populations are needed to make EBP more useful in real-world practice.

We also note that most EBM/EBP research discussed in social work is directed to determining treatment outcomes. We have also purposefully adopted this focus in this book. Readers should keep in mind that EBP research can also address prevention programs and even the effects of policies (Oxford Centre for Evidence-Based Medicine, 2016: Rubin, 2008). Another focus of EBP research is the cost-benefit analysis of specific procedures. Yet social justice efforts have not yet been overtly and sufficiently included in the EBP framework, nor in prioritized for funding.

## *Limitations to Available Research*

While we note that EBP has begun to alter priorities for research funding, most treatments and service programs have not been studied using high-quality methods. The large number of specific DSM diagnoses, including their subtypes, means that more than 1000 specific diagnoses would need to be studied to even have a beginning database of "what works" in mental health. In reality most high-quality studies focus, appropriately, on high incidence and high-cost disorders such as depression, anxiety, and schizophrenia. This means that the concerns of many clients, including children and elders, are not well reflected in some Cochrane or Campbell systematic reviews for practice use. For example, Evans, Berkman, Brown, Gaynes, and Weber (2016) note that racial bias is evident in the available research on services for persons who have serious mental illnesses. Clinical social workers will have to search for individual studies on diverse populations which takes considerable time and expert research evaluation skills. There is also no guarantee that at the end of a search, the located and relevant results will offer clear and practical guidance for decision-making.

As social workers, we also think that DSM diagnoses are only starting points for evaluating real-world client needs. We have noted throughout this book that clients with comorbid disorders, with significant social stressors, and who may suffer from socially structured oppression are not yet well addressed by EBM and EBP outcome research. Galea, Tracy, Hoggatt, DiMaggio, and Karpati (2011) used a meta-analysis of the Medline research reports to estimate that 176,000 deaths in the United States in 2000 were caused by racial segregation, 162,000 to low social support, and 133,000 to individual-level poverty. They conclude that "the estimated number of deaths attributable to social factors in the United States is comparable to the number attributed to pathophysiological and behavioral causes" (Abstract). The evidence base on which EBM and EBP rest needs enormous expansion to be optimally useful for practice decision-making. Social work's person-in-environment worldview and focus on vulnerable populations can add significantly to the utility of EBM and EBP research.

There is also little evidence that the use of treatment manuals improves client outcomes. Truijens, Zühlke-van Hulzen, and Vanheule (2018) found no better outcomes with the use of treatment manuals, though they may create somewhat more consistency across settings and individual practitioners. They conclude that "Manualized treatment is not empirically supported as more effective than nonmanualized treatment. While manual-based treatment may be attractive as a research tool, it should not be promoted as being superior to nonmanualized psychotherapy for clinical practice" (Abstract, Conclusions).

Ironically, clinical social workers and others who undertake EBP literature searches often suffer from information overload (Greenhalgh, Howick, & Maskrey, 2014; Tanjong-Ghogomu, Tugwell, & Welch, 2009). Lots of information is available in print and online, but finding truly useful and relevant research results may be all the more difficult due to the sheer volume of available material. Even with sources for high-quality systematic reviews and excellent search tools, finding useful research can be like finding a needle in a haystack. Both the lack of specific research and the volume of available research information combine to make "doing" EBP difficult and time-consuming. Further, the time needed to research the best available evidence may not be compensated in many agency settings.

## *Realities of Real-World Practice*

Other critiques of EBP are that empirically supported treatments (ESTs) do not take into account the "messiness" of real-life practice (Bellamy et al., 2008; Murphy & McDonald, 2004; Nelson et al., 2006; Pollio, 2006; Proctor et al., 2007; Rosen, 2003). One social worker states that highly controlled studies are "irrelevant" and "absurd" (Nelson et al., 2006, p. 404) regarding their utility for practitioners. As discussed throughout this book, EBM/EBP researchers generally seek to study narrowly defined and tightly controlled samples to ensure homogeneity and strong internal validity. Most often, the selection criteria highlight only a single diagnosis or a diagnosis in combination with specific client demographic criteria (most often age and/or gender).

These limitations often translate into a very narrow group of individuals who are actually studied in EBP research. The samples may, or may not, be representative of the larger and more diverse, often multiproblem, populations who apply for clinical services. Results of high-quality studies may be based on samples that are quite different from the typical clients with whom a social worker is working. For example, a clinician is working with a 10-year-old Korean-American girl who has experienced a trauma and now has a diagnosis of post-traumatic stress disorder as well as a severe learning disability. It will be difficult to locate research reports that capture both her complex diagnostic picture and her specific cultural background. For social workers who work with diverse clients, applying the findings from a research study can feel unrealistic or impossible. One social worker in a study regarding the applicability of research findings to her practice stated, "Our kids don't come in nice neat packages. Most have multiple diagnoses, and I don't know what's out there for kids with multiple diagnoses" (Nelson et al., 2006, p. 409). Another stated "The research has to be with out-of-control kids, not control kids" (Nelson et al., 2006, p. 404). These quotes reflect the wariness that many social workers have about how to transfer what is done in a "lab" with what they see in the "real world."

## *Accessibility of Research*

For other social workers, the accessibility of research further limits the use of currently available knowledge. This has two parts. First, social workers find it difficult to locate research findings. Second, they also question their ability to understand and evaluate the research they can locate (Bellamy et al., 2008; Proctor et al., 2007). For example, a study aimed at translating empirically supported treatments (ESTs) into a community-based practice setting. One participating social worker said, "To me, the evaluations of the research, it's like really complicated, and the statistical stuff, to me, I start to zone out." Another said, "I can't see myself going through 15 articles and calculating the effect size" (Bellamy et al., 2008, pp. 63–64). Indeed, EBP research summaries can be very complex and detailed (Rousseau & Gunia, 2016). Most MSW level social work education does not adequately prepare clinical practitioners to critically evaluate research reports including statistical results. The plain language abstracts of Cochrane Collaboration and Campbell Collaboration systematic reviews may be easier to understand, but most still contain many unfamiliar statistics and may omit important caveats about the summarized research.

Further complicating the interpretation of research is that the majority of empirical research articles reporting findings regarding a particular intervention are not written for clinicians but for other researchers (Yunong & Fengzhi, 2009). This makes it a challenge for lay clinicians to understand the findings of different research projects and apply those findings to their own practices. We hope that through this book, we have made the evaluation of the research a bit more accessible and less daunting by sharing various ideas and resources. We also provide readers with research review materials in Chaps. 6, 7, and 8 and in the Glossary. However, the reality is that for many social workers, the prospect of evaluating research evidence remains a difficult and intimidating task. It is also a task that most social work agencies do not support adequately.

We also note that each of the literature searches completed for the cases in this book took no less than 3 hours. Where there was no systematic review, literature searches for individual articles often took much longer. Funding and other supports for the time to locate and to evaluate relevant research literature must be made available to make doing EBP realistic.

## *Ignores the Expertise of the Clinician*

We have emphasized throughout this book that the clinician is the "glue" that integrates the components of the EBP process. Still, many clinical social workers think that EBP ignores the expertise of the clinician. Some clinicians say that "Therapy is still an art" (Proctor et al., 2007, p. 483). Clinicians often believe that researchers do not understand the interpersonal processes that make up clinical practice. Some clinicians say that researchers need to be more informed about the nuances of actual practice and that many research interventions are unrealistic given practice realities (Brekke, Ell, & Palinkas, 2007). In addition, some argue that social work has been built as a profession, "very much around the clinical experience of people" (Murphy & McDonald, 2004, p. 131). The ability to form relationships with clients is seen as central to the work that social workers do in the field. Yet the role of the therapeutic relationship is not often included in EBM and EBP outcome research. The therapeutic relationship and the working alliance are also viewed as key active ingredients in clinical change by many clinical researchers in allied mental health professions. Studies that directly address clinical expertise should be part of EBP research.

Going even further, some social workers believe that EBP and lists of empirically supported treatments (ESTs) have been created by governmental or other monitoring bodies without regard for the actual needs of the clients or the challenges in implementing the interventions (Baines, 2006; Bellamy et al., 2008). As discussed in Chap. 2, the push by governmental agencies or managed care companies for the use of prescribed empirically supported treatments (ESTs) has created the feeling that clinicians cannot be trusted to design and implement their own interventions; rather they need an administrator or a manual to tell them what to do with their clients (Pollio, 2006). As such, many clinicians have resisted the movement, which they believe dismisses an essential part of their professional identity and expertise (Baines, 2006; Bellamy et al., 2008; Pollio, 2006).

We argue that health-care economics largely drives many efforts to limit professional autonomy individualized client choice. Health-care companies and public regulatory agencies use inconsistent standards to certify lists of ESTs. We have noted that insurance payers may endorse specific treatments despite the fact that Cochrane Collaboration and Campbell Collaboration systematic reviews show little or no support for these treatments. Health-care organization and public funding agencies should follow the lead of organizations that seek transparent and high-quality research results. The standards and decision-making processes of funders should also be open and transparent. That said, funders face the same limitations to finding high-quality outcome studies that clinicians face: there is simply no strong outcome research on many mental health-care issues, especially comorbid concerns, or on diverse populations.

## *Logistics and Realities of EBP Implementation*

Finally, there are concerns among social workers that EBP sounds like a wonderful concept in theory, but the logistics of implementing EBP and ESTs found in the search process render them unrealistic (Rousseau & Gunia, 2016). This is due to time, training, and money restraints that make it too difficult for many agencies to sustain such practices. Specifically, budget restrictions make it difficult for agencies to both fund the actual intervention found to be effective in a search and allow supervision and training time, all of which takes away from the productivity of the workers (Proctor et al., 2007).

Statements that express these sentiments come from two separate studies that interviewed practitioners and agency directors regarding the challenges of implementing and sustaining ESIs within their agencies. One agency director stated, "A treatment may be the best thing in the world, but if we can't fund it, we can't do it" (Nelson et al., 2006, p. 402). Another stated that "Supervision takes people off-line" (Proctor et al., 2007, p. 483). Other clinical social workers and agency directors have noted that high caseloads and the need to maximize billable time do not allow for the luxury of locating and reading research articles and attending training on various ESTs (Murphy & McDonald, 2004; Proctor et al., 2007). Administrative practices, and lack of time and pay, undermine the implementation of EBP.

