

*Full Length Research Paper*

## Perceptions of school going adolescents about substance abuse in Ramotswa, Botswana

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**Drug and substance abuse is a global public health problem affecting adolescents and young adults especially in developing countries. This study investigated the perceptions of school-going adolescents about substance abuse in Ramotswa, Botswana. A cross-sectional design study using mixed methods was used to collect data from primary, junior and senior secondary school children aged 13 to 19 years. Some 207 school children were recruited into the study. Almost equal numbers of boys and girls had ever used substances prior to this study and the overall prevalence of substance use is 17.4%. The media is the major source of awareness and knowledge of substances and most schools (59.9%) do not have strategies for reducing abuse of substances. School surroundings provide school children easy access to substances. Knowledge of the association of substance use and abuse is high with mental health (74.9%), traffic accidents (70.7%) and 58.5% with heart diseases. It is concluded concerted effort is needed involving major stakeholders to scale-up campaigns for reducing drug and substance abuse among school children. This can be achieved through raising awareness about the consequences of substance abuse; building capacity to strengthen coping mechanisms to stress and to those presenting with effects resulting from use of these substances and review academic curricula.**

**Key words:** Adolescents, drugs, substance abuse, perception, knowledge.

### INTRODUCTION

The 21<sup>st</sup> Century is characterised by drug and substance abuse as a global public health challenge (Owoaje and Bello, 2010). United Nations Office on Drugs and Crime (UNODC) estimated that between 3.6 and 6.9% of the global adult population aged 15 to 64 years has ever used an illicit substance (WHO, 2004). Opiates are among the commonly used substances in Europe, USA and Asia; cocaine in Southern America and cannabis in

Africa (UNODC, 2013a). With respect to drug abuse, drugs are substances that have detrimental effects on the user including physical, mental, and emotional as well as behavioural (Whichstrom and Hegna, 2003, Galea et al., 2004, UNODC, 2013b). Drug abuse is now generally defined as excessive or inappropriate use of a psycho-active substance by a person; such user being considered or judged to be illegal (immoral) by the culture

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and resulting in harm to the person or society (Pela and Ebie, 1982).

The World Health Organization (WHO) has defined adolescence as a period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19. It represents one of the critical transitions in life and is characterised by a tremendous pace in growth and change that is second only to that of infancy (WHO, 2011). Studies in Asia, Europe and USA have reported a significant increase in drug abuse amongst adolescents and youths (Stanton et al., 2001, Babaola et al., 2013, Brooks et al., 2003, Deressa and Azazh 2011, UNODC, 2013, Gebreslassie et al., 2013, Osman 2016) therefore, calling for a thorough investigation on the factors behind this trend. Some countries have introduced strategic measures to reduce drug abuse among populations. In Canada, consumption of alcohol, tobacco, cannabis and drugs are illegal (Adlaf et al., 2005). The Nigerian Government introduced a Law Enforcement Agency but still the trend has not changed (National Law Enforcement Agency, 1992) suggesting control of drug and substance use goes beyond legislations.

The primary developmental change during early adolescence is the re-evaluation of the self and the emergence of self-identity (Forehand and Werson, 1994). At this stage, adolescents experience several biological, cognitive and psychological changes and begin to develop the capacity to think abstractly making them more inquisitive and concerned with peer relationship (Eccles, 1999; Vartanian, 2000; Christie and Viner, 2005). Experimentation with drugs during adolescence is common and reasons driving adolescents to use substances include curiosity, experimentation, amusement, reducing stress and sense of maturity (Erickson, 1968; Greenfield et al., 2007). Some reports suggest that the school environment influences adolescents to engage in drug use (Bond et al., 2007, Fletcher et al., 2009). Peer pressure, drug addict parents and economic reasons (Gikonyo 2005, Lynskey et al., 2006, Gabhainn et al., 2008, Maithya 2009, Mihalca et al., 2012) are additional reasons driving adolescents to engage in substances use.

