



Learners' Substance Abuse at School in Selected High Schools in East London of South Africa

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ABSTRACT This study has sought to examine the extent of substance abuse at schools in the Buffalo Flats area of East London, South Africa, with relation to gender, age and grade of learners. A cross-sectional descriptive quantitative design was used to conduct the study. A total of 246 randomly selected learners participated in the study. The statistical package for social sciences, version 22, was used to analyse the data. Although no statistical significance association was found between gender, age or the grade of learner and substance abuse at school, at $p < .05$ using the Pearson's Correlation test, it emerged that learner substance abuse at school was arbitrarily high (17.14%). It was concluded that learner substance abuse at schools in the Buffalo Flats area is neither gender-, age- nor grade-dependent.

INTRODUCTION

Over the years, learners' substance abuse has become a significant public health and educational concern in almost every part of the world (Mangerud et al. 2014; Osman et al. 2016; Tshitangano and Tosin 2016). For instance, in the United States of America, Bold et al. (2017) found that young adults, who are usually school or college learners, often abuse substances, such as alcohol. The use of illegal substances by school-going adolescents is not peculiar to the Western world; but is also found in most African countries. In Nigeria, for instance, a substantial non-conventional substance abuse has been found among the youth in the northern and central parts of the country (Aliyu et al. 2016). Other African countries, such as Ghana, Burkina Faso and Zimbabwe have all recorded significant prevalence rates of Alcohol and other illicit drug use among teenagers (Obot 2013; Maseko et al. 2014; Nkyi 2014).

In South Africa, illegal substances are so readily available and cheap to the extent that learners can afford to buy them (Department of Social Development 2012). As a result, substance abuse by school-going adolescents is on the rise in South African schools, especially those located within urban and peri-urban communi-

ties, such as the Buffalo Flats area of East London (Benjamin 2011). Learner abuse has been tagged as an educational concern in the Eastern Cape Province of South Africa; as the practice spreads from one school to another. For instance, Rungani (2012) established that 58 percent of learners in GrahamsTown High Schools in the Eastern Cape Province used alcohol and 22 percent of them used cigarettes.

High Schools in The Buffalo City Municipality, of which East London is the capital, also face the challenge of learner substance abuse. A study conducted by Manu et al. (2016) established that 86.83 percent of learners in East London High Schools were aware of drug-peddling activities and their usage in schools. The study further revealed that substance abusers accessed their substances at school – either through fellow learners (37%), or through spaza shops near schools (28.86%), or through drug peddlers over the school fence (21.13%).

The majority (37%) of the learners preferred alcohol; while a few preferred cigarette (27%) and marijuana (13%) (Manu et al. 2016). However, the breakdowns of the various substances used by learners at school did not account for learner substance abuse at school in relation to variables, such as their age, gender or grade.

This study, therefore, has sought to shed more light on learners' substance abuse in East London Schools, especially those in the Buffa-

lo Flats area, in order to ascertain the influence of various variables, such as the age of learners, their gender and grade on substance abuse at school, so as to assist in the formulation of variable-specific interventions to address learner-substance abuse. The development of variable-dependent school-based learner-substance abuse-intervention programmes could assist school authorities to create conducive teaching and learning environments across High Schools in East London, South Africa.

Objectives of the Study

The objectives of the study were to:

- ♦ Ascertain the relationship between gender and learner-substance abuse at school in East London High Schools.
- ♦ To establish the relationship between age and learner substance abuse at school in East London High Schools.
- ♦ To ascertain the relationship between grade and learner-substance abuse at High Schools in East London.

MATERIAL AND METHODS

A cross-sectional descriptive quantitative-survey approach was used in this study, which comprised Grades 10, 11 and 12 learners attending government high schools in the Buffalo Flats area of East London in the 2011 academic year. There were seven government high schools, with grades 10, 11 and 12 classes in the Buffalo Flats area during the time of the study; and two were randomly selected for the study. The study population therefore included all registered learners, both males and females, from Grade 10 to 12 in the two selected high schools that were attending school at the time of the study. There was a total of 941 such learners.

