

## Factors influencing use of illicit drugs among high school learners in an informal township of Gauteng Province, South Africa

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### **Abstract**

*The threats associated with the use of illicit drugs in many societies have become topical issues. The use of illegal drugs is currently a major problem among different population groups in South Africa especially the youth in schools. Identifying factors that influence the use of illicit drugs among high school learners in a socioeconomically deprived informal township remains a significant milestone in providing evidenced-based information useful for strategic planning to reduce the prevalence of drug use. A cross-sectional survey was conducted to determine factors that influence the use of drugs among grade 8 and 11 high school learners in an informal township in Gauteng province. A total of 262 learners participated. The prevalence of illicit drug use among the learners was 20.6% [N=54/262]. The most commonly reported illicit drugs used, with an initiation age of  $\leq 13$  years, were marijuana 81.3% [N= 213/262] and nyaope 52.3% [N=137/262]. Girls were 83% less likely to use drugs compared to boys [OR=0.17, (95% CI=0.073-0.402) p=0.000]. Learners who lived with both parents were 86% less likely to use drugs as compared to those who lived with single parents [OR=0.139, (95%CI=0.042-0.462) p=0.000]. Religion had no statistical significance with drug use. The most common factors influencing illicit drug use among high school learners were gender, parental or guardian level of education, and family structure. Early initiation of community programs may assist in reducing the impact of this scourge in the study area.*

**Key words:** Illicit drugs, High school learners, Diepsloot, Informal Township

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## Introduction

The threats associated with the use of illicit drugs in many societies have become topical issues affecting different population groups. In particular, the pattern of vulnerability and level of consumption of addictive drugs has increased globally among those between the age 15 and 25 years (Haddad et al, 2010). Considering the socio-economic impact, substance abuse among the youth population in communities is an issue of major concern in South Africa (Morojela et al, 2009; Moodley et al, 2012). In line with the government commitment to reduce the incidence of drug abuse in South Africa, the youth population has been considered among the sixth target population groups in the National Drug Master Plan (NDMP) of 2013 –2017. As indicated in the NDMP, about 6.4% of the gross domestic product (GDP) of South Africa in 2005 was spent to address the socio-economic impact of illicit drugs and alcohol (CDA, 2013).

Delinquency problems related to drug use among adolescents have several adverse effects that are not limited to the individual users, but the families and the nation at large also share in the burden. Drug use increases the risk of exposure to many unfavorable behaviors such as violence, risky sexual behavior, school dropout, and crimes. A study conducted among high school learners across all the nine provinces in South Africa found that substance use is the major reason behind violence which may be either physical or emotional (Mncube and Harber, 2013). The victims of drug use are also likely to have their health compromised even at an early age in life. Although Nyaope is a relatively new drug, a recent study has shown that mothers who are addicted to Nyaope during pregnancy are likely to induce symmetrical growth restriction and neonatal abstinence syndrome on their newborn babies (Thomas and Velaphi, 2014).

Learners in South Africa have been found to be involved in the use of different psychoactive substances which include: cannabis (marijuana/dagga), amphetamines, ecstasy, cocaine, mandrax (methaqualone), crack (rock), methamphetamine (Tik), heroine, *nyaope* (heroin and dagga) and cocaine (Peltzer et al, 2010; CDA, 2013). Cannabis which is smoked by 129 - 190 million people at least once a year has been considered as the most widely used substance globally (World Drug Report, 2015). In South Africa, cannabis also remains a drug of high interest among the youth (Peltzer, 2007). The tradition of using multiple drugs (poly drug) at a time which is intended to augment the effect of some particular drugs has also been recognised as a common practice in South Africa (Floyd et al, 2010). A typical poly drug found in Gauteng province of South Africa is Nyaope which has varying compositions ranging from heroin, morphine, methamphetamine, marijuana, rat poison, antiretroviral (ARV) medications and rat poison (Thomas and Velaphi, 2014; Venter, 2014). Nyaope which is currently restricted to South African population is smoked mainly among young and unemployed South African black who reside in socio-economic disadvantaged communities (Venter, 2014).