In Africa, inadequacy of information and a systematic data collection on the subject have hampered the assessment of the extent, the patterns and trends of drug abuse. Literature however, suggests that drug and substance use trends are also on the increase in the region and cannabis, khat, alcohol, amphetamines, opium, cocaine, heroin and lysergic acid diethylamide, sedative hypnotic, glue and petrol sniffing are some of the substances commonly abused by adolescents. A study in Kenya, reported that the rate of lifetime alcohol use was 51.9% (Atwoli et al., 2011) and an estimated overall prevalence of cannabis smoking was 37.2% among youth in Zambia (Siziya et al., 2013).

The 2007 United Nations Office on Drugs and Crime

World Report stated that the highest cannabis production occurred in the African continent where about 1547 kg of marijuana (Cannabis) was confiscated in Botswana (UNODC, 2007). Additional reports in Botswana show that alcohol is the commonest (95%) substance of abuse among school children and cannabis, glue, and other ecstasy drugs were also used by adolescents (1%), (Botswana Alcohol AIDS Surveillance, 2004). The Botswana Youth Risk Behavioural Surveillance (2011) reported common substances of abuse among school children being tobacco (18.6%), alcohol (16.6%), cannabis (14.9%) and snuff (13.8%). Other substances according to the report were cocaine and ecstasy at 5.6 and 3.7% respectively. These reports support that drug and substance use among school children is a public health concern in Botswana that warrants further interrogation because studies have reported that drug abuse at an early school age is likely lead to drug abuse at adolescent, youth and adult life (Schmid et al., 2007).

The effects of drug abuse in Africa have also not been fully studied. However, "*amotivational syndrome*" has been described as an effect of cannabis abuse resulting in poor school performance and the adolescent may eventually drop-out of school (Kurdek, 1992, Shek et al., 1997). Other effects include cannabis-associated psychosis contributing between 12 and 40% of all psychosis in African mental hospitals (Odejide and Sanda, 1976, Henquet et al., 2005). Amphetamines cause among adolescent students a psychosis characterised by acute symptoms especially during examination period and low productivity has been reported among khat users because they spend more time chewing than working (Boroffka, 1996). Drug use therefore has far reaching implications beyond individuals to affecting productivity and hence sustainable economic development of a country.

This study was carried out in a semi-urban area, Ramotswa in Botswana to determine the perceptions of school children. The study reports on knowledge and perception of the studied population towards drug abuse, commonly used and sources of substances and the factors influencing school children to use drugs. The knowledge on the perception of the school children about substance abuse would enable the local and central government to plan a better primary approach to prevent drug abuse among the population segment.

## METHODOLOGY

### Study design and sample size

Cross-sectional, mixed methods approach was used to collect data from school-going children aged 13 to 19 years in Ramotswa District located about 35 km from the city of Gaborone. Ramotswa has nine including six primary schools, two junior and one senior secondary school. All schools were recruited and according to the Botswana Population Census (2011) the sampling frame was the total of 6025 in the age range 13 to 19 years. A total of 213 school-

**Table 1.** Demographic characteristics of the study population in the drug use study among school-going adolescents in Ramotswa, Botswana.

Population sample	N	Percentage	Gender	N	Percentage
Primary School 1	16	7.7	Male	109	52.7
Primary School 2	17	8.2	Female	98	47.3
Primary School 3	29	14.0	<b>Total</b>	<b>207</b>	<b>100.0</b>
Primary School 4	26	12.6			
Primary School 5	23	11.1	<b>Religion</b>		
Junior Secondary School 1	25	12.1	Christian	201	97.1
Junior Secondary School 2	33	15.9	Traditional	6	2.9
Senior Secondary School	38	18.4	<b>Total</b>	<b>207</b>	<b>100.0</b>
<b>Total</b>	<b>207</b>	<b>100.0</b>			
<b>Age (Years)</b>			<b>Education grade</b>		
13	96	46.4	Standard 6	14	6.8
14	33	15.9	Standard 7	97	46.9
15	26	12.6	Form 1	21	10.1
16	15	7.2	Form 2	19	9.2
17	14	6.8	Form 3	17	8.2
18	20	9.7	Form 4	1	0.5
19	3	1.4	Form 5	38	18.4
<b>Total</b>	<b>207</b>	<b>100.0</b>	<b>Total</b>	<b>207</b>	<b>100.0</b>