Sampling Techniques

The names of the seven High Schools in the Buffalo Flats area of East London were written on pieces of papers and put into a container; and thereafter they were thoroughly shaken. The first two schools, which were randomly drawn from the container, formed the sample population of the study. A sample size of about 30 percent of the grades 10 to 12 learners, totalling 283 learners in the two schools, were then randomly

selected to form the study sample. First, a stratified random sampling technique was used to ensure the proportional representation of both sexes.

To achieve this, the population in each school was organised into three separate strata: Grades 10; 11 and 12. A sample size of 30 percent of the population of each grade was then determined. In each Grade, the male and female populations were again grouped into two strata in each class per grade (grades 10 to 12); and they were also allotted a proportionate representation of 30 percent, according to the number of such gender groupings in each class per grade per school. After grouping the learners into various strata, the second phase of sampling, which involved the simple random-sampling technique, was used to select the representative fraction for each gender group per class per grade per school, depending on the number of respondents required from each gender group per class per school.

Data Collection Method

A self-administered questionnaire with multiple choice and closed-ended questions was used to collect the data. The questionnaire was further divided into two sections: the demographic profile of the respondents and the personal acknowledgment of substance use at school. The questionnaire was written in both English and IsiXhosa. It was first compiled in English; and then translated into IsiXhosa; and then back again to English by a professional translator, to ensure that the meaning of the questions was not lost during translation. The validity of the questionnaire was ensured by presenting it to a panel of expert professors in the field of quantitative and substance-abuse research at the Walter Sisulu University for review. The reviewed questionnaire was then piloted with ten learners from a different High School in a community in close proximity to the Buffalo Flats, and with similar characteristics to the Buffalo Flats community.

The pilot study enabled the researcher to identify any ambiguities; and it helped in the early detection of any necessary additions or omissions to the questionnaire. The findings of the pilot study were then analysed; but they were not included in the findings of the study. The validated questionnaire was then distribut-

ed, according to the language preferences of the respondents in the schools where the actual study was conducted: either in English or in IsiXhosa. Out of the 283 questionnaires issued, 246 of them were returned, with 4 being incomplete.

The findings of the study are therefore based on the 242 complete and four incomplete questionnaires, that is, the 246 questionnaires that were returned, constituting an 87 percent response rate among the respondents.

Ethical Considerations

Firstly, the research proposal was presented to the Health Sciences Higher Degrees Committee of Walter Sisulu University for scientific and ethical review and approval, with allotted ethical clearance certificate number 013/011. The proposal, with an accompanying permission letter, was then submitted to the Department of Basic Education, East London District, for permission. Permission to conduct the study was also obtained from the Principals and the School Governing Bodies (SGBs) of the two selected schools, as well as from the parents, teachers and learners of the schools.

To protect the identity of the schools and the respondents that participated in the study, the schools were referred to as School A and B. The respondents were also instructed not to write their names, the school's name, or anything that might identify them on the questionnaire. Those learners who felt uncomfortable and did not want to continue to participate in the study were allowed to withdraw at any stage of the study.

Data Analysis

The data were analysed by using the Statistical package for Social Sciences (SPSS), version 22. The pre-coded questionnaire was captured through the help of statisticians at the Post Graduate Research Laboratory of the Walter Sisulu University. Cross tabulations of the variables were carried out to ascertain any associations that existed between the various variables and substance abuse, using the chi square test. The data were then presented in tables for easy comprehension. Despite efforts to ensure the reliability and validity of the study findings, some challenges were encountered. For instance, considering the number of High Schools in the Buf-

falo Flats Area of East London, the selection of two schools could not give an accurate representation of learners in the area, thereby negatively impacting on the true reflection of substance abuse in schools in the Buffalo Flats area of East London.