To use an example to illustrate some of these challenges, imagine a clinician who meets with Chad, a 15-year-old Caucasian male who is involved in the juvenile justice system, has a diagnosis of conduct disorder, and is at risk of being placed out of his home. The clinician is interested in learning about the most effective interventions to help Chad with both the conduct disorder behaviors and to attempt to keep him in his home. After completing an initial search, the clinician finds that Multisystemic Treatment (MST) (Henggeler & Lee, 2003; Schoenwald, Brown, & Henggeler, 2000) appears to be and empirically supported treatment for the client's needs. The demographics of clients included in several outcome studies match with Chad's in terms of race, age, diagnosis, and presenting problem. On all accounts, MST seems like a very appropriate and potentially efficacious treatment for Chad. (We must note that a Campbell Collaboration systematic review of MST by Littell, Popa, and Forsythe (2005) questions its effectiveness regarding out of home placement, arrests, and convictions.)

The clinician's excitement about finding a likely effective intervention is quickly damped once she learns that MST can be conducted only through agencies that have acquired the training and licensing to provide this intervention (Schoenwald et al., 2000). In other words, unless her agency opted to get the training, receives the license, and follows the protocols of the licensing body for MST, she is unable to offer this service to her client. The agency where the social worker works is based in a small rural community, with a very limited budget and staff. It would be economically unrealistic for the agency to pursue the supervision and training needed to become a provider of MST. In the meantime, Chad's challenges remain. In searching for other options in her community, she learns that no local agency is a licensed MST provider. While the clinical social worker has found a good match for Chad and his needs, she is not able to offer him such a service, nor is she able to offer him other evidence-based alternatives within his own community.

The example of Chad highlights that EBP is a starting point in practice decision-making. Clinical social workers must use the best available evidence to inform their clinical decision-making, in conjunction with the client's stated needs, values, and goals. When the research points to only a few likely effective options, there is even more need for clinical expertise in interpreting and synthesizing all of the factors in the client's presentation. While the EBP search process located likely effective treatments for Chad, the practice realities obligated the clinician to revise the search and incorporate the additional information into the clinical decision-making process.

## *Questions Related to Modifying the Intervention*

Another challenge faced by social workers is whether modifying an intervention is appropriate and allowed in EBP. That is, must an EST be used only in full, exactly as the authors describe it? Many ESTs and ESIs, like multisystemic therapy or Linehan's dialectical behavior therapy (DBT), have strict treatment protocols that have been followed in efficacy studies to make for internally valid research. In the field, however, the realities of practice come into play. In practice it is up to the clinician to determine whether such interventions can be modified for the client's benefit. Questions include how, when, where, and in what situations should the intervention be modified.

> If we decide that there were some approaches or interventions that were useful, there is still a whole piece missing, and that is how we would actually implement–with whom, why, when–and that's not in the literature, that's where the creative part is. (Bellamy et al., 2008, p. 66)

Clinicians often make modifications to a treatment in order to combine the art and science of clinical practice (Graybeal, 2007; Messer, 2004; Pollio, 2006; Weinberger & Rasco, 2007). After doing so, however, can the clinician be confident that the modified intervention maintains the essential ingredients needed for it to be effective?

The clinician-researchers who have developed intervention models often work hard to ensure that only those individuals who have been trained and supervised in the model can legitimately state that they are actually using the model in practice. They do this to protect the treatment fidelity of the model. Such treatment models include MST (Schoenwald et al., 2000) and Eye Movement Desensitization and Reprocessing (EMDR; Shapiro & Maxfield, 2002). Yet, by copyrighting these interventions and certifying trained providers, they have become less accessible to many clients and clinicians due to financial, training, and supervision challenges.

If a clinical social worker uses a copyrighted treatment that he or she has learned about, and modifies it based on the needs of the client, can it still be labeled as the original model? If it does *not* prove to be effective with that client, did the model fail or was it the *way in which* the model was implemented that was ineffective?

Practice anecdotes indicate that clinicians and agencies do frequently modify copyrighted and detailed treatment protocols. These vary from minor alterations in content or timing of delivery to using only the group components of models that originally included both group and individual components. While modifying treatments may be common in practice, it is unclear how such modification fits with the EBP model. Delivering a modified treatment without research support may be a way of avoiding or evading EBP. It is also unclear if a modified treatment might open clinicians to legal suit for malpractice or for violation of professional ethics. This would appear to be a greater risk if the original treatment plan identified a specific model which was not fully delivered. Funders might also challenge payment for modified treatments. The issue of if, and if, how much, modification to ESIs is allowable in EBP remains minimally explored and unresolved.

## *Motivation to Use EBP*

A critical factor in the implementation of EBP is the motivation of the practitioner to use it. Rousseau and Gunia (2016) outline several factors that impact practitioners' motivation to implement EBP in their practices. They argue that the most important factor is the practitioner's behavioral beliefs. These "represent a favorable or unfavorable attitude toward the behavior, perceived behavioral control reflects an individual's belief that he or she is capable of the behavior, and normative beliefs reflect perceived social norms regarding the commonality of the behavior" (p. 676). Rousseau and Gunia say that when all three of these are high, the individual's intention is expected at the strongest level. (Note that these are quite similar to the preconditions for doing EBP that Yunong and Fengzhi (2009) set forth for social workers doing EBP describe at the beginning of this chapter.)

Rousseau and Gunia (2016) state that "Behavioral beliefs reflect the extent to which a behavior is seen as beneficial" (p. 676). They report that the perception is based on the practitioners' knowledge level of EBP, whether they perceive that there is a significant economic or psychological cost and whether they perceive that stopping their practice of non-EBP-based interventions is more difficult than adding in EBP. In other words, the more knowledge they have about EBP and the less of a burden they perceive it to be, the more motivated they will be to adopt EBP in their practices. (Note, too, that the client's values and preferences are not mentioned in this summary.)

Rousseau and Gunia offer a variety of suggestions for how to increase practitioners' motivation levels, including offering an EBP mentor, creating ties to leaders in the field who have favorable opinions, and practicing EBP in order to increase a sense of self-control and self-efficacy. In addition, they also emphasize the importance of creating a culture where EBP is "normal" within the organization and implementing policies and practices that reinforce a structure where EBP is emphasized. These include supervisory sessions emphasizing EBP and offering trainings and peer support where EBP is discussed and emphasized (Rousseau & Gunia, 2016). Racially, Yunong and Fengzhi (2009) add that compensation for professional work is also needed to motivate use of EBP in practice.

## *Social Workers Compared to Other Professionals in the EBP Movement*

Whether due to the concerns discussed above or to other issues, social workers have lagged behind other mental health and medical professionals regarding their training and knowledge of the EBP principles and empirically supported practice models (Brekke et al., 2007; Murphy & McDonald, 2004; Weissman et al., 2006). In a national study of accredited training programs in psychiatry, psychology, and social work, Weissman et al. (2006) found that social work programs required the least amount of training and supervision in ESTs in comparison to the other disciplines. This is despite claims by many social work programs that they provide strong clinical training. The authors concluded that "There is a considerable gap between research evidence for psychotherapy and clinical training. Until the training programs in the major disciplines providing psychotherapy increase training in EBT [evidence-based therapy], the gap between research evidence and clinical practice will remain" (p. 925).

This lack of training in social work programs surrounding EBP and the use of ESTs may have negative consequences for social workers who work in multidiscipline settings. In one study at a community hospital that delivers services through interdisciplinary teams, researchers surveyed the different disciplines about their perceptions of the knowledge base of the other professionals (Murphy & McDonald, 2004). Of all of the professions included, social work was the only one for which respondents raised concerns regarding a lack of knowledge and skills in using EBP. This puts social workers at a disadvantage when compared to other professionals on the same team. One nurse in the study stated that social workers "come from a non-medical background and they fit into teams, but often operate differently…it's pretty airy fairy" (p. 134). A physiotherapist stated in reference to social workers "some of them just don't have any real evidence base…they seem not to" (p. 134). The social workers themselves identified that their lack of knowledge of EBP "problematic" for them in their work settings and they felt that concerns were raised about the "validity of social work practice" on their teams (Murphy & McDonald, 2004, p. 132). One social worker stated that "Professionally we are being devalued because we're unable to compete in that context" (p. 134).

### *Including Human Diversity in EBP*

Social worker's professional values include an explicit focus on the needs of diverse and vulnerable populations. Several areas need further research to be optimally useful in practice: Cristofalo (2013) calls for more attention to vulnerable populations using "safety net" services who are disproportionately persons of color; Hemsing, Greaves, and Poole (2015) note that underserved women are routinely not offered basic health services such as smoking cessation help; Caputo and Mason (2009) note how family composition impacts client's use of services; Tsai et al. (2018) note racial bias on medical wards; Wang, Wong, and Humbyrd (2018) point out that payer eligibility requirements may limit medical services to people with other preexisting conditions who are disproportionately people of color. The list goes on. To be optimally useful, and to motivate social workers to do EBP, many and intersecting areas of human social diversity need to be much better represented in outcome research.

## Summary

The continuing issues raised above by clinical social workers and the profession's relationship with EBP are indeed challenging. We believe that in order for social work to remain a respected profession, it must find a way to balance the criticisms and concerns of EBP with the strengths presented in this book. As discussed previously, social workers are viewed by other professionals as having less knowledge of EBP when compared to other health and mental health professionals (Murphy & McDonald, 2004). In order for our profession to be seen as relevant and knowledgeable in today's current practice climate, social workers must embrace the tools needed to practice within an EBP context. We also need to take leadership is exploring these unresolved issues related to applying EBP in everyday clinical practice. Outcome research explicitly including populations of color; women; lesbian, gay, bisexual, and transgender populations; children; and elders is all needed.

Our goal in this chapter is to clearly present the challenges of doing EBP. We have already pointed out its many strengths through this book. We also provide in Appendix B a summary listing of both the strengths and the limitations of EBP. Learning, and critically examining, EBP will help clinical social workers understand its complexity from several different perspectives. We hope that readers will be motivated to think about how to help individual practitioners, and the profession as a whole, address these concerns.

## References

Baines, D. (2006). 'If you could change one thing': Social service workers and restructuring. *Australian Social Work, 59*(1), 20–34.

Bellamy, J. L., Bledsoe, S. E., Mullen, E. J., Fang, L., & Manuel, J. I. (2008). Agency-university partnerships for evidence-based practice in social work. *Journal of Social Work Education, 44*, 55–75.

Brekke, J., Ell, K., & Palinkas, L. (2007). Translational science at the National Institute of Mental Health: Can social work take it rightful place? *Research on Social Work Practice, 17*, 123–133.