A number of factors contribute to high prevalence of drug use in South Africa: vulnerability of youth; peer pressure; inadequate role model; community tolerance; availability of drugs; under actualisation of metaphysical shortcoming; poverty and unemployment; violence as well as living in an area surrounded by substance users (Ramlagan et al, 2010; van Zyl, 2013). In particular, children who lack parental guidance are more likely to engage in

substance use (Meghdadpour, 2012). The role of peer pressure as a powerful tool of influence on adolescence behavior in relation to drug use has been noted in a previous study (Mohapi, 2014). In a study which examined a nationally representative sample of secondary school students in the United States, the parental educations, as well as the parental income, were key factors influencing rates of substance use (Humensky, 2010).

Many communities are distressed due to diverse socio-economic challenges which include poverty, joblessness and consequently the problem of substance abuse is heightened (UNODC, 2010). Stress as a factor has a contributory influence on substance abuse among adolescents as reflected in various studies carried out in different locations in Sub-Saharan Africa including South Africa and Kenya (Atwoli et al, 2011; Ward et al, 2008). Other research findings from Kenya confirms that the most important influencing factor for substance use among learners is peer influence (Kyalo and Mbugua, 2011; Ndeti et al, 2010). The study setting shares similar economic features such as joblessness, uneven access to basic public services, and overwhelming levels of crime and violence with other townships in South Africa (World Bank, 2015). Meanwhile, communities with a high level of poverty, crime, reduced productivity and unemployment will inevitably be affected by the damaging effects of substance use (CDA, 2011). The aim of the study is to investigate the types of substance use and some of the factors that contribute to the use of drugs among high school learners in Diepsloot informal township.

## **Methods**

### **Design**

A descriptive quantitative cross-sectional study was conducted with learners using semi-structured questionnaires. Students were recruited from a school in the in Dipsloot informal township, Gauteng province, South Africa. Students were conveniently approached during their formal lecture schedules with the assistance of educators responsible for the specific classes. The aim and the nature of the study were explained to the participants and only those who agreed to participate and signed the informed consent were considered to participate in the study. The informed consent letters were sent to parents through the learners and were returned with the names and signatures of the parents.

### **Data collection**

Considering the nature of the study which involves the use of drugs, the data were collected using anonymous self-administered questionnaire which was constructed in English. The questionnaire was adapted and modified from validated tools related to substance use (Flisher et al, 2003; Hamdulay and Mash 2011). The use of self-administered questionnaire was appropriate because it offered confidentiality for the participants who were afraid to be associated with drug use. Furthermore, the learners were assured of the anonymity of their responses. The questionnaire had three sub-sections which focused on socio-demographic variables, types of illicit drugs used, and the factors that influence drug use. Before the main survey was conducted, the questionnaire was pre-tested to improve the efficacy of the instrument. Pretesting was done on ten randomly selected learners who were in grade 8 and 11 from a neighbouring school. Aspects of the research tool that

appears to be confusing were restructured in an attempt to improve the instruments after the pre-testing. The pre-testing also gave an idea about the estimated time required for completion of each questionnaire in the main survey which was roughly 30 minutes.

Data collection took place in the classrooms where all the participating learners were seated to complete the question. The purpose of the study was further clarified to the learners before the completion of the questionnaire. The duration of the data collection took a period of three weeks as different days were allocated for different classes. The process took about 30-35 minutes and all completed questionnaires were collected immediately.

### **Data analysis**

The raw data was captured, cleaned and coded. After that, the data was entered into Microsoft Excel (Microsoft Office 2013) and imported into Stata IC/10 for analysis. The summaries from the analysis were used to define the response rate, demographic characteristics, and prevalence of illicit drug use as well as different types of illicit drugs used among the learners. Each statistical test was carried out using two-sided tests at 0.05 level of significance. The P-values were reported to three decimal places with values less than 0.001 and values less than 0.05 were considered significant. Through multiple logistic regression, independent variables associated with illicit drug use among learners were determined.

### **Ethical considerations**

Permission to conduct the study was approved by Sefako Makgatho Health Sciences University Research and Ethics committee (Ref: SMUREC/H/170/2015: PG). Permission was also obtained from the Gauteng Department of Education (Ref: D2016/260) and the school principal to conduct the study in the selected school. Confidentiality and anonymity of the learners was ensured and participation was voluntary. In addition to the written informed consent obtained from parents and guardians of learners younger than 18 years, the assent of the learners who could not sign an informed consent was also obtained.