going children were estimated as sample size and adjusted for design error to 267. Permission to collect data from one primary school was not granted, therefore, five primary schools, two junior secondary schools and one senior secondary school participated in the study as shown in Table 1. From each school, eligible candidates were allocated numbers from which respondents were randomly selected by the researcher to participate in the study. Inclusion criteria were restricted to those aged between 13 and 19 years, school boys and girls who were willing to participate in the study. Consent/assent to participate in the study was obtained from parents and participants. Children under 13 years of age, those above 19 years, those with mental illness, blind and those whose parents did not grant consent to participate were excluded from the study.

#### Data collection and analysis

Quantitative data were collected using a questionnaire developed by WHO designed for student drug surveys (Smart, 1980). The questionnaire was piloted on 10 school children from a school outside Ramotswa. To prevent discussing and sharing responses with each other, the questionnaire was administered to the children in class by the researcher. Information on age, gender, sources of drugs and substances used; substance practices, sources of information and knowledge about drugs and substances of abuse, reasons for initiation of substance use, knowledge and awareness about consequences of substance use; and motivating and demotivating factors for drug and substance use was collected and analysed using IBM SPSS version 20. Descriptive statistics, frequency percentages were used to summarise categorical variables.

Focus Group Discussion (FGD) participants were purposefully and conveniently recruited from the schools. Three groups were conducted, one from the primary, junior and senior secondary schools. Each group consisted of 10 children (5 boys and 5 girls).

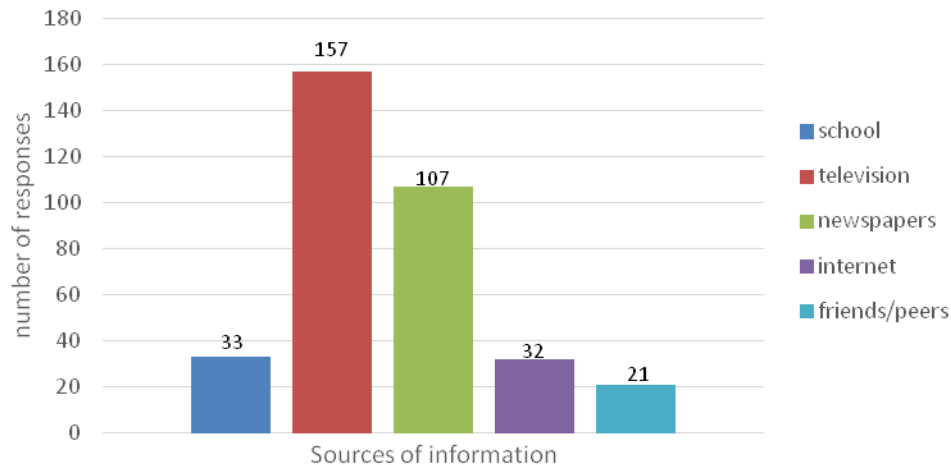
Interview guides aimed at generating information on awareness, substance use practices, sources of substances of abuse and knowledge of perceptions, association of substances use and disease conditions. The interviews were audio-recorded and each session lasted about 30 min. Accuracy of the narratives was assured by the researcher who probed further on ambiguous responses. No repeat interviews were carried out. Transcripts were analysed through an inductive approach (Strauss and Corbin, 1994) and themes were identified. Responses were coded manually by the Researcher and like data were grouped into categories.

#### Ethical consideration

The study received ethical clearance (Ref. URB/IRB/GRAD/151) from the University of Botswana Institutional Review Board and permit to carry out the study at the schools was granted by the Office of the District Education Officer in Ramotswa. The privacy of the information collected was assured by ensuring that non-participating children were not in the interview room and no identifiers which would trace back to the sources of information were placed on the records. Participation was also voluntary and children were informed that they were free to withdraw at any time if they so wished. The purpose and methods were clearly explained to the teachers and school children and the teachers assured availability of participants. Participants were assured that collected information would be kept confidential and informed consent/assent was obtained from all children participating in the study.