Data-entry errors might also have occurred during the data-capturing process, considering the fact that more than one person was working on the questionnaires.

RESULTS

Five key findings were made from the data-analysis process: the demographic characteristics of the respondents; the acknowledgement of substance use by the respondents; the relationship between gender, age and grade of a learner; and substance abuse at school. The findings are presented and explained below.

Demographic Characteristics of the Respondents

The demographic characteristics of the respondents that were taken into consideration included their gender, age, and race. The information obtained is presented in Table 1. A higher percentage of the respondents were females (60.98%), with males constituting 39.02 percent of the respondents. The majority of the respondents (98.78%) were 15 years or older, with less than 2 percent of the total respondents aged between 11 and 14 years. The majority of the respondents were indigenous Africans (50.41%) and mixed race (41.19%), often referred to as 'Coloureds' in the South African context. The Indian population constituted (0.41%) of the sample population, with no representation of White learners in the study.

The majority of the respondents (82.86%) denied having used any of these abused substances at school in the past 30 days preceding the study. A sizeable figure (17.14%), on the other hand, acknowledged having used at least one form of substance at school, at least once in the 30 days prior to conducting the study. The responses are presented in Table 2. One respondent did not answer the question.

Of the respondents who indicated that they had abused substances at school across the three grades in the past 30 days prior to the conducting of the study, 30.95 percent of males

Table 1: Demographic profile of respondents (n=246)

Gender (n=246)	Grades							
	Respondents n=246		G10 n=104 (42.28%)		G11 n=75 (30.49%)		G12 n=67 (27.23%)	
	(f)	%	(f)	%	(f)	%	(f)	%
<i>Distribution of Respondents According to Gender (n = 246)</i>								
Male	96	39.02	50	48.08	26	34.67	20	29.85
Female	150	60.98	54	51.92	49	65.33	47	70.15
Total	246	100	104	100	75	100	67	100
<i>Age Distribution (n= 246)</i>								
11 - 12 years	1	0.41	1	0.96	0	0	0	0
13 - 14 years	2	0.81	1	0.96	1	1.33	0	0
15 - 16 years	84	34.15	68	65.38	15	20	1	1.49
17 - 18 years	110	44.72	28	26.92	53	70.67	29	43.28
>18 years	49	19.91	6	5.77	6	8	37	55.22
Total	246	100	104	100	75	100	67	100
<i>Distribution of Respondents According to Race (n=246)</i>								
African	124	50.41	63	60.58	43	57.33	18	26.87
Coloured	121	41.19	41	39.42	31	41	49	73.13
Indian	1	0.41	0	0	1	1.33	0	0
White	0	0	0	0	0	0	0	0
Total	246	100	104	100	75	100	67	100

Table 2: Self acknowledgement of substance abuse at school (n = 245)

Response	(f)	(%)
<i>Self-acknowledgement of Substance Use at School (n = 245)</i>		
Yes	42	17.14
No	203	82.86
Total	245	100

indicated to having drunk alcohol, compared with 23.81 percent of females. The percentage difference between male and female alcohol abusers was, however, not statistically significant

(NS) at $p < 0.05$ confidence interval using the Parsons correlation test. Similar results were found for nicotine use: with males at 26.19 percent and females at 16.67 percent. However, with regard to marijuana use, more female respondents (11.90 %) indicated that they had used marijuana at school than males (9.52%) (see Table 3). Furthermore, only male respondents indicated that they had used mandrax (2.38%) and inhalants (2.38%); while tik (2.38%) was only used by a female substance user. Statistically, there was no relationship found between the gender of a learner and substance abuse at

Table 3: Current (past 30 days) substance abuse patterns at school, according to gender