Caputo, R., & Mason, S. E. (2009). The role of intact family childhood on women's earnings capacity: Implications for evidence-based practices. *Journal of Evidence-Based Social Work, 6*(3), 244–255.

Cristofalo, M. (2013). Implementation of health and mental health evidence-based practices in safety net settings. *Social Work in Health Care, 52*(8), 728–740.

Evans, T., Berkman, N., Brown, C., Gaynes, B., & Weber, R. P. (2016). *Disparities within serious mental illness*. Rockville, MD: Agency for Healthcare Research and Quality.

Galea, S., Tracy, M., Hoggatt, K., DiMaggio, C., & Karpati, A. (2011). Estimated deaths attributable to social factors in the United States. *American Journal of Public Health, 101*(8), 1456–1465.

Graybeal, C. T. (2007). Evidence for the art of social work. *Families in Society, 88*, 513–523.

Greenhalgh, T., Howick, J., & Maskrey, N. (2014). Evidence-based medicine: A movement in crisis? *British Medical Journal [BMJ], 348*, g3725. Retrieved from https://www.bmj.com/content/348/bmj.g3725.

Hemsing, N., Greaves, L., & Poole, N. (2015). Tobacco cessation interventions for underserved women. *Journal of Social Work Practice in the Addictions, 15*(3), 267–287.

Henggeler, S. W., & Lee, T. (2003). Multisystemic treatment of serious clinical problems. In A. Kazdin & J. Weisz (Eds.), *Evidence-based psychotherapies for children and adolescents* (pp. 301–322). New York, NY: Guilford Press.

Littell, J., Popa, M., & Forsythe, B. (2005). Multisystem therapy for social, emotional and behavioral problems in youth aged 10–17. *Campbell Systematic Reviews, 2005*, 1. Retrieved from http://www.campbellcollaboration.org/library.php (with search term multisystemic therapy).

Mapp, S., Boutte-Queen, N., Erich, S., & Taylor, P. (2008). Evidence-based practice or practice-based evidence: What is happening with MEPA and current adoption practices? *Families in Society, 89*(3), 375–384.

Messer, S. (2004). Evidence-based practice: Beyond empirically supported treatments. *Professional Psychology: Research and Practice, 35*(6), 580–588.

Murphy, A., & McDonald, D. (2004). Power, status, and marginalisation: Rural social workers and evidence-based practice in interdisciplinary teams. *Australian Social Work, 57*, 127–136.

Nelson, T., Steele, R., & Mize, J. (2006). Practitioner attitudes toward evidence-based practice: Themes and challenges. *Administration and Policy in Mental Health, 33*, 398–409.

Open Clinical. (undated). Evidence-based medicine (Benefits section). Retrieved from www.openclinical.org/ebm.html

Oxford University Centre for Evidence-based Medicine. (2016, May). The Oxford levels of evidence 2.1. Retrieved from https://www.cebm.net/2016/05/ocebm-levels-of-evidence/

Pollio, D. (2006). The art of evidence-based practice. *Research on Social Work Practice, 16*, 224–232.

Proctor, E., Knudsen, K., Fedoravicius, N., Hovmand, P., Rosen, A., & Perron, B. (2007). Implementation of evidence-based practice in community behavioral health: Agency director perspectives. *Administration and Policy in Mental Health, 34*, 479–488.

Rosen, A. (2003). Evidence-based social work practice: Challenges and promise. *Social Work Research, 27*, 197–208.

Rousseau, D., & Gunia, B. (2016). Evidence-based practice: The psychology of EBP implementation. *Annual Review of Psychology, 67*(1), 667–692.

Rubin, A. (2008). *Practitioner's guide to using research for evidence-based practice*. Hoboken, NJ: John Wiley & Sons.

Schoenwald, S., Brown, T., & Henggeler, S. (2000). Inside multisystemic therapy: Therapists, supervisory, and program practices. *Journal of Emotional and Behavioral Disorders, 8*, 113–127.

Shapiro, F., & Maxfield, L. (2002). Eye movement desensitization and reprocessing (EMDR): Information processing in the treatment of trauma. *Journal of Clinical Psychology, 58*, 933–946.

Tanenbaum, S. (2003). Evidence-based practice in mental health: Practical weakness meets political strengths. *Journal of Evaluation in Clinical Practice, 9*, 287–301.

Tanjong-Ghogomu, E., Tugwell, P., & Welch, V. (2009). Evidence-based medicine and the Cochrane Collaboration. *Bulletin of the NYU Hospital for Joint Diseases, 67*(2), 198–205.

Trinder, L. (2000a). A critical appraisal of evidence-based practice. In L. Trinder & S. Reynolds (Eds.), *Evidence-based practice: A critical appraisal* (pp. 212–241). Ames, IA: Blackwell Science.

Trinder, L. (2000b). Evidence-based practice in social work and probation. In L. Trinder & S. Reynolds (Eds.), *Evidence-based practice: A critical appraisal* (pp. 138–162). Ames, IA: Blackwell Science.

Truijens, F., Zühlke-van Hulzen, L., & Vanheule, S. (2018). To manualize, or not to manualize: Is that still the question? A systematic review of empirical evidence for manual superiority in psychological treatment. *Journal of Clinical Psychology*, 1–15. https://doi.org/10.1002/jclp.22712. [epub ahead of print].

Tsai, J., Brooks, K., DeAndrade, S., Ucik, L., Bartlett, S., Osobamiro, O., et al. (2018). Addressing racial bias in wards. *Advances in Medical Education Practice, 21*(9), 691–696.

Wang, A. Y., & Wong, M., & Humbyrd, C. (2018). Eligibility criteria for lower extremity joint replacement may worsen racial and socioeconomic disparities. Clinical Orthopedic Related Research. https://doi.org/10.1097/CORR.0000000000000511. [electronic publication ahead of print].

Weinberger, J., & Rasco, C. (2007). Empirically supported common factors. In S. G. Hofmann & J. Weinberger (Eds.), *The art and science of psychotherapy* (pp. 103–129). New York, NY: Taylor & Francis Group.

Weissman, M. M., Verdeli, H., Gameroff, M. J., Bledsoe, S. E., Betts, K., Mufson, L., et al. (2006). National survey of psychotherapy training in psychiatry, psychology, and social work. *Archives of General Psychiatry, 63*, 925–934.

Wells, S., Merritt, L., & Briggs, H. (2009). Bias, racism and evidence-based practice: The case for more focused development of the child welfare evidence base. *Children and Youth Services Review, 31*(11), 1160–1171.

Yunong, H., & Fengzhi, M. (2009). A reflection on reasons, preconditions, and effects of implementing evidence-based practice in social work. *Social Work, 54*(2), 177–181.

# Chapter 21
# Conclusion: The Evidence for Evidence-Based Practice

Throughout this book, we have attempted to show how to implement the evidence-based practice (EBP) decision-making process in a way that feels manageable and realistic in everyday clinical practice. We hope that the previous chapters have provided practitioners with the tools and the knowledge necessary to have confidence in their ability to use EBP to inform practice decisions in many settings and with a wide range of clients. While EBP is a process with both strengths and limitations, we believe that social workers must engage with EBP as a way of providing the best possible care to the clients they serve. Evidence-based medicine (EBM) and EBP are valuable steps toward realizing Dr. Archie Cochrane's (1972) goals of increasing effective treatments, reducing benign treatments, and eliminating harmful and ineffective treatments. EBP is an important step in improving client outcomes and professional accountability. EBP moves social work from the "empirically based practice" world of single case outcome evaluation into the realm of large-scale, experimentally based, outcome research.

We have examined EBM and EBP from three different perspectives. First, EBP is widely promoted as a practice decision-making process. Second, EBP is also actively used to promote certain administrative and economic interests. Third, we argue that it is also used to promote certain research priorities and academic positions. We think all three perspectives help professionals understand the complexity of EBM and EBP as "public ideas" and as social movements. Looking at EBP only as a practice decision-making process omits the context in which it is promoted, critiqued, funded, and researched.

Still, EBM and EBP are most often discussed as practice decision-making processes. This is indeed the perspective of the McMaster Group of physicians who have so clearly and effectively promoted the inclusion of population-based scale experimental outcome research into routine clinical practice (Guyatt, Rennie, Meade, & Cook, 2008; Sackett, Rosenberg, Muir Gray, Haynes, & Richardson, 1996). The EBP practice decision-making process is also widely promoted within

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6_21

social work (Drisko, 2013, 2017; Drisko & Grady, 2015; Gambrill, 2001; Gibbs, 2002; Thyer, 2011). We agree this is a key, and valuable, part of EBM and EBP.

The six-step EBM/EBP practice decision-making process provides a clear method for social workers to identify, locate, evaluate, and utilize research knowledge for practice. While we find the steps of the EBP process very useful, we also note that they are silent on assessment. To start the EBP practice decision-making process, a high-quality, thorough assessment is assumed. We think assessment can be a challenging process and is often incomplete. We are concerned that contemporary clinical practice policies and administrative practices do not always allow for the thorough assessment that is the hidden foundation of the EBP practice decision-making process (Grady & Drisko, 2014). We offer an outline of a social work assessment in Appendix A.

The EBP process begins by requiring a clear formulation of the practice issues presented by your client. The EBP process then promotes location and evaluation of relevant population-based research. Recent innovations in online materials and search tools aid in the location of research results. New international professional organizations have developed and promoted preliminary standards for evaluating clinical research. They have also developed libraries of high-quality research results, most notably the Cochrane Library for medical and psychiatry topics and the Campbell Library for social welfare, education, and criminal justice topics. While these libraries may lack results on any given practice topic of interest to clinical social workers, their knowledge bases are growing rapidly. Social workers are increasingly authors of systematic reviews.

The contemporary EBM and EBP practice decision-making process obligates active and collaborative discussion with the client about the alternative treatments and services located in the research review. While some medical texts on EBM appear to make this step a simple "reporting out" of research results, clinical social workers may use it as an opportunity to actively involve clients in decision-making. This is an important part of obtaining truly informed consent from a client for participating in treatment. We believe collaborative discussion is consistent with core social work values and useful for engaging clients in the therapeutic process. Active engagement in informed, shared practice decision-making can be an empowering aspect of practice. EBP also allows client values and preferences to override research results in practice decision-making. In this way issues of cultural, religious, and other client values can be discussed and incorporated into treatment planning. The EBP practice decision-making process highlights the critical importance of professional expertise in combining clinical circumstances, client values, and preferences with research knowledge to guide practice. The EBM/EBP movement has actively promoted the use of quantitative research results in practice decision-making, but it neither omits professional expertise and judgment nor client views and autonomy.