## RESULTS

The demographic characteristic of the study sample is presented in Table 1. A total of 207 school children (52.7% males and 47.3% female) participated in the



**Figure 1.** The major sources of information about substance use and abuse among school-going adolescent in Ramotswa, Botswana.

study giving a response rate of 77.5%. Primary school children (standard 6 and 7) were 53.7% (n=111) of the participants. The minimum and maximum age was 13 and 19 years respectively with a median age 16 years. Majority of the participants 62.3% (n=129) fell within the ages of 13 and 14 years and Christians accounted for 97.1% and about 3.0% African tradition believers.

### Definition of drugs and substance use

There is a shared perception among school children (n = 86) about the definition and forms of drugs that “*Drugs are substances which give a pleasure feeling to the body when taken*”. A male participant from a senior secondary school added that: “*There are two forms of drugs being used; legal like pain killers and all sorts of medicines; while illegal drugs include cocaine, marijuana and mandrax*”. The children also have a shared definition of substance abuse: “*Substance abuse is when an individual uses substances to the extent that the body can no longer do without these substances*”.

### Awareness and knowledge of substance use and abuse

Most children are aware of substance use and abuse and the major sources of information are shown in Figure 1. Television was the most common source of information mentioned [157(75.8%)] followed by printed media [107(51.7%)]. Information from friends and peers was listed by 21 (10.1%). When children were asked whether the schools have programmes to prevent substance abuse, 83(40.1%) said schools have such programmes while the majority 124(59.9%) said no specific and targeted programmes for preventing drugs and substance

abuse exist at their schools.

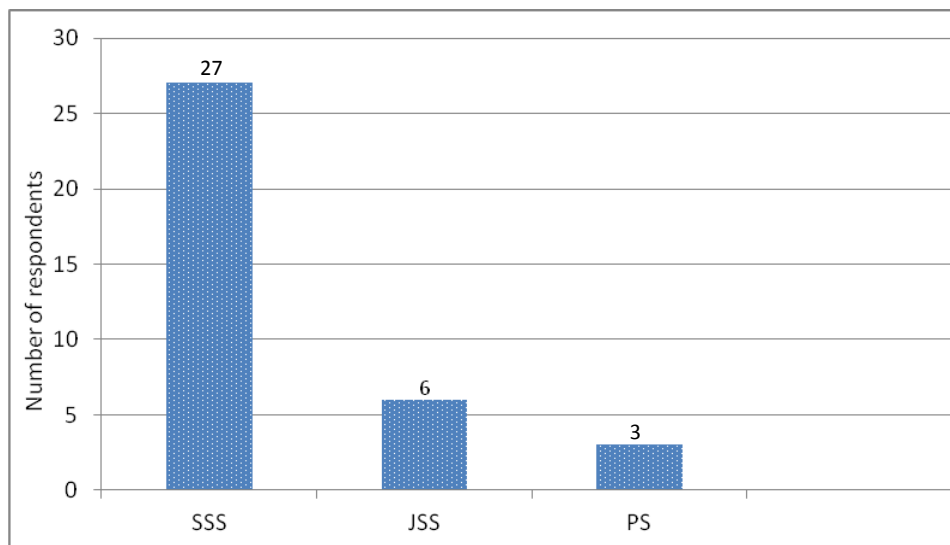
### Substance use and commonly used substances

Substance use in this study was defined as use of any of the items described in the WHO Questionnaire (Smart 1980) during twelve months prior to this study. Figure 2 shows 36 (17.4%) children admitted to have ever used substances prior to the study. Majority were senior secondary school children [27 (75.0%)] and the average age at which they commenced using drugs and substances was 14 years. Most 18(50%) said they were introduced by friends, 7 (19.4%) by family members and 5 (13.9%) by fellow students. When asked whether boys use drugs more than girls, majority said; “*substances are mainly used by boys and boys use tobacco and marijuana most while girls use alcohol*”. However, our results show that almost equal number 19 (52.8%) males and 17 (47.2%) females had used substances prior to this study.

