

By DR Aliva Luvaso Elphas PhD luvasoaliva@yahoo.com +254722381328 AND DR Lornah Sirima, PhD lornahsiri@yahoo.com +254722215823 of RONGO UNIVERSITY

RESEARCH PAPER PRESENTED AT

2ND ANNUAL INTERNATIONAL CONFERENCE

THEME: SUPPORTING GREEN GROWTH AND KNOWLEDGE ECONOMY THROUGH RESEARCH, INNOVATION AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT

VENUE: MACHAKOS UNIVERSITY HOTEL AND CONFERENCE CENTER, MACHAKOS, KENYA

DATES: 24TH - 26TH APRIL

Abstract

Graffiti: A New Dimension in School Discipline in Secondary Schools in Kenya

Graffiti is writing or drawings made on a wall or other surface, usually without permission and within public view. Graffiti ranges from simple written words to elaborate wall paintings, and it has existed since ancient times, with examples dating back to ancient Egypt, ancient Greece, and the Roman Empire. In modern times, paint and marker pens have become the most commonly used graffiti materials. In most countries, marking or painting property without the property owner's permission is considered defacement and vandalism, which is a punishable crime. Many students in our public secondary schools have embraced the use of graffiti in books, buildings and even on their bodies which is also done by our various worldly sportspeople, heroes and heroines in various fields. The kind of graffiti the youth draw is a replica of who they are. This literary paper investigates the various types of graffiti drawn by our secondary school students, interpret their meanings and determine their effects on students' performance and discipline. This paper is guided by Behaviour Modification theory by B.F. Skinner on "how our voluntary actions are influenced by what happens to us immediately after we perform a given act". Controversies that surround graffiti continue to create disagreement amongst city officials, law enforcement, school administrators and writers who wish to display and appreciate work in public locations. This paper finds that many students enjoy the use of graffiti but they are not so specific about the meaning they are portraying. The paper concludes that there is need to develop guidelines especially on use of graffiti in our schools. Interventions are needed which include all stake holders to ensure change is effected and lastly sensitization programs need to be put in place to help the youth understand the effects of graffiti.

Keywords: Graffiti; School discipline; Dimension; academic performance; Secondary school

Introduction

Graffiti is the term given to letters, images or artwork that is painted, sketched, marked or drawn in any manner on property (Mores G,1992). It is a form of social expression and an art movement that is on the rise on global scale. The use of graffiti dates back to centuries, where walls and trees and mountain rocks were used as a canvas for people to leave messages and express themselves over various issues of human existence, however majority of the world is against graffiti (Senator Campell,1996).

Background to the Study

Graffiti started in the early 1960's but can be argued that the first ever pieces of artwork located in the caves, where our ancient ancestors resided, were graffiti. These cave drawings were how the people of that time would express themselves by telling a special story correlated to their lives, and the style the cave men used is pretty similar to the same principles used in graffiti today, (Watson T,1996). The media used obviously has progressed from berries and dirt, to the modern aerosol spray paint can, marker pen but it is still just art on a wall.

Rolling through the dusty roads of Nairobi capital city, you see wild, fanciful vehicles zipping by, their sides daubed with vibrant messages of graffiti, this is "Matatu" culture in Kenya, the practice of pimped-out, colour-exploding, happy-tatted local transit buses and matatus.

Statement of the problem

School administrators have the responsibility of maintaining discipline and high academic performance as one of their most important areas of emphasis. Recently schools are faced with modern acts of indiscipline including fighting, bullying, insubordination and of recent graffiti drawings which summarily results in poor academic results.

Graffiti drawings can form just one tool in an array of resistance techniques. It's often a subculture that rebels against authority, although the considerations of the practitioners often diverge and can relate to a wide range of attitudes. Many students in our public secondary schools have embraced the use of graffiti in books, buildings and even their bodies.