It is our position that practice evaluation is an integral part of doing good practice. We find merit in many forms of practice evaluation. However, we think the experimental, population-scale research logic highlighted in EBM and EBP research is very different from the single case evaluation methods used to evaluate everyday practice efforts. Single case evaluation does not necessarily allow the determination of cause and effect relationships fundamental to the EBP research hierarchy. It may reflect the perspective of researchers unfamiliar with practice that evaluation is "tacked on" to EBP, while assessment is omitted from it. We support the importance of ongoing monitoring and practice evaluation but do not view it as part of the EBP practice decision-making process. We understand that professionals may have different views on this issue.

## Other Perspectives on EBP

To understand EBM and EBP more fully, it is also important to examine these social movements from multiple perspectives. The practice decision-making process is one key part of EBM and EBP, but it does not capture the movement in full. How EBM and EBP are promoted for economic purposes at policy and administrative levels. How they are used to promote and privilege certain types of research also matter. How EBP shapes research will have important consequences for education in social work and allied professions and for clinical supervision.

Just how client values and preferences, and how clinician expertise, are identified, defined, and included in the macroscale applications of EBP remains unclear. Macro applications of EBP, currently, seem to leave out the individual client or a similar source of individualized feedback. This shifts them toward an expert judgement model which may lose connection to direct clinical practice. Macro applications of EBP also do not appear to include, or even to consider, the expertise, settings, and limitation of clinical practitioners in agency settings. Here we see again how the definition of EBP matters and varies widely: the four parts of the EBP/EBM process do not always have parallel components when EBP/EBM is imagined at macro-level. Microscale and macroscale applications of EBP seem to be very divergent processes though they use the same name.

## EBP as a Shaping Influence on Research and Education

From a second perspective, EBP and population-scale research are vital sources of knowledge for practice. Dr. Archie Cochrane's effort to increase effective treatments, reduce ineffective treatments, and eliminate harmful treatments is a very worthy endeavor. That this viewpoint has been adopted worldwide shows its value. Yet large-scale, population-based research cannot be the only source of knowledge used to inform and expand social work's knowledge of what helps clients achieve their goals. Other kinds of knowledge and other types of research must also inform clinical social work practice and the policies that shape it (Lietz & Zayas, 2010). We find merit and worth in both EBP and in "many ways of knowing" (Hartman, 1994). We note that the current Council on Social Work Education (2015) Educational Policy and Accreditation Standards requires attention to many ways of knowing, which we think should include Indigenous and qualitative research methods. Nonexperimental research allows for innovation and discovery in ways that are necessary to learn about changing practice needs and changing social circumstances. Such methods also allow for discovery and inclusion about social diversity in ways that are too often omitted or underrepresented in EBM and EBP research. Maximizing the internal validity of research on practice is a worthy goal for many important purposes. Still, the results of experimental research must address the questions and needs of clinical social work practitioners more fully to encourage them to make the best use of EBP. Questions of *what* generates changes in clinical practice and *how* individual clinicians and their agencies impact practice outcomes need further study. Questions about modifying empirically supported treatments to meet specific client needs and service limitations also need further conceptualization and study. Such research should not be at odds with high-quality quantitative studies of the outcomes of clinical social work practice.

EBM and EBP are actively shaping research training, priorities, and funding. They promote large-scale experimental research methods and medical model views of problems and outcomes. In academics, they also shape the content of research courses. We argue that EBP has many merits but does not always value and encourage diverse ways of knowing. From one perspective, it is a battleground for defining "the best research" when different research methods are appropriate to varied research questions, varied research purposes, and varied audiences who need research information. There is no single "best" approach to research. Social work students should be educated in many different research approaches and methods for different uses.

Social work educators have a long way to go to help practitioners understand the research methods used in EBP and to critically appraise EBP results. This book provides detailed information on how to implement EBP in clinical social work practice. Littell, Corcoran, and Pillai (2008) provide an excellent introduction to the details of interpreting systematic reviews. Gilgun's (2005) "Four Cornerstones of Evidence-Based Practice" provides a valuable introduction to EBP research assumptions and methods. Many social work texts on research methods offer useful starting points for understanding EBP research. Still standards for accreditation only broadly promote "research-informed practice" and "practice-informed research" (CSWE, 2015, Competency 4). How to more actively include the knowledge and expertise of clinical social work practitioners, and that of clients, must be explored and resolved. EBP shaped and guided only by researchers will not be fully embraced by real-world practitioners, nor will it fully meet the needs of real-world clients.

## EBP as a Public Idea that Shapes Policy and Practice Funding

From a third perspective, EBM and EBP are public ideas that are being actively used in the process of managing health-care costs. This is an important public issue affecting rich and poor, old and young. To make health care accessible to the greatest number of people, efficiency is important. *How* such decisions are made matters to both professionals and to our clients.

Dr. Archie Cochrane believed improving patient outcomes and reducing ineffective treatments would simultaneously reduce overall health-care costs. This may be more likely in countries with single-payer, national health-care systems than in countries with a patchwork of paid insurance plans and many for-profit health-care corporations. Health-care costs in the United States have increased far beyond the average level of overall inflation for many years. Annual increases in health-care costs outpace both increases in inflation and personal income (Levingston & Tozzi, 2018; Patton, 2015). Health-care costs and cost increases have reached a crisis point.

In this context, the public ideas of EBM and EBP actively shape public opinion (Tanenbaum, 2003). As quoted in Chap. 2, the conflict between professional autonomy and administrative oversight of EBP is often portrayed as competent, research-informed administrators pitted against ineffective and incompetent practitioners. Using the EBP practice decision-making process makes clear that clinical social workers are research informed. Yet if a goal of the tighter administrative oversight of practitioners is to limit the types and number of treatments and services solely to generate cost savings, practitioners must be much more active critical voices in the health-care debate. We find it odd that the lists of "empirically supported" treatments and services created by states and insurance companies often do not match with the treatments found to be effective by Cochrane Collaboration and Campbell Collaboration systematic reviews. It is often quite unclear *who* created these lists of funded treatment and *what standards* they applied in making these determinations. A basic premise of EBM and EBP systematic reviews is transparency that readers can review exactly how research knowledge was generated and aggregated in great detail. Such transparency is often lacking in the lists of approved treatments and services created by states and insurance companies. We argue that it should be fully transparent for professionals and for the people who pay for coverage. Administrators, policy makers, and funders might more fully embrace and enact the methods of the EBP movement.

## Making the Most of Professional Expertise

The professional expertise and knowledge of clinical social work practitioners is one vital part of the contemporary EBP process. EBM and EBP embrace and include professional expertise in the application of the EBP practice decision-making process. We argue that professional expertise should be much more widely incorporated into the definition of EBP questions and its research methods. We also argue, along with Petr (2009), that client's views and multiple voices should be much more part of the EBP research. EBP should expand from a narrow view of symptom reduction to a larger view that also includes enhancement of capacities and empowerment. Such a larger view of the outcomes of effective treatments is more fully consistent with social work's core professional values.

We note that EBP provides a forum in which social workers can disseminate their research and practice wisdom in an intentional manner. When clinical social work practitioners contribute to research and knowledge about what works in treatment, the field, the profession, and, most importantly, clients benefit. Social workers have an opportunity to help shape how EBP is understood and implemented. We must use this influence to support high-quality practice processes and outcomes and to ensure our efforts best meet the needs of our clients at macro-, meso-, and micro-levels.

## Staying Close to Cases and to the Realities of Clinical Social Work Practice

As we have attempted to show through the case examples examined in this book, there are still significant gaps in the research knowledge of what works in treatment for certain clinical presentations and for certain populations. EBP is based on the assumption that evidence should inform treatment, yet there are many times when little or no high-quality evidence is available to inform the practitioner about what forms of intervention have been shown to be effective with similar clients. Intervention outcome research is a growing yet limited body of knowledge. The professional knowledge and expertise of clinical social work practitioners will be a critical component in increasing this body of knowledge around what actually works in practice.

Professional expertise and practice wisdom are the integrating factors in EBP. We argue that the EBP decision-making process pays much too little attention to assessment. The EBM and EBP models appear to assume a thorough and adequate assessment has been completed, though many contemporary mental health policies and administrative practices fail to support thorough assessment. Single-session assessment is often insufficient to learn about a client's needs and circumstances. Clinical social work uses many different models of assessment which address different aspects of client's needs and situations. These models also formulate clinical needs and problems in ways that go far beyond symptom reduction. Most require multiple measures of outcome to demonstrate effectiveness. How EBP fits with the models of assessment clinical social workers' use needs more examination. More research on the kinds of complex problems social workers confront in practice also needs to be completed.

Even with an accurate assessment, clients may still be offered services that are inappropriate for them. There is a growing emphasis within many mental health and human service organizations to offer clients a selection of empirically supported treatments (ESTs) or empirically supported interventions (ESIs). Some funders and policy makers restrict money and other benefits, such as certification or licensing, to organizations that do not deliver a pre-selected set of ESTs or ESIs that have been identified by these third parties as "effective" (Proctor et al., 2007). One administrator who was interviewed in Proctor et al.'s (2007) study stated, "There's not going to be a new dollar on the street that's not going to be associated with EBPs. Period…. There's not going to be a new dollar that comes out to do non-EBPs" (p. 488). As noted, such lists of ESTs and "EBPs" may be inconsistent with the results found by independent searches of the Cochrane or Campbell databases for the same disorders. With such policies, there is a risk of clients only being offered a limited type of services that do not align with their needs and personal goals. Practitioners may be put in a position of having to offer services that they know are not appropriate for the client. Neither client values and autonomy nor professional expertise is honored; the EBP practice decision-making process is overridden by administration. In those instances, it is essential to refer clients to other agencies that may provide a better fit for the needs of the clients. Yet due to financial realities, there may be pressure to encourage clients to remain at the original agency, so it will not lose potential revenue. Agencies, policy makers, and providers all want to offer clients treatments that work. How restrictive or limited is the vision of "what works," and from whose point of view effectiveness is assessed, will be important to watch as EBP is embraced in various practice settings.