When asked what drugs or substances are commonly used, most primary school children mentioned cocaine, marijuana, glue and alcohol in that order. A junior secondary school boy remarked: “*commonly used drugs include illegal drugs like cocaine, marijuana and mandrax*”. A male senior secondary school adolescent added that: “*In addition to dagga (marijuana), Nyaope, a mixture of dagga and ARVs used by adolescents in South Africa is also used by some Batswana adolescents*”. Least mentioned substances include petrol, heroin, ecstasy and artane (trihexyphenydl).

### Sources of substances of abuse

The sources from where school children in Ramotswa access substances are shown in Table 2. Most children



**Figure 2.** The proportion of school-going adolescents in Ramotswa, Botswana who admitted to have ever taken substances prior to the study. SSS, JSS and PS mean “senior secondary school, junior secondary school and primary school respectively.

**Table 2.** Sources of substance of abuse to school children in Ramotswa, Botswana.

Sources	Frequency	Percentage
School environment	29	14.0
Parents	6	2.9
Friends	12	5.8
Joints	39	18.8
Unspecified	121	58.5
Total	207	100.0

[121 (58.5%)] know that there are many sources but could not specify exactly where school children collect supplies from. In addition, 39(18.8%) said “*Joints*”, places where young people meet for supplies and fun. The school environment was listed 31 (15.0%) times and small number of children mentioned parents and friends provide substances to their children (3.3%). When asked to be more specific about the sources of the substances one primary school said: “*In the school there are legal and illegal tuck-shops. Illegal tuck-shops are where students bring sweets to the school to sell and then there are those who sell marijuana as well because it is profitable*”.

A senior secondary school boy added that “*There are certain individuals across the streets who sell these substances to the youth. They are street vendors, barber shop owners and carwash owners. So, the places we [school children] get substances from are tuck-shops, barber shops, car wash places, households and also from across the border [Ramotswa borders with RSA]*”. The findings suggest that the substances are easily accessed by the children not far from the schools.

### Factors influencing substance use

Out of a total of 36 children who ever used substances, 13(36.1%) reported relieving stress as the major reason followed by fun/pleasure [10 (27.8%)]. Experimentation and peer pressure each accounted for 9(25.0%). Qualitative data provided additional understanding of the factors that drive adolescents to use substances. A male junior secondary school student said: “*Those who use substances are only doing it to boost their confidence*”. He added that he was once told by a substances-user that: “*After taking the substances, nothing is impossible in the world*”. The perception that some use substances for fun and experimentation was also supported by a statement that: “*Those using substances are just doing it for fun. They are just doing it to experiment how it feels because they would have elders using them while they were young*”. A senior secondary school girl added that:

“*sometimes the substances are taken to relieve stress and to get rid of the problems they have. They are doing it because they want to be carefree*”. These findings point

**Table 3.** Emerged issues on substance use among adolescent school children in Ramotswa and implications for campaign and research.

Sn	Issue/coding concept	Themes	Sub-theme(s)	Implication
1	Information sources	Media content relevance in reducing use and abuse of substances	TV movies and documentaries roles in drug and substance use/abuse	Content that does not focus on strategies to reduce drug and substance use is likely to motivate adolescents to experiment.
2	Knowledge gap on the effects of drugs/substances	Subject content in education curricula at primary, secondary school levels	Different education grade require different material depth  Deficiencies in school curricula	Inadequate knowledge results in poor understanding the effects of drugs/substances on health.  Curricula review are needed to mainstreaming drugs/substances of abuse in curricula at all education levels
3	Motivating and demotivating factors	Knowledge gap on motivating and demotivating factors	Inadequate understanding and focus on factors demotivating use of drugs and substances.	Strategic interventions focusing on building capacity to adopt demotivating factors for reducing use of substances and further research is needed to understand issues behind those easily motivated to use drugs.
4	Access to drugs and substances by adolescents	School surroundings  Community	Criteria used to vet vendors surrounding schools  Lack of or ineffective legislation on drug and substance restriction	Weak criteria and ineffective legislations allow circulation of drugs and substances in schools  Stringent criteria and effective enforcement are needed to restrict access to drugs and substances in schools.
5	Association of substance abuse with disease burden	Knowledge gap in existing curricula and instructional materials	Mainstreaming drugs/substances association with disease burden in instructional materials	Curricula review is needed to address knowledge gap and increase awareness of the association between drugs/substances and burden of diseases