## **Results**

### **Sample characteristics**

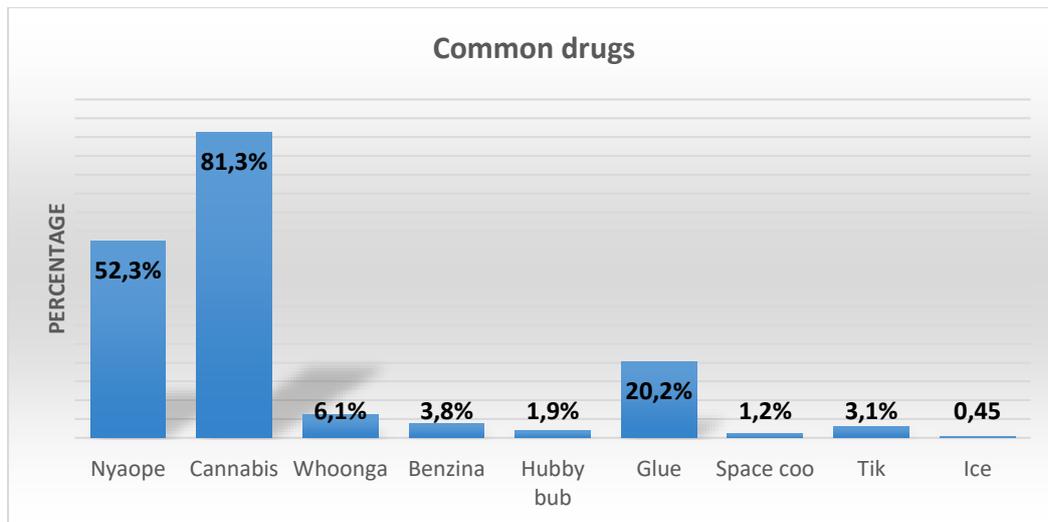
The study sample consisted of 262 grade 8 and 11 high school learners. The age of the participants ranged from 13 – 21 years, the majority 80.9% (n= 233) were between the age of 14 - 19 years. The male students constituted the majority 51.5% (n = 135). Over half (n= 133, 50.8%) were in grade 8, slightly less than half 46.2% (n= 121) lived with single parents, and over two thirds (n= 165, 62.9%) of the parents or guardians had secondary education. Of the 262 learners who participated in the study, over three-quarters (n=189, 72.1%) obtained financial support directly from their parents. With regards to religion, three quarters (n=191, 73.2%) have an affiliation to Christianity. The predominant ethnic groups among the learners were the Tsonga speaking learners (n=57, 21%) and Tswana speaking (n=52, 20.2%).

**Table 1: Percentage distribution of respondents by age (N = 262)**

Age ( Years )	Frequency ( N )	Percent (%)
-	2	0.8
13 years	16	6.1
14 years	38	14.5
15 years	51	19.5
16 years	44	16.8
17 years	40	15.3
18 years	35	13.4
19 years	25	9.5
20 years	8	3.0
21 years	3	1.1
<b>Total</b>	<b>262</b>	<b>100</b>

**Common types of illicit drugs used by learners**

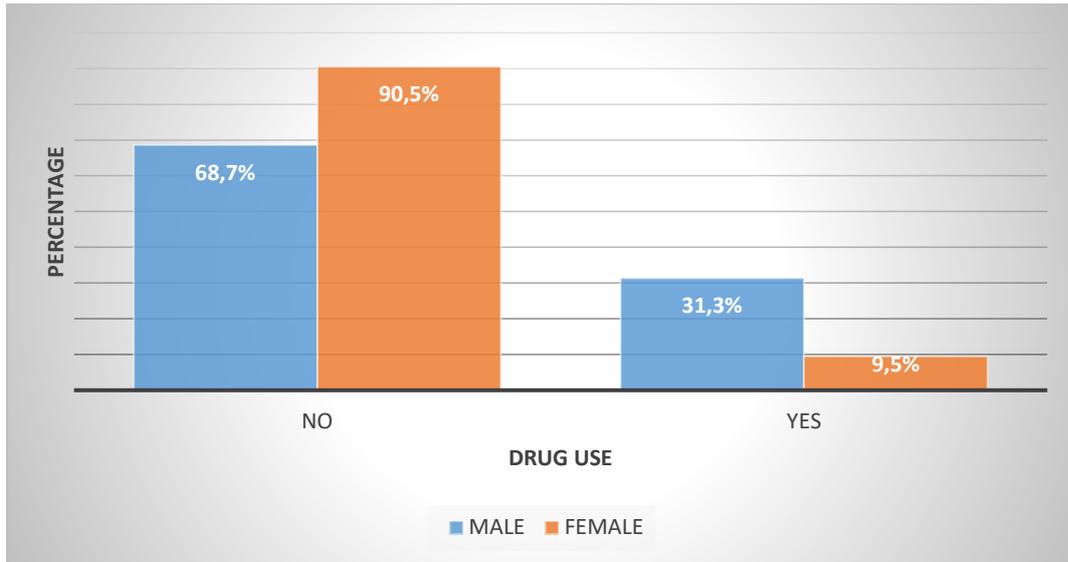
In figure 1, the majority of learners, 81.3% (n= 213) considered cannabis as the most common drug used by learners in Diepsloot followed by Nyaope 52.3% (n=137).