## Is EBP Effective?

EBP is based on the premise that clinicians should be using evidence to inform their practice decisions, yet there is no evidence on whether using such an approach actually improves outcomes with mental health clients (Greenhalgh, Howick, & Maskrey, 2014; Trinder, 2000; Westen, 2006). In using the model of population-scale research, there have been no trials in which randomly selected clinicians are divided into groups that use EBP and do not use EBP, then comparing which clients had better outcomes. (Note that such a study would likely have many confounds, low internal validity, and some ethical challenges.) While everyone appears to agree that using evidence is a good thing, it is still not clear whether adopting this process will measurably improve the outcomes for the clients whose social workers serve in their practice settings. Nor is it clear that EBP will reduce service costs (Stetler & Caramanica, 2007).

We raise this issue not to dismiss or negate any parts of what we have described throughout this book. EBP is a valuable, individualized process for determining the best possible treatment options for clients and should be part of clinical decision-making. Well-conceptualized, high-quality research can help improve practice outcomes. However, it is important to note that just as in many areas of social work, there is much still unknown about what happens during the change process. The mechanisms behind clinical changes in mental health need further study and identification. In the meantime, clinical social workers must use all forms of knowledge that are available to them, as they work tirelessly with their clients to find solutions to the complex internal and external experiences with which our clients struggle.

We encourage clinical social workers to learn about, engage with, and critically examine both the strengths and limitations of EBP. It is an important social movement and a practice decision-making process that will better inform clinical practice. The voices and views of both clinical social workers and our clients must be active components of the future of EBP.

## References

Cochrane, A. (1972). *Effectiveness and efficiency: Random reflections on health services*. London: Nuffield Provincial Hospitals Trust.

Council on Social Work Education (CSWE). (2015). *Educational policy and accreditation standards*. Alexandria, VA: Author.

Drisko, J. (2017). Active collaboration with clients: An under-emphasized but vital part of evidence-based practice. *Social Work, 62*(2), 114–121.

Drisko, J. (2013). Research evidence and social work practice: The place of evidence-based practice. *Clinical Social Work Journal, 42*(2), 123–133.

Drisko, J., & Grady, M. (2015). Evidence-based practice in social work: A contemporary perspective. *Clinical Social Work Journal, 43*(3), 274–282.

Gambrill, E. (2001). Social work: An authority-based profession. *Research on Social Work Practice, 11*, 166–175.

Gibbs, L. (2002). *Evidence-based practice for the helping professions: A practical guide*. New York: Brooks-Cole.

Gilgun, J. (2005). The four cornerstones of evidence-based practice. *Research on Social Work Practice, 15*(1), 52–61.

Grady, M. D., & Drisko, J. (2014). Thorough clinical assessment: The hidden foundation of evidence-based practice. *Families in Society, 95*(1), 5–14.

Greenhalgh, T., Howick, J., & Maskrey, N. (2014). Evidence-based medicine: A movement in crisis? *British Medical Journal [BMJ], 348*, g3725.

Guyatt, G., Rennie, D., Meade, M., & Cook, D. (2008). *Preface to users' guides to the medical literature: Essentials of evidence-based clinical practice* (2nd ed.). New York: McGraw-Hill.

Hartman, A. (1994). Many ways of knowing. In W. Reid & E. Sherman (Eds.), *Qualitative research in social work* (pp. 459–463). Washington, DC: NASW Press.

Levingston, I., & Tozzi, J. (2018, February 14). Health prices to outpace inflation for first time since 2010. *Bloomberg News*. Retrieved from www.bloomberg.com/news/articles/2018-02-14/health-prices-to-outpace-inflation-for-first-time-since-2010

Lietz, C., & Zayas, L. E. (2010). Evaluating qualitative research for social work practitioners. *Advances in Social Work, 11*(2), 188–202.

Littell, J., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analysis*. New York: Oxford University Press.

Patton, M. (2015, June 29). U.S. health care costs rise faster than inflation. *Forbes*. Retrieved from www.forbes.com/sites/mikepatton/2015/06/29/u-s-health-care-costs-rise-faster-than-inflation/#656c49396fa1

Petr, C. (Ed.). (2009). *Multidimensional evidence-based practice: Synthesizing knowledge, research, and values*. New York: Routledge.

Proctor, E., Knudsen, K., Fedoravicius, N., Hovmand, P., Rosen, A., & Perron, B. (2007). Implementation of evidence-based practice in community behavioral health: Agency director perspectives. *Administration and Policy in Mental Health, 34*, 479–488.

Sackett, D., Rosenberg, W., Muir Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Editorial: Evidence-based medicine: What it is and what it isn't. *British Medical Journal, 312*, 71–72.

Stetler, C., & Caramanica, L. (2007). Evaluation of an evidence-based practice initiative: Outcomes, strengths and limitations of a retrospective, conceptually-based approach. *Worldviews on Evidence-Based Nursing, 4*(4), 187–199.

Tanenbaum, S. (2003). Evidence-based practice in mental health: Practical weakness meets political strengths. *Journal of Evidence in Clinical Practice, 9*, 287–301.

Thyer, B. (2011). *Evidence-based practice versus practice-based research*. Paper presented at the Society for Social Work and Research, Tampa, FL, January 15, 2011.

Trinder, L. (2000). A critical appraisal of evidence-based practice. In L. Trinder & S. Reynolds (Eds.), *Evidence-based practice: A critical appraisal* (pp. 212–241). Ames, IA: Blackwell Science.

Westen, D. (2006). Transporting laboratory validated treatments to the community will not necessarily produce better outcomes. In J. Norcross, L. Beutler, & R. Levant (Eds.), *Evidence-based practices in mental health* (pp. 383–392). Washington, DC: American Psychological Association.

# Appendix A: An Outline for a Biopsychosocial Assessment and Intervention Plan

## Referral

How and why did the client(s) get to the agency? Is the client self-referred? Is the client voluntary or involuntary? Is the need acute (also called emergent)?

## Description of Client

Who is the client? Briefly document relevant identifying information including: Age, gender identity, marital/partner status, race, ethnicity, sexual orientation, religion, social class, income source(s), disabilities, level of education, prominent health and/or medical issues, medications, substance use, and legal issues.

## Presenting Issues and Concerns

What are the client's complaints? What are the larger presenting issues? How does the client view these concerns/issues? How do other people (family, friends, agency, work, school, courts, physicians, religious community, you, etc.) view the concerns/issues?

When did these concerns/issues begin? Is there an identifiable precipitant? Why is the client coming in now?

How has the client dealt with these or similar concern/issues in the past? What would the client most want help with? What supports have been helpful to the client in the past?

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6

## Assessment of Relevant Contextual, Historical and Intrapersonal Factors

(a) *Current context*. What are the family, social community, work, and other issues relevant to an understanding of the client and the problem? (An eco-map and/or a family genogram, identifying family and environmental resources may help clarify these intertwining issues.)

- Are the client's basic needs met? (Housing, food, clothing, utilities, emergency or situational needs like diaper services or money for medicine or care of pets while inpatient?) What are the clients' strengths in meeting basic needs? Are these needs met in a culturally appropriate/sensitive manner?
- What are the clients' income sources? Are they stable? Can they be improved? What are the clients' strengths in meeting basic needs? Is this income obtained in a culturally appropriate/sensitive manner?
- Are there issues related to socially structured oppression, such as racial or ethnic discrimination (present and past), gender-based discrimination, age-based discrimination? How does the client view these as connecting with the presenting complaints? Are there supports to address these issues in place? If not, what supports, including joining social action, are available?
- Are there issues of substance use/misuse presently or in the past? (If so, a detailed substance use assessment is indicated.) What has exacerbated or reduced the need to use substances? What social factors support or reduce substance involvement? Are the services culturally appropriate?
- Are there language issues for the client in the services and communities to which they relate? In meeting basic needs? In the school or workplace? Are interpreters available? Is language training accessible if sought? What strengths and challenges does language pose for the clients?
- If the client has disability issues, how adapted/accessible are home, neighborhood, workplace, schools, stores, and professionals? How are communication needs met? How are transportation needs met? Does the client have access to needed equipment for safety and for daily living skills? Does the client have training to use such equipment/devices? How is this disability understood in the clients' cultural context? What strengths are evident related to this disability? Are the services culturally appropriate?
- Are the client's medical and dental needs met? (This includes routine check-ups, assessment of illnesses, emergency care, immunizations, dental care, rehabilitation services, access to medications or rehabilitation equipment, access to nursing help, and access to long term care, etc.). Are the services culturally appropriate? Accessible?
- Are the client's safety needs met? (Domestic violence, abuse or neglect of children or elders, gender and/or racial discrimination, violence in housing, neighborhood, and specific threats?) Is the client's physical environment safe? (Free of fire hazards, with accessible fire escapes, no lead paint, etc.?)

- Does the client pose a hazard to the safety of self or others; specifically, is there suicide risk or lethality risk? Fire setting risk? (If any of these apply, a specific detailed evaluation and documentation is also required.)
- Is domestic, partner or marital violence an issue? If so, is a safety plan in place? Is the plan culturally appropriate?
- Are there child protective, disability or elder protective issues for the clients? If so, is there a service plan? What services are involved? What services/needs are ignored?
- Are there legal issues for the clients? Any court involvement, restraints, obligations? Are there obligatory services, costs, or settlements unpaid?
- What is the client's immigration status? Could this be a source of being unsafe or exploited?
- Does the client have other connections to spirituality? How do these (religion and/or spirituality) shape the meaning of the client's life?
- What are the client's recreational interests? How and where are these met? Are there barriers to recreational activities?
- What is the client's religion or spiritual beliefs? What level of involvement do they have with their religion or spiritual organization, its practices and its community?
- What are the client's key social supports? Are they accessible? Are the services culturally appropriate?
- Are there important social policy or social structural aspects to the client's situation and problem? Has (or could) the client join with others to address these issues? How? What's a typical day like? Does the client show ability to eat, sleep, work, play, interact with others in a self-regulating and enjoyable manner? What's rewarding? What are small concerns (I'd like to lose weight, or eat better, or stop smoking, etc.)

(b) *Historical influences*. Summarize, as relevant, past material about

- Client's childhood, including developmental history
- Relationships with family of origin,
- School and work history,
- Previous experiences with social, medical or psychological services,
- Intimate relationships.

(c) *Coping strengths and weaknesses.*

- What are the client's key self-reported strengths? Are there other strengths you observe or can infer?
- How does the client typically handle intense emotions? How is self-soothing done?
- How does the client handle being alone?
- How does the client process information? Protect themselves from anxiety and stress? Who do they turn to for support and nurturance?