to stress as a major driving force for adolescents to indulge in drugs and substance use.

### Emerging issues from qualitative data

Thematic analysis of the qualitative data revealed five major factors which seem to motivate adolescents to use of substances (Table 3). Information sources is an issue because it is not clear whether the focus of the content aired by TV stations and printed media encourages or discourages adolescents from engaging in drugs and substances of abuse. Content that does not focus on strategies to reduce drug and substance use is likely to motivate adolescents to experiment. Similarly, inadequate knowledge results in poor understanding of the health effects of substance use, and deficiencies in the curricula results in failure to mainstream drugs and substance use/abuse in the schools curricula.

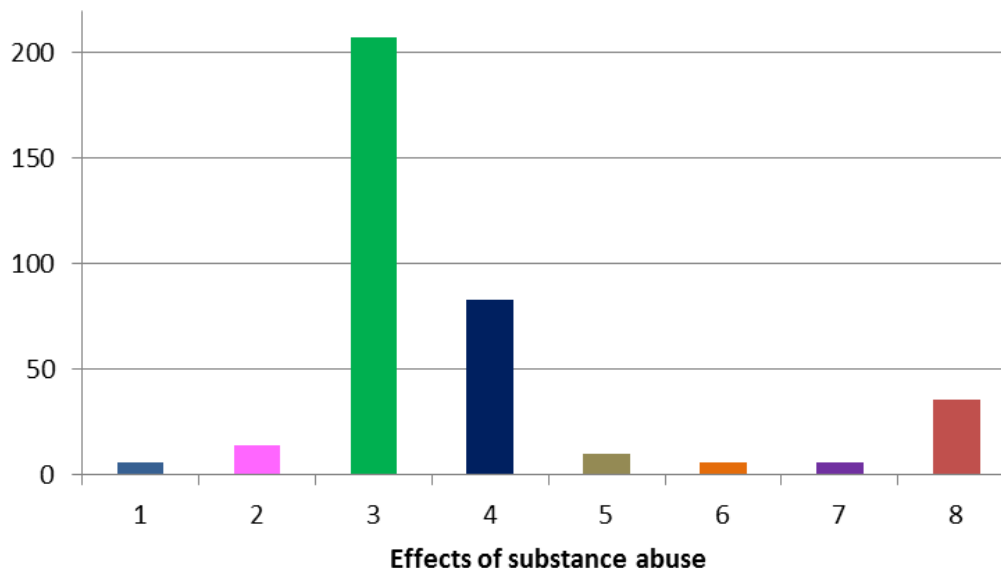
### Demotivating factors from using substances

Respondents pointed out two major factors which

demotivate adolescents from using substances including knowing what you want and knowing the health effects of substance use. This was stated during interview: *“Those who do not use substances know the consequences that come with it”*. A female respondent added that: *“It is a matter of knowing what you want in life; other people do not use substances because they are aware of the health risks that come with using substances. They have seen the dangers of using substances just by observing from those who have been using them”*. Other reasons mentioned include inability to buy the substances and ability to cope with stress. These findings suggest a knowledge gap exists on adverse effects of drugs and substance use and abuse and poor copying mechanisms to real life.