Purpose of the Study

This research paper examined emergence of graffiti in our secondary schools and its effects on discipline and academic performance. Not considered here is graffiti which is legal and commissioned by property owners for example matatu and buses.

Literature Review

Most studies in graffiti to date have used either content analysis to determine the reasons behind graffiti behavior, (Norlander, T .1996). There are no studies to date that use a school sample to examine the prevalence of 'tagging' in adolescents and its indiscipline and psychological covariates. However, studies on general antisocial behavior including vandalism provide some insight into the possible covariates of graffiti behavior (Marcus, R,F .1999).

Antisocial behaviors including vandalism have been associated with family and parental factors, drug and alcohol use, self-esteem, and locus of control.

A study of girls referred for out-of-home placement because of repeated and chronic juvenile indiscipline, (Chamberlain and Moore, 2002) noted several risk factors including family fragmentation, physical and sexual trauma, mental health problems, official arrest and self-report offending histories. In addition, apart from sexual trauma histories, these sample characteristics were similar to those found in a sample of chronically offending boys.

Another study (Vermeiren, Deboutte, Ruchkin and Schwab-Stone,2002) assessing 955 students in Belgium, 1,026 in Russia, and 1,391 in the United States, all aged between 14 and 17 years adolescents were assigned antisocial group status according to the nature of their reported indiscipline behavior. A non-antisocial group, a moderate antisocial group (non aggressive behavior) and a severe antisocial group (mainly aggressive behavior) were identified. Results show that in both genders and in all three countries, depression, somatization, negative expectations for the future and sensation seeking gradually increased from the non-antisocial group to the moderate antisocial group, and finally to the severe antisocial group. Levels of anxiety were insignificant across most groups. The study concluded that although cross-national differences exist, the variables of interest showed markedly similar trends between antisocial groups across countries. Despite some work in these areas there is still much to understand about indiscipline behaviors in our schools this forms the basis of this study.

Research Objectives

The current study investigated possible co-variates of graffiti drawings in relation to behavioral characteristics that affect discipline and academic performance. This is because graffiti is used almost everywhere now and is really starting to adapt more to our schools' culture it's on high spread. To some its seen as a form of indiscipline and measures are being taken to discourage it but the more its discouraged the more it spreads.

Research Design

This study adopts cross-sectional survey research design recommended in collecting data from a sub-set of cognitive constructs.

Sampling

Participants in the study were 3603 (n = 1942 males; n = 1654 females; n = 17 undefined) secondary form three students (aged 15-19 years) from 28 public and 28 private schools. Participating schools were from both rural and suburban areas and in low to middle and high socioeconomic status in fourteen counties.

Administration of Instruments

Teachers supervised the administration of questionnaires, informed students their participation was voluntary, and that non-participation would have no adverse consequences. A teacher counsellor was made available to talk with any student showing distress and a group debriefing session followed the completion of the questionnaire. Students placed their responses in a sealed container to maintain confidentiality.

Instruments

Items of interest reported here form part of a comprehensive questionnaire – the Youth Assessment Checklist [20]. Socio-demographic information collected included school, gender, age, county of birth, vernacular language.

(i) Graffiti behaviour was assessed by a single item drawn from the DSM-IV criteria for conduct discipline: “I have graffitied (tagged) things in school ” with a yes/no response.

(ii) Indiscipline behaviour was assessed with an adaptation of the Self-Report Delinquency Scale [21]. Students responded ‘yes’ (score 1) or ‘no’ (score 0) to statements such as “I have stolen from a colleague”. Three items were added to bring the scale closer to DSM-IV

diagnostic guidelines for conduct discipline disorder. These were: “I have imagined setting fires to things”; “I have deliberately tried to physically hurt fellow students”; “I have deliberately tried to attack someone in a sexual way”. Reliability for the adapted 21-item scale was good ($\alpha = 0.82$). Total scores were calculated and recoded to new 2 category variables based on cut-offs calculated from the mean (2.38) plus one standard deviation (SD) (3.24) and mean + 2SD. Thus, total scores 0-5 were coded ‘low indiscipline’, scores between 6 and 8 coded ‘serious’, and scores ≥ 9 coded ‘extreme’.