- How does the client characteristically interact with others? Are these strategies successful in meeting the client's needs? Are they routinely problematic? Can the client show flexibility in style of interaction?
- How do these strengths, challenges and abilities fit with the client's social and institutional resources? What resources or obstacles facilitate or inhibit the client's mastering current issues/concerns?
- What role do current life cycle tasks play in relation to the concerns and issues that have been identified?

## Formulation

Develop a brief, clear, biopsychosocial summary of the above material that integrates relevant developmental, theoretical (i.e. psychodynamic, cognitive-behavioral, P-I-E, family systems, or risk and resiliency), family, and sociocultural issues. How would you state the client's dilemma in easily understood words that capture the key concerns and strengths?

## Plan for Intervention

Drawing upon the formulation, describe your plan for intervention. Identify your goals, separating immediate from long term. What would be the core elements of a treatment contract with this client? Are there elements that might be uncomfortable or unacceptable to the client?

## The Best Research Evidence

Given the proposed plan for intervention, what does the research evidence indicate are the best likely effective treatments or services to discuss with the client? Are the treatments realistically available and can they be funded? Are these treatments likely to be acceptable to the client?

## Values and Ethics: The Worker's Own Values and Experience

What are the value, ethical, diversity, personal reactions, and other challenging issues that surface in this case? Will these alter what you can offer and provide?

## Organizational Issues

How will your agency mission and practices shape further service delivery? What organizational factors aid successful services for this case? What factors are barriers or impede services for this case?

## Social Change Goals

What social change goals can be part of, or related to, your work with the client? These may be at the case level or at the 'cause' level affecting more than just this client. What resources might you mention to the client as ways to promote the changes they wish to help make? What resources might you help connect the client with to promote these changes? How might you work to promote social changes related to this client and case?

# Appendix B: A Bullet Point Summary of the Merits and the Limitations of Evidence-Based Practice

In this appendix we offer a very brief overall summary of the merits evidence-based medicine (EBM) and evidence-based practice (EBP) and the concerns and issues scholars and practitioners have raise about it. Each of these issues has been examined in greater detail in this book.

## The Merits of EBP

### *The General and Practice Merits of EBP*

1. EBP offers a method for clinical social workers to include the use of research evidence in treatment planning, in diagnostic determination, and in the understanding of etiology and prognosis. It helps clients and clinicians select among treatments in an informed manner that includes knowledge of comparative outcomes for large samples. EBP provides policy planners with important data for determining the cost-benefit of specific treatments and procedures.
2. The current EBP practice decision making model makes research evidence one key part of practice decision making while also emphasizing the client's clinical needs, the client's values and preferences, and the clinical social worker's expertise. Specific aspects of the clinical picture, the client's values and preferences may over-ride research evidence in clinical decision making. Clinical expertise is used to determining the relative emphasis to be placed on each component of the practice decision making process and to address any practical limitations of potentially useful treatment plans.
3. EBP should help keep practice up to date. The obligation to search *current* research will bring new knowledge to bear on practice. It should speed up the translation and application of new knowledge in day to day clinical practice.

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*, Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6

4. The EBP can help ensure that nothing is overlooked when the EBP practice decision making process is fully applied after a thorough clinical assessment.
5. EBP should help make practice more effective, ideally for individual clients as well as for clients with the same disorder in the aggregate.
6. Evidence-based practice can empower clients and clinicians to develop independent views and positions regarding practice claims and controversies. It supports their ability to make alternative treatment choices with an informed, clear rationale.

## Methodological Merits

1. Well conceptualized and carefully implemented experimental studies (RCTs) of large samples provide a strong basis for documenting that a specific treatment causes specific outcomes. Carefully applied, these research designs have strong internal validity. This allows researchers to say that a specific treatment *causes* a specific change (or does not cause such a change,)
2. The use of probabilistic, statistical methods proves a clear and well-developed method for making decisions about differences among treatments. EBP applies a well-developed technology for making claims that a specific treatment leads to a specific change (or does not lead to such a change).
3. EBP promotes the aggregation of multiple studies on a topic. This emphasis has the practical effect of increasing the combined sample size on which calculations and decisions are made. It benefits clinicians by emphasizing large scale calculations of outcomes; allowing for better representation of large populations than do individual studies (that often use small samples).
4. EBM/EBP, and particularly the efforts of Cochrane Collaboration methods groups, have led to the creation of quality standards for systematic reviews of research that are transparent and very demanding. Other groups have created standards for reporting systematic reviews that both promote quality and help readers understand the research processes being reported.
5. The aggregation of multiple RCTs through carefully conceptualized and implemented systematic reviews provides a clear methodology (including statistical meta-analysis) for determining the magnitude of treatment effects (i.e., effect sizes, odds ratios, number needed to treat). This aids comparison of treatment effects.
6. The aggregation of multiple RCTs also provides a clear methodology for identification of treatment risks and harms that might not be identified in small scale outcome studies (so long as the measured outcomes are wide ranging).

## Administrative and Policy Merits

1. Both for individual clients and in many clients in the aggregate, EBP should make practice more efficient, by increasing the use of effective treatments and reducing the number of ineffective, benign and harmful treatments delivered. This should reduce overall costs.
2. EBM/EBP provides a methodology to help policy makers and funders make choices about which treatments are effective and which are benign, ineffective or harmful.
3. EBM/EBP provides a clear rationale for making funding choices.
4. EBP may provide a rationale for the determination of comparative provider effectiveness.

## Research Merits

As noted in the Methodological Merits section above, EBM and EBP have led to many refinements and elaborations of research methods. EBP represents the application of very large scale (population scale) epidemiological research methods and results to clinical practice decision making. It is an expanded application of an existing, and well developed, research methodology, rather than a new form of research endeavor.

1. EBM and EBP have identified, and actively promoted, the need for many more studies of treatment outcome and effectiveness (as well as the effectiveness of diagnostic procedures, the etiology of illnesses and disorders, and the prognosis of disorders). EBM and EBP provide a strong rationale for increasing research funding.
2. EBM and EBP have shifted research funding priorities heavily toward studies of the effectiveness of treatments, and of diagnostic procedures.

## Ethical Merits

1. EBP is ethical in that clients are offered treatments that are demonstrated to be effective (though they may decline them based on their own values and beliefs).
2. EBP may provide a public good by reducing or eliminating ineffective and harmful health care services. This may also reduce unnecessary health care spending and may reduce health care costs.

## Questions and Continuing Issues About EBP

### *General Concerns About EBP*

1. There is no evidence that adapting the EBM/EBP model will generally make health and mental health care services more effective or less costly. Medications with demonstrated effectiveness sometimes prove to have harmful side effects after they have been widely used. EBP could end up increasing mental health care costs, especially if empirically supported but labor-intensive models of treatment such as dialectical behavior therapy (DBT) begin to be widely used for the treatment of personality disorders.
2. EBP adopts a particular definition of evidence drawing upon large scale, quantitative research. This definition has been promoted by many physicians, policy makers and funders, psychologists, social workers, nurses and educators. On the other hand, many professionals from the same groups question the narrow nature of this definition of 'evidence.' They note that some useful forms of research are devalued by the EBP research hierarchy. They also note that it is an act of economic, political, academic and social power to set a definition of evidence, setting up relative winners and losers. Clinical practitioners question the completeness of EBP's definition of evidence and its relevance to direct practice. Some academic researchers have started to re-frame EBP as "Science based Research" (SBR) to reclaim the word 'evidence' as much broader and varied than is defined in the EBP evidence hierarchy and methods.
3. EBP offers what is often called an "objective" approach to scientific knowledge building, but it fails to address theory in many instances. Science is typically defined as a circular process starting with inductive knowledge building based on observation, leading to the creation of theories, which are then tested based on deductive hypotheses or predictions. Based on the result of these tests, theory is revised and modified. New hypotheses and predictions are generated. EBP applies an empiricist approach, comparing treatments outcomes and effects of large groups of people, but does not attend to theories that explain how treatments works or why groups differ that is fundamental to good science.
4. While EBM and EBP research methods are well developed and increasingly transparent, they value internal validity over external validity and ecological validity. That is, those characteristics of research that allow claims that a treatment caused a change are valued over considerations of to whom research results are applicable, and in what settings and situations. Some researchers call EBM/EBP research 'lab science' that may not be relevant or applicable to the complexity of real world clinical practice.
5. EBP results may be so complex that clinical practitioners from many professions cannot interpret them correctly and may be unable to critically evaluate their strengths and limitations. This has led to the development of a new area of 'translational research' in which researchers help develop ways to make research results more applicable and more useful to practitioners. Practitioners are not

widely involved in the conceptualization or implementation of such translational models.

6. The medical model orientation of EBP addresses mainly personal characteristics and disorders with little attention to social factors and social context. For social workers this narrow focus omits balanced attention to persons in environments. It also omits attention to factors that point to risks and sources of resiliency and factors that may render even the best treatment ineffective (i.e., lack of trust or motivation, of full participation, of full adherence with a treatment plan).
7. Social workers and others note EBP research often fails to identify and address the needs of socially diverse communities. The bulk of medical and social science research uses middle class whites as its samples. Many large-scale research reports simply do not address or identify the specific sub-populations they include or omit. As population demographics in many countries show growing racial, ethnic, gender identity and other forms of diversity, EBP does not include sufficient attention to their different needs and values to guide knowledge development and practice. This is evident both in the questions EBP research addresses, and in the failure to identify and study the specific needs of social groups. Systematic review standards do not emphasize social diversity as an important variable in health care.
8. EBP research values the researcher-defined evaluations of clients and clinical professionals. Yet a multidimensional model of EBP has been offered by Petr (2009) which actively seeks out the perspectives of clients and of other community members in their own words and voices, not just through standardized measures of disorders. Why not actively include the views of clients and other community members in outcome research and in searches for the best available evidence?
9. Some social workers argue that the restrictive medical model emphasis of EBM and EBP fails to address social work' core value on social justice.

## Practice Concerns

1. There is often little quality research to guide practice decision-making and to inform clients of treatment choices. Even the best systematic reviews may not find research studies of sufficient quality to back recommendations about the empirical support for many client concerns and for many types of treatments. Many potentially useful treatments remain un- or under-researched.
2. Client populations in real world practice settings are often very different from the samples used in outcome research. The complex social circumstances and multiple problems and multiple diagnoses of socials work clients make it difficult to apply results of studies that exclude comorbid diagnoses and ignore social circumstances.
3. Access to research results is a mix of free and paid print and online resources. Both individual clinical social workers and many agencies do not have access to the most current paid research results.