**Figure 1: Types of Illicit drugs commonly used by learners**

**Prevalence of illicit drug use**

In this study, out of the 262 participants, 20.6% (N=54) reported that they used drugs. Among the participants who reported that they used drugs, there is a significant difference between the male and the females, p = 0.000. The proportion of the male was 31.3% while the female constituted 9.5%.



**Figure 2: Percentage distribution of sex by drug users (N = 262)**

### **Factors influencing use of drugs among learners**

Multivariate regression analyses were conducted as shown in Table 2 to determine which independent variables would be associated with illicit drug use when adjusting for other independent variables. Gender remains a significant factor that influences the use of drugs among learners. The female learners were 83% less likely to use drugs compared to boy learners [OR = 0.172, (95 % CI = 0.073 - 0.402) p-value = 0.000].

The likelihood of learners who lived with both parents to use drugs was found to be lower by 86% compared to those who lived with just one parent [OR = 0.139, (95 % CI = 0.042-0.462) p-value = 0.001]. Parental level of education and religion were not significantly associated with drug user among learners. In addition, the majority 87.0% [N = 228/262] of the learners who attended parties regularly reported that alcohol was the commonest substance readily available at these events.

Additionally, findings from this study showed that learners who reported drug use were more likely to have admitted that they were undergoing stressful events in their lives. They attributed stress as one of the reasons for drug use; they used drugs to avert pressure and to be more relaxed or confident.

**Table 2: Factors influencing use of drugs among learners in Diepsloot**

Variables	Odds	Std Dev	P- value	[95%] CI	
<b>Level of education of parent/guardian</b>					
Primary education	(RC)1				
Secondary education	0.31	0.1625	0.025	0.11	0.86
Tertiary education	0.43	0.2724	0.183	0.12	1.48
No formal education	0.27	0.2575	0.169	0.04	1.74
<b>Sex</b>					
Male	(RC) 1				
Female	0.17	0.0744	0.000	0.073	0.40
<b>Religion</b>					
Christians	(RC) 1				
African beliefs	0.58	0.293	0.284	0.21	1.56
Others	1.80	1.1446	0.355	0.51	6.25
<b>Family structure</b>					
Live with one parent	(RC) 1				
Live with both parents	0.13	0.0851	0.001	0.04	0.46
Live with others relatives	2.32	0.9913	0.048	1.00	5.36
<b>Have friends who smoke</b>					
Yes	(RC) 1				
No	1.01	0.4079	0.968	0.46	2.23

### Discussion

The study determined factors influencing the use of illicit drug use among high school learners in an informal township. Consistent with existing literature, this study revealed that cannabis remains the most common illicit drug use among the youth (Peltzer and Ramlagan, 2007). The study further suggests that the use of cannabis and nyaope is on the increase among the learners. Identifying nyaope as one of the commonest drugs used by learners further substantiates the reality of the poly-substance use being an evolving problem in South Africa (Gopal and Collings, 2014).

The finding of this study provides a basis to categorize adolescents who are victims of drug use; younger adolescents (14 – 18 years old) and older adolescents (19 - 21 years old). Among the younger adolescents, the frequency of drug use increased as their age increases but in older adolescents, there was no significant difference in the frequency as the age increased. It is suggestive from this study that if the participants did not take drugs on or before the age of 18 years, the likelihood of not taking drugs during a lifetime is high. In essence, age is only a predictive factor in relation to drugs use among younger adolescents. This noticeable difference is a concern that may necessitate further research in the future but also to develop intervention to mitigate drug use among young people.