(iii) Drug use was assessed by asking, “Which of the following drugs have you used in the last year? alcohol; cigarette; bhang, acid or LSD; sniffed glue, petrol, or solvents; injected illegal drugs (heroin); oral stimulants”. Respondents rated frequency of use for each on a five-point scale: 0 (never), 1 (less than once per month), 2 (one to three times a month), 3 (once a week) or 4 (more than once a week). Total scores (0-32) were recoded to new 2-category variables based on cut-offs of the mean (1.82) plus SD (2.87) and mean + 2SD. Thus, total scores ≥ 5 coded ‘serious’, and scores ≥ 8 coded ‘extreme’. Internal reliability for the summed items was good, ($\alpha = 0.82$).

(iv) Risk-taking was assessed with the ‘Brief Adolescent Risk-Taking Scale’ (BART), a 9-item measure. Items include, “I accept rides in cars from people I do not know”; “I take part in dangerous activities”; “I usually talk things over with my parents before doing something new”. Responses are ‘never’ (score 0 or 2), ‘sometimes’ (score 1) or ‘often’ (score 0 or 2). Reliability of the summed items is good ($\alpha = 0.72$). Principal components analysis indicates two factors – danger and caution.

(vi) Students were asked to rate their current overall academic performance as; ‘failing’, ‘below average’, ‘average’, or ‘above average’. For this analysis, scores were recoded to a 2-category variable of failing/below average (‘failing’) or average/above average (‘ok’).

(vii) Sexual and physical abuse were assessed simply: “Have you ever been sexually abused”; and “Have you ever been physically abused, bullied or beaten up”, with yes/no responses.

Data Presentation and Analysis

Data analysis was performed with SPSS v24 using both parametric and nonparametric procedures to investigate graffiti related differences in indiscipline behaviour and other individual, parental and school factors. Separate analyses were conducted for boys and girls as

significant gender differences were expected. Pearson Chi-square tests were used to detect significant differences between groups for dichotomous variables including extreme indiscipline behaviour, drug use, abuse and poor academic performance. Analysis of variance was used to detect differences in means of continuous variables for the same groups. Where the homogeneity of variance tests failed for groups that were significantly different, nonparametric Kruskal Wallis tests were performed to confirm any significant findings.

Research Results Findings

Characteristics of the sample and prevalence of graffiti and indiscipline behaviour are presented in Table 1. Similar proportions of graffiti occur girls (10.9%) and boys (12.3%), while the prevalence of serious or extreme indiscipline behaviour is between 2 and 3 times more likely in boys. Six participants indicated ‘yes’ to graffiti and ‘no’ to all other forms of indiscipline behaviour.

Table 1; Characteristics of the sample and prevalence of graffiti and indiscipline behaviour

BOYS	GIRLS
(%)	N(%)

TOTAL	1942	1654
Born in study counties	1838(92.9)	1550(93.4)
Kiswahili main language	1386(96.4)	1111(96.3)
Other counties	17(1.2)	7(0.6)
Graffiti	169 (12.3)	121 (10.9)
No ASB†	407 (29.2)	516 (45.9)
Low ASB (scores 0-5)	1139 (81.7)	1038 (89.9)
Serious ASB (scores 6-8)	145 (10.4)	62 (5.4)
Extreme ASB (scores ≥ 9)	110 (7.9)	25
Graffiti + No ASB	2	4
Graffiti + Low ASB	45	74
Graffiti + Serious ASB	49	30
Graffiti + Extreme ASB	75	17

Note. Other counties; ASB=antisocial behaviour. †Antisocial Behaviour is a 22-item Scale excluding graffiti item.