4. Training in EBP, and in empirical supported treatments, is not adequately funded. Supervision on such therapies is also inadequately funded. Agencies do not provide time and support to fully implement the EBP practice decision making process. This appears to be, in large part, due to reimbursement policies which do not fund the time such efforts require. Learning and doing EBP is a cost shifted onto individual providers rather than supported as a valuable part of the health care system.
5. Even when the EBP practice decision making process points to empirically supported treatments that are acceptable to the client, such services may not be available in all areas. (The Jennifer case examined in Chap. 16 is an example of this dilemma.) Ironically, some such services may not be reimbursed by state or insurance companies as they do not appear on their lists of empirically supported treatments (ESTs).
6. It is unclear if treatments and services that are based upon empirically supported treatments (ESTs) can claim demonstrated effectiveness when they are modified to meet local circumstances and needs. It is unclear if ESTs that are not delivered fully according to treatment programs or manuals, and by appropriately trained and certified providers, can claim any empirical support for their altered treatments.

## Methodological Concerns

1. It is often unclear how relevant and applicable large-scale research results are to any individual client. EBP uses medical model definitions of individual disorders. These often include many components in a ‘menu’ of options. Clients may fit a diagnosis based on presenting with 5 of 7 to 12 characteristics. This may create subtypes of people within a diagnostic category that are not differentiated in EBP conceptualization or in EBP research. This may make EBP findings more or less relevant to individual clients within the same large diagnostic category.
2. EBP uses measures of disorders that vary widely in content, comprehensiveness and psychometric properties. Many standardized measures used in research have highly variable scores on concurrent validity. The measures on which EBP outcomes are based may themselves be suspect. The psychometric properties of measures are often omitted from, or minimally reported, in research reports. These measures may also not have been tested for validity and reliability for diverse social groups.
3. Research on clinical processes are not a major part of EBP research but are of great interest to clinical practitioners. What factors within a treatment model make the treatment effective? How are individual differences and preferences best accommodated in clinical practice? There is research that demonstrates that even “demonstrated effective” therapies may not lead to good outcomes unless a good working alliance between client and clinician is in place (see, for example, Castonguay, Goldfried, Wiser, Raue and Hayes, 1996). How does the relationship and the alliance differentially impact outcomes?

4. The active roles of both client and clinical are not widely addressed in EBP research. Common factor research suggests that the client is the largest source of variation in clinical outcome. Why aren't client differences more studied? Clinical practitioners also vary in strengths, styles and skills. Why aren't differences among clinicians studied in detail?
5. Investigator bias and/or allegiance bias is under-examined in EBP research. Studies may be conceptualized and designed in ways which overtly or covertly favor one theory over another. This bias may also extend to favoring one type of outcome, or type of treatment, over others. In turn, researchers fail to question adequately whether their own biases may influence the design, implementation, results and interpretations of their studies.

### Administrative and Policy Issues

1. While rising health care costs are a concern to everyone, who does it benefit to portray clinical practitioners as lacking in knowledge or skill, or even as incompetent? Isn't there a way to address financial concerns that is less accusatory and inflammatory? Why are the financial concerns of professionals suspect while the motives of for-profit health care corporations are assumed to be righteous and are not examined as equally suspect?
2. Managed care policies and practices may actively discourage acceptance of EBP by practitioners. It is even possible that managed care administrative practices may directly conflict with the emphasis on clinical expertise as the integrating factor in the EBP practice decision making model. That is, if treatments with empirically demonstrated effectiveness are not authorized by managed care companies, or if their lists of reimbursable treatment differ from those of major research organizations, managed care practices may directly conflict with the use of the best available evidence in clinical practice.

## References

Castonguay, L., Goldfried, M., Wiser, S., Raue, P., & Hayes, A. (1996). Predicting the effect of cognitive therapy for depression: A study of unique and common factors. *Journal of Consulting and Clinical Psychology, 64*, 497–504.

Petr, C. (Ed.). (2009). *Multidimensional evidence-based practice: Synthesizing knowledge, research, and values*. New York: Routledge.

# Glossary

**Absolute Risk Reduction (ARR) also known as Absolute Risk Difference** In epidemiology, a measure of the effectiveness of a treatment. ARR is the risk of an outcome for the control group minus risk of the same outcome for the treated group. An ARR of 0 means there is no difference due to a treatment. Negative values indicate treatment reduces the risk of unwanted outcomes, i.e., an ARR of −12% means the treatment leads to 12% fewer re-hospitalizations. This is a positive treatment effect.

**AMSTAR** Stands for the Assessment of Multiple Systematic Reviews, is an 11 item measurement tool for the assessment of quality in systematic reviews.

**Attribution Bias** Refers to the possibility that creators of a treatment might consciously or unconsciously favor their own methods, leading to a falsely positive implementation or interoperation of research results.

**Bias** In general, bias is any unknown or unidentified influence that alters the results of a study or its interpretation. Biases may be systematic or random, intentional or unintentional. In experiments or RCTs, bias is any influence that impacts the results of a trial or its interpretation other than the specified intervention under study.

**Blinding** A research technique involving the concealment of an intervention or any other influence that might consciously or unconsciously influence study results from patients, clinicians, and/or researchers. Single blinding involves concealment from participants but not from the researchers doing the study. Double blinding involves concealment from both researchers and participants. Blinding in psychosocial interventions can be very difficult.

**Boolean Operators** Commands used to specify the logical connections among search terms. The most common Boolean operators are “Or” (which yields all content on both terms), “And” (which yields only content with both terms), and “Not” (which excludes all content with the specified term).

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6

**Campbell Collaboration** An international organization promoting high quality outcome research in education, social welfare, and crime and justice. Works in close cooperatively with the Cochrane Collaboration.

**Case Control Study** In research design, a naturalistic design in which participants with an outcome of interest (known as "cases") and control patients with different outcomes are compared for exposure to specific risk or resiliency factors.

**Case-Series** In research design, a naturalistic design in which participants with a specific target outcome of interest are studied without using controls.

**Case Study** In research design, a naturalistic design which focuses on just one, or very few, cases. Case studies often provide in depth information about the focal case and the intervention process.

**Clinical significance** In interpreting outcomes, describes the practical impact of an intervention when applied to the practical, everyday life of the client. Its purpose is to demonstrate practical significance to the client, rather than simply a standard score. Clinical significance demonstrates that persons who receive interventions have outcomes that represent better functioning and/or lesser symptom severity. Clinically significant may, or may not, link to significant changes in scores on standardized measures.

**Cochrane Collaboration** An international organization, begun in 1993 to promote standards for medical and psychiatric outcome research and to increase the use of high quality research results in practice and policy. Established and publishes the *Cochrane Handbook for Systematic Reviews of Interventions,* widely acknowledge as the most clear and rigorous set of procedures for summarizing quantitative outcome research.

**Cohen's** *d* A statistical measure of effect size of the magnitude of change. Small effects are in the 0.00 to 0.20 range, moderate effects are in the 0.21 to 0.79 range, and large effects are 0.80 or higher. Effects sizes of 0.20 may also be interpreted as a 55% success rate, 0.50 as a 62% success rate, and 0.80 as a 69% success rate. Cohen's *d* is best applied to studies involving large numbers of participants; more than 25 to 30 in each group under comparison.

**Cohort Study** In research design, a naturalistic design comparing two distinct groups (or cohorts) of clients, one which has a specific exposure or intervention and another which does not, to determine how the groups differ over time on a given outcome.

**Conceptual Definition also called a Theoretical Definition** Are definitions stated in terms of the concepts or theories. To theoretically define is to create a hypothetical construct acknowledged as useful within a profession. For example, that depression is generated by dysfunctional cognitions in cognitive theory, or that repetitive patterns of early childhood cognition and behavior may be unconsciously continued as transference in psychodynamic theory. Contrasts with operational definition.

**Confidence Interval (CI)** In statistics, the range around a study's main statistical result within which the unknown true or population value is determined to be located. Defined as range of values between specific lower and higher limits, if a statistical result is found within the CI, it is statically significant. If it does not, the result is not statistically significant. In research reports, study outcomes that fall within the CI are statically significant, while those that fall outside the CI are not. In Forrest plots used in meta-analyses, if the null result falls within the CI, the result is not statistically significant.CIs allow for sampling error in comparing estimating how well a study's sample reflects the larger, but unknown, population the study seeks to represent. Smaller CIs are preferable to large CIs as the point estimate is likely more representative of the larger population.

**Confounding Variable also known as Confounds** An extraneous variable that is not under explicit study, but which may impact both the independent and dependent variables. Confounding variables undermine the internal validity of studies, most often by increasing false positives or Type I errors.

**CONSORT** Stands for Consolidated Standards of Reporting Trials, begun in 1993, is an international medical working group seeking to improve standards for the reporting of randomized controlled trials (RCTs). The CONSORT statement offers a standard, consistent, format for reporting the results of RCTs.

**Criterion Level** In statistics, the probability that, in comparison to a defined null hypothesis, a statistical test will generate a false-positive error. In practice, the criterion level is used by researchers to make a determination that an observed result is unlikely to have occurred by chance alone. The common criterion levels are $p < 0.05$ (or 1 chance in 20) or the more conservative $p < 0.01$ (1 chance in 100). The criterion level may also be called the alpha level.

**Effect Size** In statistics, a measure of the magnitude of experimental effects. Effect sizes go beyond simple statistical significance to measure the size of the observed effect. Effect sizes are typically reported using the Cohen's $d$ statistic for large samples and the Hedge's $g$ statistic for small samples. $d$ and $g$ values are interpreted as, 00 to 0.19 no effect; 0.20 to 0.49 as a small effect; from 0.50 to 0.79 as a moderate effect; and over 0.80 as large effect. Odds ratios and relative risk are also measures of effect size used with binary data.

**Effectiveness Studies** Research studies done on real-world clinical populations rather than as fully controlled experiments. Effectiveness studies reflect everyday practice conditions well but often allow for threats to the interval validity of study results.

**Efficacy Studies** Research studies done as very carefully controlled experiments. In clinical trails, efficacy studies often involve diagnostic procedures and efforts to insure treatment fidelity that are not typical of everyday practice. They seek to demonstrate treatment effects under ideal controlled conditions.

**Epidemiology** The study of the relationships of the various factors determining the frequency and distribution of diseases.

**Event Rate** In epidemiology, the proportion of clients in a group or population for whom a specific result or event is observed.