The study further substantiated the differential patterns in the use of illicit drugs among male and female. In the current study, the prevalence rates for drug use are 31.3% and 9.5% for boys and girls respectively. This is in agreement with previous findings where the

prevalence rates for past month cannabis use were 23.9 % for boys and 18.6 % for girls in the USA and 14.3 % for boys and 5.1 % for girls in previous studies conducted in South Africa (Reddy et al, 2007; Onya et al, 2012a). The results of this study are also comparable to the findings in other studies in African countries such as Zimbabwe and Ghana where there was a statistically significant gender difference in the prevalence of drug use with higher prevalence in males (Emmanuel et al, 2009; Nkyi, 2014). However, our findings are in contrast to a previous study in the USA where the socioeconomic status of the adolescence as measured by parental education and household income was linked to higher rates of alcohol and illicit drug use (Humensky, 2010).

The current study showed a significant difference in drug use among learners whose parents or guardians had secondary education compared to those whose parents or guardians has just primary education. Meanwhile, adolescents from both lower and higher socioeconomic backgrounds have different supporting reasons for getting involved in substance use. Family structure was found to have a considerable impact on the behavioral characteristics of the adolescent which can constitute a risk factor for drug use. The results from this study showed that while the tendency to use drugs is lower among respondents who stay with both parents compared to single parents, the tendency is higher among those who stay with other people apart from their parents.

The influence of the peer pressure to use drugs as identified in this study is not exceptional considering the result from the previous study in Nigeria which indicated that information for drug use, and availability can readily be sourced from friends or peer group (Ngesu et al, 2008). Most of the learners in the current study attended parties regularly or occasionally where alcohol is freely available which increases their exposure to illicit drugs. It can, therefore, be inferred from this study that party attendance is a contributory factor to the use of drugs among high school learners. Meanwhile, the majority of the learners who reported drug use admitted that the main source of getting drugs is through their friends. The finding is in agreement with a previous study in South Africa which established the connectivity of peer influence resulting in additional 13% variance in drug use among adolescents (Judith et al, 2006).

In contrast to a previous study carried out in South Africa, alcohol drinking and cigarette smoking were found to have an association with a significantly higher odds of lifetime cannabis use. In this study, learners who reported drug use also had a history of drinking alcohol but not necessarily a history of cigarette smoking as previously reported also by Moodley et al, (2012).

Most of the learners had religious conviction, in particular, towards Christianity. Therefore, it was expected that religiosity should be a protective effect for substance use. However, in the present study, religious practice had no statistically significant relationship with drug use. This is contrary to other studies carried out in South Africa and the USA where the shielding nature of religiosity on drug use was noted (Bahr and Hoffmann, 2008; Ghandour et al, 2009; Hamdulay and Mash 2011; Meghdadpour et al., 2012). Meanwhile, the lack of a significant relationship between religiosity and substance use in this study is in agreement with

a study from Nigeria noting that the populations for the two studies are different (Makanjuola et al, 2014).

Finally, the findings in this study are consistent with studies conducted in Nigeria and Iran where psychological factors such as stress, nervousness, and pressure were found to be predisposing factors for drug use among students (Oshodi et al, 2010; Talaei et. Al, 2008).

### **Limitations**

The study obtained self-reported data of the learners only; hence social desirability in their responses could not be ruled out. In addition, the restriction of the study to learners in grades 8 and 11 excluding grades 10 and 12 makes the findings less generalizable to pupils and youth from the study area. However, it should be noted that sample had youth aged 13 to 21 years old, a range covering pupils and youth generally described as adolescents.

### **Conclusion**

The current study revealed prevalence of drug use of 20% among the learners; marijuana followed by *nyaope* were the most commonly reported illicit drugs used. Although there are some significant dominant factors that influence drug use among high school learners in the current study, the impacts of socioeconomic challenges on drug use are not very different from findings from previous studies. Family structure in terms of physical presence of both parents or either of the parents was an important factor that influenced adolescent behavior which may have impacted on the choice to use drugs or not. Despite the level of religious affiliations of learners, the expected protective impact on the use of drugs was not observed. The above findings suggest that further investigations are required to establish the importance and role of sociodemographic and socio-economic factors in the use of drugs among adolescents. The most common factors influencing illicit drug use among high school learners were gender, parental or guardian level of education, and family structure. Early initiation of community programs may assist in reducing the impact of this scourge in the study area.

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