### Awareness and knowledge of the consequences of substance abuse

Figure 3 summarises the responses to the question on awareness and knowledge about the consequences of substance abuse. A general perception emerged that



**Figure 3.** Awareness and knowledge of the health effects on substance abuse among school-going adolescents in Ramotswa, Botswana. 1, addiction (n = 6); 2, absenteeism and poor performance (n = 14); 3, diseases (n = 207); 4, mental illness (n = 83); 5, cancers (n = 10); 6, accidents and violence (n = 6); 7, socio-economic problems (n = 6); 8, death (n = 36).

**Table 4.** The frequency of the association between drug/substance use and burden of disease among school-going adolescents in Ramotswa, Botswana.

Condition	Frequency of association category and percentages			
	Number of responses	Likely associated	Associated	Not associated
Mental illness	207	40 (19.3%)	155 (74.9%)	12 (5.8%)
Liver disease	204	52 (25.4%)	125 (61.2%)	27 (13.4%)
Heart disease	205	60 (29.3%)	120 (58.5%)	25 (12.2%)

substance abuse is likely to lead to liver diseases, lung diseases, heart diseases, stroke and cancers. Mental health was the most listed condition followed by death. In addition, adolescents are aware that substance use is associated with absenteeism, poor performance at school and could either be short or long term depending on the duration of use. This was supported by a junior secondary school girl; *“Use of substances has short and long term effects. An individual using these substances more, the more likely he will develop long term effects”*.

#### Knowledge of the association of substance abuse and disease burden

The association between substance use/abuse and burden of disease was explored by asking respondents to categorise responses into “likely associated”, “associated” and “not associated”. The summary of the knowledge of the association between substance use and disease burden is shown on Table 4. Most respondents 155(74.9%)

are aware of the association of drug/ substance use with mental illness; 61.2, 58.5 and 70.7% with liver diseases, heart diseases and traffic accidents, respectively.

#### DISCUSSION

From the estimated sample the study recruited 207 school children who were willing to participate and met the inclusion criteria giving a response rate of 77.5%. Similar high response rates on similar studies have been reported (Stanton et al., 2001, Onojole and Bamgbala, 2004) and were attributed to high level of education among the studied population of undergraduate students. In the contrary, the study population consisted of primary and secondary school children; therefore the response rate cannot be attributed to the level of education but suggest that health education and information dissemination through social media and political campaigns are likely to be influencing this trend. This study found that television is the major source of



awareness and knowledge on drug and substance abuse (73.0%) followed by printed media (49.8%). Similar observations were reported in Nigeria (Oshikoya and Alli, 2006). The findings therefore suggest that there is information being communicated from where children learn about drugs and other substances. What needs to be determined is the focus of the content aired TV and printed media on raising awareness about the health effects, the consequences of drug and substance use instead of practices that might encourage viewers and readers to experiment drug/substance use.

Previous studies have reported that adolescents and young adults are vulnerable at experiencing and using drugs; marijuana being the most abused substance by undergraduate students in Nigeria (Oyakhilome, 1990, Hides et al., 2006). In this study, 17.4% of the adolescents have ever used drugs and substances prior to this study. This prevalence is comparable with previous reports in Botswana and could be underestimation of the prevalence. Drug and substance use is prohibited by law in Botswana (Drugs and Related Substances Act No. 18, 1992). Therefore, underestimation could result from children's reluctance to disclose, fear of parents, teachers and peers; and the social stigma associated with substances use. The average age at commencement of drug and substance use according to this study is 14 years supporting previous reports that adolescence is accompanied by profound environmental changes as they make a transition to middle and secondary school; environment that is characterised by multiple classes and teachers, less individualised instructions, lower level of teacher-student interactions, more stringent grading and comparative performance evaluations.

According to Nutbeam et al. (1993) student failure to pay attention to studies coupled with peer pressure influence them to turn to drugs as a way of suppressing their feeling of rejection. These psychosocial and environmental changes are sources of stress which increase the vulnerability for high risk behaviour, drug and substance abuse as a coping mechanism (Masten et al., 2008). The fact that adolescents resort to drugs and substances to alleviate stress suggest that there is inadequate knowledge and awareness about the consequences of substance use and weakness in the support systems for addressing the challenges adolescents face. Adolescents should be made aware that the solution to stress and other social challenges cannot be found in substance use but from being able to deal with the challenges by taking advantage of existing support systems in the community. Specific information on parental support, parental pressure, pressure from drug addicts and parental-conflict and teachers is needed to fully understand the complex nature of the predisposing factors driving adolescents to use drugs and substances.