**Fidelity** The degree to which an intervention, treatment or service adheres to the manual or rules that define the original intervention, treatment or service. An intervention that omits aspects of the defined treatment, is not fully implemented, or delivered by poorly trained personnel may be said to lack fidelity (to the defined model).

**Forrest Plot** A chart or diagram representing the results of individual studies in a meta-analysis. Forrest plots show clearly how study results compare to the mean outcome of the meta-analysis, making better or worse than mean results quickly apparent.

**Funnel Plot** A flow chart documenting how the results of trials in a meta-analysis are affected by publication bias.

**Generalization** The ability to apply the results of any single study on a specific sample to the larger population from which the sample was drawn.

**GRADE** Starting in 2000, the GRADE working group is a collaboration of professionals working to develop a common approach to grading quality of quantitative research evidence.

**Hedge's** *g* A statistical measure of standardized effect size; a measure of the magnitude of observed change. Small effects are in the 0.00 to 0.20 range, moderate effects are in the 0.21 to 0.79 range, and large effects are 0.80 or higher. Effects sizes of 0.20 may also be interpreted as a 55% success rate, 0.50 as a 62% success rate, and 0.80 as a 69% success rate. Hedge's *g* is best applied to studies involving small numbers of participants as it includes a control factor for sample size. It is best used when there are less than 25 to 30 participants in each group under comparison.

**Heterogeneity** In statistics, a property of a dataset, indicating how similar or varied are the cases that constitute it. In meta-analysis and in systematic reviews, a measure of variation or difference among trials included in the review. Forrest plots graphically display heterogeneity of results. The $\chi^2$ (Chi-square) statistic is often used as a test of significant differences among combined study results. The $I^2$ statistic is used to measure the parentage of variation not due to chance alone. $I^2$ values of <25% are considered low by convention.

**Incidence** In epidemiology, the number of new cases of illness arising during a specified time period for a defined population.

**Intention-to-Treat** In research design, a design in which client data are analyzed in the groups to which they were originally assigned, despite the possibility that they may have switched treatment types (or arms) during the study. Such changes often occur for clinical reasons to maximize positive outcomes for the client. For example, a client with serious side effects to a medication might be switched to a group not receiving medications but would still be analyzed at the end of the study in the original group that received medication.

**Likelihood Ratio** In epidemiology, the likelihood that a given result is expected in a person with the disorder of interest compared to the likelihood for the same result in persons without the disorder.

**MeSH** Medical Subject Headings created by the United States National Library of Medicine. MeSH provides a thesaurus of medical terms (including psychiatry and psychology) used by many databases and libraries. Very useful to target precise literature searches.

**Mean** The numerical average of observed scores. Only appropriate to use with interval or ratio level measures.

**Median** The category that divides a distribution of scores into two equal parts. Only appropriate to use with ordinal, interval or ratio level measures.

**Meta-analysis** Are statistical methods for combining the results of several quantitative studies exploring related content using weighted effect sizes. Statistically, meta-analytic results overcome the limited statistical power inherent in studies using small sample sizes by combining studies and increasing overall sample size. Results of meta-analysis are often reported as effect sizes, in Forrest plots, or in Funnel plots. Meta-analysis originally refereed to combined literature search efforts and statistical methods, but the design of systematic reviews have largely replaced meta-analytic search methods. Meta-analysis statistics are a key part of systematic reviews.

**Mode** The most frequent score. Appropriate to use with all levels of measure.

**Number Needed to Harm (NNH)** In the epidemiological literature, a measure summarizing the number of clients who must to be treated in order for 1 negative outcome to occur compared to untreated controls. Lower values (i.e., 2 or 3) represent greater risk of harmful effects due to the treatment compared to controls.

**Number Needed to Treat (NNT)** In the epidemiological literature, a measure summarizing the number of clients who must be treated in order to prevent 1 negative outcome over the course of the treatment. Lower values (i.e., 2 or 3) represent greater positive effect over the course of treatment. NNT may also be reported as NNTB – the number needed to treat to obtain **b**enefit.

**Odds** In probability theory, a summary measure calculated as the ratio of an event occurring to not occurring. If hospitalization occurs for 25% of clients with a disorder, its odds are calculated as the probability of occurrence / 1 – probability of occurrence, or 25%/75%, or 1 in 3.

**Odds Ratio** In statistics, is the ratio of the odds of A in the presence of B compared to the odds of A without the presence of B. It is a quantitative measure of the strength of the association between A and B. If an OR value is greater than 1, it means that a including a service to treat a condition improves the odds of positive outcomes. For example, an OR values of 1.29 indicates that the treated group has a 29% better chance of improvement. OR values of less than 1, such as 0.75, indicates the treated group is 25% less likely to improve than did the comparison group.

**Operational Definition** An operational definition defines a concept in terms of a specific measurement process. Contrasts with theoretical or conceptual definitions.

*p* **value** In statistics, the probability that a particular result would have happened by chance alone. Compared to a defined criterion level, or alpha level, the p value is used to decide if observed results are unlikely to have occurred by chance alone.

**P.I.C.O. (or P.I.C.O.T.)** An acronym used to guide the formulation of practice questions. P stands for ***p***atient, I for ***i***ntervention, C for ***c***omparison (to contrast with the intervention), and O for ***o***utcome of interest. T stands for ***t***ype of question which may address treatment, diagnosis, etiology, prognosis or cost effectiveness.

**Point Estimate** In statistics, an estimate based on a sample of treated clients used to represent the unknown population value. Since the population value for all possible persons whom might receive a treatment is unknown, point estimates based on large probability samples are used as the best estimates of these unknown values. Point estimates are best reported with confidence intervals for the estimate.

**Prevalence** In epidemiology, the baseline risk of a specific disorder occurring in a population, usually reported as a proportion or percentage.

**Prevalence Rate** The proportion or percentage of a population that has a target characteristic, such as a Major Depressive Episode, often over a specific period of time.

**PubMed** A database of the U.S. National Library of Medicine that compiles over 20 million citations from the electronic biomedical literature, including online books (but not print books). Also a valuable gateway to many free full text articles.

**Publication Bias** In systematic reviews and meta-analysis, a bias due to omission of important but unavailable research reports. Publication bias can be due to an inadequate search strategy, exclusion of reports in different languages, but is most often due to omission of unpublished reports, inclosing those with negative findings (that are less likely to be published in journals).

**Random** In statistics, refers to an equal chance of selection for all members of a population of sampling frame. Randomization limits biased assignment of cases to treated and control conditions in experiments or RCTs.

**Randomized Controlled Trial (RCT), also known as a Randomized Controlled Clinical Trial** In research design, an experimental research design used in clinical research. Clients are randomly assigned into treatment and control groups, assessed at baseline and again after treatment concludes. Both groups are then compared on the same outcome variable(s). RCTs allows determination of changes caused by the treatment, and for attribution of cause-and-effect relationships: that the treatment caused any changes observed. May also be referred to as a *parallel-group design*, since randomization is used to generate equivalent treated and control groups.

**Relative Risk (RR) also known as the Risk Ratio** RR is the ratio of the probability of an event occurring in a treated group divided by the probability of its occurring in an untreated group (or a known prevalence rate). It is a measure of improvement due to treatment. An RR of 1 shows no difference in outcomes between the groups. Values greater than 1 means that the treatment increases the risk of the outcome, which is good for positive outcomes but bad for unwanted outcomes. (The treated group fared better.) Values less than 1 mean that the treatment reduces risk of the outcome, which is good for unwanted outcomes but bad for positive outcomes. (Untreated group fared better.)

**Relative Risk Reduction (RRR)** A widely used measure of medical treatment effect calculated as 1 – RR. RRR summaries the reduction in an unwanted outcome in the treated group compared to the control group. An RRR of 50% would indicate that 50% fewer treated clients were re-hospitalized compared to controls.

**Reliability** In tests and measures, refers to how consistently a measure produces similar scores over time, setting and administrator, not based on any changes in the content under study.

**Sampling error** In statistics, the uncertainty generated by collecting data from a sample rather than from every member of a population.

**Sensitivity** In standardized tests, a measure of how well a test can capture very small changes.

**Specificity** In epidemiology, refers to the proportion of people without a disorder who have (correctly) a negative test.

**Standardized Mean Difference (SMD)** In statistics, the standardized mean difference is used in meta-analysis when the studies all assess the same outcome but measure in different ways, such as using different measures for anxiety. To create a meaningful companion, results on each measure are standardized by conversion into standardized or z scores each with a mean of 0.0 and a standard deviation of 1.0. This mathematical transformation does not alter the relative differences across measures, but it does create a common metric or scale, for comparing them. The resulting SMD expresses the size of the intervention effect relative to the variability observed in that study. Cohen's *d* and Hedge's *g* are examples of SMD statistics which convey effect size.

**Systematic Review** A peer-reviewed research summary on a specified topic, involving systematic and transparent searching, evaluation, selection, and meta-analytic summarizing of all high quality relevant results found in the literature. The standards for a systematic review are set by the *Cochrane Handbook for Systematic Reviews of Interventions*, but many published reports use different, and often much lower, quality standards.

**Treatment as Usual** Used as a comparison intervention in some experiments or RCTs, refers to the treatment or services routinely available in a community. A limitation of treatment as usual as a comparison group is that it may be composed of many different treatments, with varying fidelity of delivery. The choice of such services may also be subject to several forms of bias. In favor of this approach is that, done well, it represents routine care and can be a reasonable, naturalistic, basis for comparison of treatment effects.

**Validity** The extent to which a variable measures what it is intended to measure. There are several types of validity. In research design, *internal validity* refers to the ability of an experiment research design to make cause and effect attributions when fully and carefully implemented. The *external validity* of a study refers to how well results based on the study sample can be generalized to other people and settings. *Statistical conclusion validity* refers to how fully and carefully the statistical analysis was completed. In tests and measures, validity refers to how well the measure represents the concepts and content they are intended to capture.

**z Scores** In statistics and in meta-analysis, scores may be converted mathematically from their original scales into z scores which have a mean value of 0 and a standard deviation of 1. The relative distribution among scores in a distribution is not altered, but the labels for each value is changed to a new, common or shared, metric. This allows different interval or ration level measures, with different ranges, to be meaningfully compared in meta-analysis.

# Index

J. W. Drisko, M. D. Grady, *Evidence-Based Practice in Clinical Social Work*,
Essential Clinical Social Work Series,
https://doi.org/10.1007/978-3-030-15224-6