Substance		Gender of substance users at school n = 42				df	χ^2 p<.05
Response		Male		Female			
		(f)	%	(f)	%		
Alcohol	Yes	13	30.95	10	23.81	1	0.87 (NS)
Nicotine	Yes	11	26.19	7	16.67	1	0.21 (NS)
Marijuana	Yes	4	9.52	5	11.90	1	0.71 (NS)
Tik	Yes	0	0	1	2.38		
Mandrax	Yes	1	2.38	0	0		
Inhalants	Yes	1	2.38	0	0		
Cocaine	Yes	0	0	0	0		
Ecstasy	Yes	0	0	0	0		
Heroin	Yes	0	0	0	0		
Opium	Yes	0	0	0	0		

school at a confidence interval of $p < 0.05$, using the Parson's Correlation test. However, the arbitrary figures indicated that more male learners used illicit substances at school than did females, with the exception of marijuana, which was abused mostly by female learners.

Respondents in their late adolescence (17-18 years) had drunk alcohol the most at school (30.95%) within the 30 days preceding the study. Nicotine and marijuana use were high in this age bracket. As evidenced from Table 4, 16.67 percent of the respondents older than 18 years indicated having used alcohol at school at least once in their lifetime. Furthermore, 19.05 percent of 17 and 18 year olds had used nicotine at school; while 4.76 percent had used marijuana at school at least once.

No respondent younger than 15 years had ever used illegal substances at school. Although at a lower rate (2.38%), mandrax, tik and inhal-

ants were only used by learners who were older than 18 years. Although mature learners appeared to have used abused substances, such as alcohol, nicotine and marijuana more at school than younger learners, no significant association was found between learner substance abuse at school and age at $p < 0.05$ confidence interval level.

Substance use in the past 30 days preceding the study among the acknowledged users also varied, according to grades. Grade 11 respondents had frequently used illegal substance at school. From Table 5, it can be seen that 28.57 percent of grade 11s had used alcohol at school as opposed to 14.29 percent of Grade 10s and 11.90 percent of Grade 12s. Nicotine use followed a similar pattern: 21.42 percent Grade 11s; 14.29 percent of Grade 12s, and 7.14 percent of Grade 10s. On marijuana use, 11.90 percent of Grade 11s had used the drug at school before, as op-

Table 4: Current (past 30 days) substance-abuse patterns at school, according to age (n = 42)

Substance		Age categories						df	χ^2 p<.05
		n = 42							
		15-16 years		17-18 years		Older than 18 years			
Response		(f)	%	(f)	%	(f)	%		
Alcohol	Yes	3	7.14	13	30.95	7	16.67	2	1.34 (NS)
Nicotine	Yes	2	4.76	8	19.05	8	19.05	2	5.66 (NS)
Marijuana	Yes	1	2.38	6	14.29	2	4.76	2	0.74 (NS)
Mandrax	Yes	0	0	0	0	1	2.38		
Tik	Yes	0	0	0	0	1	2.38		
Inhalants	Yes	0	0	0	0	1	2.38		
Cocaine	Yes	0	0	0	0	0	0		
Ecstasy	Yes	0	0	0	0	0	0		
Heroin	Yes	0	0	0	0	0	0		
Opium	Yes	0	0	0	0	0	0		

Table 5: Current (past 30 days) substance abuse at school according to grade (n = 42)

Substance	Response	Response Grades n = 42						df	χ^2 p<.05
		G 10		G11		G12			
		(f)	%	(f)	%	(f)	%		
Alcohol	Yes	6	14.29	12	28.57	5	11.90	2	1.02 (NS)
Nicotine	Yes	3	7.14	9	21.42	6	14.29	2	3.44 (NS)
Marijuana	Yes	2	4.76	5	11.90	2	4.76	2	0.55 (NS)
Tik	Yes	0	0	0	0	1	2.38		
Mandrax	Yes	0	0	1	2.38	0	0		
Inhalants	Yes	0	0	1	2.38	0	0		
Cocaine	Yes	0	0	0	0	0	0		
Ecstasy	Yes	0	0	0	0	0	0		
Heroin	Yes	0	0	0	0	0	0		
Opium	Yes	0	0	0	0	0	0		

posed to 4.76 percent usage among both Grade 10 and 12 users. Again, only Grade 11 learners indicated that they had used mandrax and inhalants at school. No significant statistical association was established between the grade of a learner and the subsequent substance abuse at school, using the Parson's Correlation test at confidence interval of $p < 0.05$; although more Grade 11 learners appeared to have used abused substances at school than Grade 10 and 12 learners.