Those in the graffiti group are more likely to report serious or extreme drug use, perceived academic failure, physical and sexual abuse, suicide thoughts and behaviours, and are more likely to indicate higher family pathology, parental overprotection and criticism, depression, hopelessness, anxiety, external locus of control and risk-taking behaviours, and lower parental care and self-esteem.

Graffiti is also significantly related to low, serious and extreme antisocial behaviour. Given this strong association, the sample was grouped to aid elucidation of effects uniquely associated with graffiti. Thus, low antisocial behaviour (Low ASB) with graffiti was compared to Low ASB without graffiti, serious antisocial behaviour (SASB) with graffiti was compared to SASB

without graffiti and extreme antisocial behaviour (EASB) with graffiti was compared to EASB without graffiti. Results of these group comparisons using chi-square analysis and analysis of variance are summarised in tables 3 to 5 and the in following sections.

(Table 2) Graffiti groups

BOYS	GIRLS
------	-------

	G (%)	NoG (%)	χ^2	G (%)	NoG (%)	χ^2
Low ASB	26.6	89.4	388.57	61.2	96.1	186.13
SASB	29	7.9	70.11	24.8	3.1	97.02
EASB	44.4	2.7	353.90	14	0.6	95.705
'failing' PAP	19.9	7.7	41.52	15.9	4.3	30.46
Physical Abuse	42.2	32.8	5.70*	44.2	16.4	52.43
Sexual Abuse	4.8	1	14.60**	12.5	5.9	7.55**
Serious Drug	49.1	5.3	291.96	40.5	5.2	162.65
Extreme Drug	26.3	1.3	219.84	22.3	1.7	119.02
	15.4	2.1	67.96	21.5	4.4	53.79
	G (M)	NoG (M)	F	G (M)	NoG (M)	F
FADGF	2.10	1.81	64.73	2.15	1.74	80.02
Depression	16.98	10.50	81.23	21.62	12.58	71.05
Hopelessness	5.26	3.18	53.33	6.23	3.38	61.18
LOC	16.09	13.48	29.86	17.19	13.49	48.65
Self-Esteem	37.26	41.14	45.50	34.15	39.62	58.96
Anxiety	5.95	3.59	55.13	7.80	4.54	53.54
Risk-Taking	10.00	6.61	227.30	8.66	5.36	166.60

Low Antisocial Behaviour With or Without Graffiti

For boys, there are significant differences between the Low ASB plus graffiti group and the Low ASB minus graffiti group, including for suicide thoughts, deliberate self-injury, drug use, family functioning, locus of control and risk-taking with those in the Low ASB and graffiti

group (Table 3). In addition to those presented in Table 3, groups are significantly different for perceived academic performance (15.6% vs 6.6%; $\chi^2=8.50$, $p<0.05$), mother care ($M=25.63$ vs $M=27.65$; $F=6.00$, $p<0.05$), father care ($M=23.46$ vs $M=25.69$; $F=5.13$, $p<0.05$), and father overprotection ($M=13.32$ vs $M=11.16$; $F=5.75$, $p<0.05$) with boys in the Low ASB plus graffiti group more likely to report ‘failing’ perceived academic performance, and lower parental care and higher father overprotection.

Girls in the Low ASB plus graffiti versus Low ASB minus graffiti groups are significantly different on all variables measured in this study (Table 3). In addition to those results reported in Table 3, groups are significantly different in mother care ($M=25.07$ vs $M=28.37$; $F=24.67$, $p<0.001$), mother overprotection ($M=14.70$ vs $M=12.08$; $F=13.38$, $p<0.001$), mother criticism ($M=11.36$ vs $M=9.12$; $F=12.62$, $p<0.001$), father care ($M=21.75$ vs $M=26.12$; $F=29.52$, $p<0.001$), father overprotection ($M=14.84$ vs $M=11.45$; $F=19.63$, $p<0.001$) and father criticism ($M=12.52$ vs $M=9.21$; $F=22.82$, $p<0.001$). Those in the Low ASB plus graffiti group reported lower parental care and higher parental overprotection and criticism.