Cannabis grows wild in most parts of Africa but is also cultivated and it is the most widely abused illicit drug in

the region. It is predominantly abused by teenagers and young adults who begin using it at adolescence (Oshikoya and Ali, 2006, Gupta et al., 2013, Tesfaye et al., 2014, Baruch et al., 2015). The common drugs and substances of abuse mentioned by both primary and secondary school children in this study [*cocaine, marijuana, glue, alcohol and mandrax*] are similar to those reported previously in Botswana (Botswana Alcohol AIDS Surveillance, 2004; Diamond Narcotic Squad Report, 2012). The finding that Nyaope (mixture of dagga and ARVs), is a new development in Botswana. Access to ARVs in an HIV pandemic country should be restricted for the intended purpose in order to minimise the side effects of ARVs on the individual and prevent occurrence of resistance of HIV to ARVs. This is a challenge that should be studied extensively to determine the sources of access, extent of use and abuse of "Nyaope" and health consequences if any to the users and the community.

This study has raised two major concerns: Firstly, the sources from where children access drugs and substances are not far from the school surroundings. The numerous vendors, barber shops and car wash places around the schools provide school children easy access to drugs and substances. It is a concern which calls for the school's management and local government authorities to institute stringent vetting procedures to applicants wishing to operate petty business in and around schools. Regular monitoring and evaluation of the vendors is also necessary to ensure compliance to the businesses vendors had been licensed to.

Secondly, 59.9% of the respondents said schools do not have programmes for preventing drug and substance abuse and the school children identified several motivating and demotivating factors for substance use and abuse which need further exploration. Since children spend a good part of their early lives at school, schools should be places where adolescents are prepared for being productive members of the civil society. In this regard, schools should be in the forefront in the campaign to reverse substance use and abuse trends by reviewing curricula and mainstreaming the subject in the curricula, providing education on the harm and stressing the dangers of drugs and substances and enhancing learning experience by adopting interactive teaching and learning approaches. Schools should build on the cited demotivating factors and engage children more in productive activities and introduce measures for early detection of symptoms before symptoms of dependence emerge. Such measures and changing the school environment have shown to reduce drug and substance use among adolescents (Bond et al., 2007).

It is concluded that drug and substance abuse among school-going children is a public health concern needing urgent attention. Most schools have not developed strategies to reduce substance access and use by school-going adolescents in Ramotswa. While children know and are aware of what drugs and substances of



abuse are, the trend of drug abuse among adolescents has not declined. Accessibility and use of “Nyaope” is a new revelation which calls for more comprehensive studies in the country.

It is recommended that consultations involving major stakeholders including parents, the community, government departments and ministries should be carried out with the aim to understand motivating and demotivating factors for drug use and develop strategies for making schools free from drugs and substance. The school managements should review and introduce regulations and conditions that will deter vendors from selling and distributing drugs and substances around school compounds. In addition schools should review their curricula to mainstream drug and substance abuse as a topic(s) focusing on the effects and consequences of substance. Intensive mass media campaigns, strengthening youth sports and clubs that will engage school children more on productive activities that are likely to have a positive impact in the future should be introduced. Families and the schools should develop workable strategies of building capacity to strengthen coping mechanisms to stress among school children. Extending this study to other districts in Botswana will enhance mapping and providing evidence-based data needed for developing comprehensive and strategic interventions for reducing drug and substance use among school-going children.

### Limitations

The study is limited to a few school children in Ramotswa, therefore generalizability of the findings cannot be made to other districts in the country. However, the use of mixed methods has provided an in-depth analysis of extent of drug/substance use/abuse among the studied population. Therefore, the results form a baseline data from which more comprehensive studies can be developed.

### CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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