DISCUSSION

The high percentage of female respondents in the study was due the high number of registered female learners in the two schools, in which the study was conducted. Over the years, there has been a gender imbalance in South African schools, with the ratio skewed in favour of females. While there is relative gender parity at the basic education level in South Africa, from Grades 1 – 9, there is a great disparity in enrolment numbers in favour of girls at the secondary school level (United Nations International Children Emergency Fund 2012). Further explaining why female learner populations exceed that of males, Statistics South Africa (2015) revealed that the female population in the country was higher than the male population, which translates into school enrolment figures.

The predominance of respondents in their mid- to late-adolescence stage was consistent with the mean age of high schools learners in the country. A report compiled by the Department of Basic Education (2015) revealed that most high school learners were usually in their mid- and late-adolescence stage; while those at the basic school level were often in their early-adolescence stage, or younger.

While substances such as nicotine and marijuana are abused on school premises by learners, alcohol seemed to be the preferred substance amongst learners. According to the World Health Organisation (2013), South Africa is among the top-five alcohol-consuming countries in the world, and the top alcohol consumer in Africa. Children are therefore likely to be exposed to alcohol on a regular basis through societal or family consumption of alcohol, which is likely to lead the consumption of alcohol by learners at school, where they spend many of their working hours. Highlighting the preference of alcohol and its abuse in South Africa, Popova et

al. (2017) reckon that alcohol abuse is so entrenched in South Africa that a high number of pregnant women drink Alcohol, leading to a number of children often born with Foetal Alcohol Syndrome. As such, the high prevalence of alcohol abuse in school premises in the Buffalo Flats of East London, South Africa, is more of a societal problem. The preference of alcohol by school-going children is not peculiar to South Africa; but it is also prevalent in some African countries. A study conducted by Osei-Bonsu et al. (2017) found that 43.4 percent of the youth in Torkoni-Hohoe, a rural community in Ghana, were currently abusers of alcohol. Alcohol abuse in the Buffalo Flats schools was more entrenched among male learners than their female counterparts, as shown in Table 3.

The high consumption of alcohol by males was earlier mentioned by Seggie (2012), who explained that more male South Africans consumed alcohol than their female counterparts in terms of quantity and frequency. Furthermore, Statistics South Africa (2016), in its demographic and health survey, mentioned alcohol as the major substance of abuse by adolescents in the country, a problem now manifesting in schools.

Although alcohol is not the only substance frequently abused by learners; it has been blamed as the main cause of school dropouts among male adolescents on the African continent (Dada et al. 2016).

Nicotine, sold in various forms of tobacco products in South Africa, was found to be the second most popular substance of choice by learners who abuse substances at school. Despite stringent laws on tobacco advertisement and sale, it remains one of the most illegally used substances in the country (Cancer Association of South Africa 2017). According to the association, at least 17.9 percent of South African boys and 10.6 percent South African girls have used one form of tobacco product in the year 2013. Hence, the male dominance in nicotine use in the Buffalo High School's premises in East London. This finding was in line with the general nicotine use trends in the country. Furthermore, Statistics South Africa (2016) revealed that 28.4 percent of South African men aged between 15 and 24 years smoke tobacco, with 20.8 percent of men being daily smokers of the drug.