Table 3;Boys and Girls in the Low ASB plus graffiti versus Low ASB minus graffiti groups]

Boys with low ASB	Girls with low ASB
-------------------	--------------------

	G (%)	NoG (%)	χ^2	G (%)	NoG (%)	χ^2
Physical abuse	-	-	ns	36.5	15.5	21.45
Suicide Thoughts	25.6	12.6	6.07*	48.6	21.5	28.14
Suicide Plans	-	-	ns	27.4	10.1	20.22
Suicide Threats	-	-	ns	30.1	7.3	42.98
DSI	20.9	9.6	5.87*	34.2	12.9	25.10
Suicide Attempts	-	-	ns	14.9	3.6	20.88
Serious Drugs	22.2	3.2	40.57	20.3	3.4	44.40
Extreme Drug	4.4	0.4	13.15*	10.8	0.8	44.03
	G (%)	NoG (M)	F	G (%)	NoG (M)	F
FADGF	1.98	1.79	8.19**	2.03	1.72	30.57+
Depression	-	-	ns	18.61	12.16	25.51
Hopelessness	-	-	ns	4.96	3.29	16.45+
LOC	15.58	13.23	7.07**	16.32	13.37	20.88
Self-Esteem	-	-	ns	35.94	39.76	19.64
Anxiety	-	-	ns	6.56	4.41	16.38+
Risk-Taking	8.42	6.30	30.10	7.23	5.18	49.53

Serious Antisocial Behaviour With or Without Graffiti

For boys, there are several significant differences between the serious antisocial behaviour (SASB) plus graffiti and the SASB minus graffiti, including with deliberate self-injury, drug

use, mother criticism, depression, anxiety and risk-taking. Group percentages, chi-square statistics, means and F values are reported in Table 4.

For girls, there are several significant differences between the SASB plus graffiti group and the SASB minus graffiti group including on suicide plans, serious drug use, self-esteem and anxiety. Details are provided in Table 4.

Table 4; Group percentages, chi-square statistics, means and F values

	Boys with SASB			Girls with SASB		
	G (%)	NoG (%)	χ^2	G (%)	NoG (%)	χ^2
Suicide Plans	-	-	ns	60	33.3	4.29*
DSI	44.9	28.6	3.77**	-	-	ns
Serious Drug	34.7	17	5.67**	73.3	46.7	4.44**
Extreme Drug	16.3	4.3	6.11*	-	-	ns
	G (M)	NoG (M)	F	G (M)	NoG (M)	F
Mother Criticism	12.77	10.91	4.42*	-	-	ns
Depression	18.91	13.08	9.30**+	-	-	ns
Self-Esteem	-	-	ns	31.46	36.37	4.56*
Anxiety	5.93	4.22	4.90*+	9.33	6.50	5.06*
Risk-Taking	9.90	8.93	4.79*	-	-	ns

Extreme Antisocial Behaviour With or Without Graffiti

For boys there are several significant differences between the extreme antisocial behaviour (EASB) plus graffiti group and the EASB minus graffiti including suicide thoughts, deliberate self-injury, suicide attempts, drug use, mother care, mother overprotection, mother criticism, and depression. Details are provided in Table 5. For girls, there were no significant differences between these same groups on any of the variables measured in this study.