According to Jules-Macquet (2015), self-reported marijuana abuse among adult and young South African Marijuana users stood at 7.93

percent. While males are traditionally the main users of illicit substances (Statistics South Africa 2016), female dominance in marijuana had the preference over their male counterparts in this study; and this has revealed a new trend in marijuana usage. Explaining how the trends in marijuana and other illicit drug use were changing in South Africa, Moodley et al. (2011) posited that the gender gap that had previously existed between males and females in terms of the use of those drugs in society was gradually narrowing; as females' use of illicit drugs was fast becoming acceptable in many traditional South African communities.

It could therefore be argued that the finding by this study that more females than males abused marijuana at school in the Buffalo Flats of East London could be a manifestation of the Moodley et al. (2011) long-held assertion. The United States of America Department of Justice (2015) established that the majority of college learners were of the perception that marijuana use posed a lower risk to the user. Should this perception be held to be true among South African learners, this would explain why female learners in the Buffalo Flats of East London of South Africa might easily experiment with marijuana at school, rather than with any other drug.

Although learners younger than 14 years of age might use illegal substances at home, or in their communities, the practice is not extended to schools in the Buffalo Flats area of East London until they reach 15 years of age. Tshitanga and Tosin (2016) established that learners' substance abuse among South African school learners begins to manifest when learners begin to contend with the issues of identity; and they are vulnerable to peer influence. At the early and mid-adolescence stage, teenagers are eager to fit into their newly found social groups; hence, they become vulnerable to substance abuse; as they are motivated to seek new experiences (National Institute on Drug Abuse 2014).

Meanwhile, the prevalence of nicotine use amongst older learners, as evidenced in this study, could be ascribed to the fact that the legal age at which one is allowed to buy or use tobacco products in the country is 18 years and hence, learners at this age have easy access to nicotine (Cancer Association of South Africa 2017). Moreover, while earlier studies (Morojele et al. 2013; Van Zyl 2013), found that learner substance use increased with grade progression, in

correlation with age, there was a deviation in this case. There was lower use of illegal substances by Grade 12 respondents compared with Grade 10 and 11 learners. The lower use of illegal substances by learners in the matriculation grade could be that they are preoccupied with academic work; and therefore, they do not have much free time at school to use illegal drugs. On the other hand, while Grade 10 learners might be reluctant to use substances at school – due to their younger age and the fact that they may be newcomers in the school and have not yet formed strong social networks, Grade 11 learners are older; and they are already familiar with the school environment and have free time on their hands.

Learners in the 11th grade therefore tend to use the free time to use drugs at school, as compared with Grade 10 and 12 learners.

CONCLUSION

This paper has looked into the prevalence of substance abuse in two selected high schools in the Buffalo Flats area of East London, South Africa, with an emphasis on how the abuse of illegal substances manifests across various gender, age and grade categories. While the incidence of substance abuse, such as that of alcohol, nicotine and marijuana in schools was arbitrarily high, no statistical significance relationship was found between substance abuse at school and any of the variables. It could, consequently, not be scientifically proven that any of the variables: gender, age and grade of a learner influenced the abuse of a particular substance in schools in the Buffalo Flats of East London, South Africa.

Nonetheless, there is a need for all stakeholders in the education and health sector in the Eastern Cape Province, especially in the Buffalo City Municipality, to collaborate in addressing substance abuse in schools in the Buffalo Flats community. Addressing substance abuse in schools could help to make these schools more conducive for teaching and learning, and prevent a continuation in the cycle of substance abuse in the country at large.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made: that edu-

cation and health officials should consider assigning health educators to schools in the Buffalo Flats area, in order to develop and implement anti-substance abuse strategies that are specifically tailored to meet the needs of learners, according to their age, gender and grades. Also, school anti-drug measures, especially security systems, need to be upgraded and fortified, to prevent learners from accessing illicit substances at school, thereby minimizing their abuse at school.

It is also recommended that a mixed-methodology study be carried out in more than two High Schools within the Buffalo City Municipality, in order to ascertain the causes of the changing dynamics in learners' substance abuse. For instance, qualitative data would help unravel why more female learners use marijuana in schools in the Buffalo Flats area than their male counterparts.

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