Table 5; Extreme Antisocial Behaviour With or Without Graffiti

Boys with EASB			
	G (%)	NoG (%)	χ^2
Suicide Thoughts	52.8	33.3	3.44*
Deliberate Self-Injury	58	24.2	10.19**
	29.2	6.1	6.98**
Suicide Attempts	75.3	40.6	11.75**
Serious Drug	46.6	21.9	5.70*
Extreme Drug			
	G (M)	NoG (M)	F
Mother Care	21.35	26.61	13.48
Mother Overprotection	16.24	12.97	4.33+
	14.41	11.00	6.26*
Mother Criticism	19.04	14.09	4.82*
Depression			

Summary

In all the results reported in Tables 3 to 5, those groups that included graffiti showed higher reported perceived academic failure, physical abuse, suicidal thoughts and behaviours, drug use, family pathology, parental overprotection and criticism, depression, hopelessness, external locus of control, anxiety, risk-taking and lower self-esteem and parental care.

Discussion

The results of this study suggest that adolescent who graffiti ('tag') are significantly different to those who do not graffiti on all of the factors measured in this study. Although this is the first population-based study to date comparing these groups, the result is similar to the differences found with general indiscipline and antisocial behaviour groups. Adolescents who graffiti show higher reported drug use, perceived academic failure, physical and sexual abuse, suicide thoughts and behaviours, and are more likely to indicate higher family pathology, parental overprotection and criticism, depression, hopelessness, anxiety, external locus of control and risk-taking behaviours, and lower parental care and self-esteem.

Results also suggest that antisocial behaviour (low, serious and extreme) with graffiti is significantly different from antisocial behaviour without graffiti. Adolescent who graffiti in addition to various levels of antisocial behaviour show higher reported perceived academic failure, physical abuse, suicidal thoughts and behaviours, drug use, family pathology, parental overprotection and criticism, depression, hopelessness, external locus of control, anxiety, risk-taking and lower self-esteem and parental care.

One limitation of this study was the one-item measure of graffiti behaviour. Our focus in this study was 'tagging' but there are several other forms of vandalism that may be defined as graffiti. In addition, we did not measure the severity of the problem behaviour. The number of graffiti acts may have been an important factor to include in the analysis. Our measure of graffiti may have captured wrongly, graffiti art and other forms of doodling, which would not be considered vandalism.

Graffiti is not only a significant community problem but should be considered a serious action, which may have many other coexisting family, parental, behavioural and psychological problems. Clinicians may need to ask about graffiti even when an adolescent present with low levels of antisocial behaviour.

Recommendations

There is need to develop guidelines especially on use of graffiti in our schools and sensitization programs need to be put in place to help the youth understand the effects of graffiti on discipline and academic performance to avoid falling prey.

REFERENCES

- Mueller MM, Morre JW, Doggert RA, Tingstrom DH. *The effectiveness of contingency-*
- Marcus RF. *A gender-linked exploratory factor analysis of antisocial behavior in young adolescence. Adolescence 1999;34(133):33-46.*
- Senator Campbell I. *Dealing with Graffiti: First National Conference on Graffiti Control. In. Perth; 1996*
- Norlander T, Nordmarker A, Archer T. *Effects of alcohol and frustration on experimental graffiti. Scandinavian Journal of Psychology 1998;39(4):201-207.*
- Watson T. *A prompt plus delayed contingency procedure for reducing bathroom graffiti. Journal of Applied Behaviour 1996;29(1):121-124.*
- Norlander T, Nordmarker A, Archer T. *Effects of alcohol and frustration on experimental graffiti. Scandinavian Journal of Psychology 1998;39(4):201-207.*
- Vermeiren R, Deboutte D, Ruchkin V, Schwab-Stone M. *Antisocial behavior and mental health: Findings from three communities. European Child and Adolescent Psychiatry 2002;11(4):168-175. Goldstein AP.*
2011. 13 April 2013 <<http://www.fatcap.com/>>. *(This website is one of the biggest graffiti websites where I acquired many of my images and retained a lot of knowledge about each style)*
- Bomb It. Dir. Jon Reiss. 2007. *(This was a documentary about various artists and their love for graffiti)*
- Eric. History of Graf. 198. Davey D. 13 April 2013 <<http://www.daveyd.com/historyofgraf.html>>. *(This website was a more in depth site about the origins and history of graffiti)*