

LEVEL OF USE OF MARIJUANA AMONG YOUTH AGED 12-19 YEARS IN BOTSWANA

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Abstract

BACKGROUND: Marijuana remains one of the most abused drugs globally and it contributes significantly to the public health burden of communities. Use of marijuana in Botswana is illegal but its use has gained momentum over the years especially among the youth as well. Literature on its use in Botswana is limited hence the need to determine the level and determinants of use of marijuana among youth in Botswana. **METHODS:** The nationally representative 2013 Botswana AIDS Impact Survey (BAIS IV) data was used to determine socio-economic and demographic factors associated with use of marijuana among the youth in Botswana. Using a weighted sample of 1163, Statistical package for Social Sciences (SPSS) version 25 was employed to identify determinants associated with marijuana use. Using univariate, bivariate and logistic regression models, socio-economic and demographic factors associated with use of marijuana among the youth were identified **RESULTS:** Results reveal that use of marijuana among the youth in Botswana is still estimated at 1.3% of the youth respondents. At bivariate level all variables which are Age, type of locality, educational level, religion and sex were not significantly associated with marijuana use. At multivariate level youth aged 16-19 years were close to 7 times more likely to use marijuana as compared to those aged 12-15 years and Female adolescents were 7 times more likely not to use marijuana than male adolescents. **CONCLUSION:** The use of marijuana among youth aged 12-19 years in Botswana is low (1.2%). There are no predictors of marijuana use among the youth aged 12-19 years in Botswana.

Keywords**Marijuana

INTRODUCTION TO THE STUDY

Marijuana is globally the most commonly used psychoactive substance. An illicit drug which is also known as motokwane, weed or cannabis (Yagoda, Ben2014, Anderson 1980) Marijuana is illegal in Botswana as well as in most parts of the world but is loved by many, from the rich and the famous to the poor and the homeless. This natural plant is one of the most generally abused drugs in Botswana. Teenagers smoke marijuana, cocaine, ecstasy flagrantly at public schools, in the streets and even in the comfort of their homesteads.

In 2005, the WHO-developed Global School-based Health Survey (GSHS) showed that 7.5% used illicit drugs aged 13- to 15-year-old secondary school students in Botswana. The lifetime use of marijuana was reported to have been tried by about 13.2% (10.9- 15.8) of the adolescents and this proportion was dominated by male adolescents (15.3%) compared to female adolescents (11.4%) (Letamo, bowelo and majelantle, 2016). Similarly, the use of marijuana precedes that of illicit drugs such as cocaine and heroin (Kandel, Yamaguchi and Chan, 1992). The current study shows that marijuana use stands at 13.2% among adolescents in Botswana which is more or less similar to 12.7% among South African adolescents (Reddy et al, 2003; Reddy et al, 2011). In our view, marijuana may be commonly used for entertainment purpose because adolescents enjoy its effect, and because it helps them to socialize, Letamo, Bowelo and Majelantle (2016). In fact, Madu and Matla (2003) have argued that because of this, drugs (marijuana) fit conveniently in the social world of many adolescents, and play a prominent role in their recreational activities.

The survey conducted last year in 145 schools from the Ministry of Education and Skills Development regions, showed that youth got involved in the use of drugs from a young age; it indicated that from the sampled population of students, 14.9 per cent reported having used marijuana. It is public knowledge that the main cities of Francistown and Gaborone are infested with drug dealers of repute who are even known to law enforcement agencies.

The use of marijuana among youth has been drifting higher in recent years following a decade or more of fairly steady decline among illicit use of drugs, marijuana had the highest rate of use, with the cohort of 12-19 year olds consuming the most. According to the World Health Organization (WHO), marijuana consumption has an annual prevalence rate of approximately 147 million individuals or nearly 2.5% of the global population. In 2014, approximately 22.2 million Americans 12 years of age or older reported current marijuana use, with 8.4% of this population reporting use. Lewis (1996) has highlighted that adolescents who become dependent on illicit drugs often experience disruption of relationships with family, teachers, peers; and a heightened deterioration of school and work performance.

There are some of the factors contributing to the use of marijuana among youth ; **Age of initiation** -Adolescents with substance use disorders and adults with substance use disorders who had initiated cannabis use in adolescence were quicker to develop dependence, have behavioral problems and major depression, than comparison groups who started cannabis use in early or later adulthood (Clark et al., 1998b). Young people who initiate themselves to alcohol use at an early age are more likely to use or abuse marijuana.

Social environment Kosterman et al. (2000) studied initiation of alcohol and cannabis use among adolescents and found that exposure to others who use drugs increases the risk of early initiation of cannabis use; as do parents who are not 'proactive' and/or parents who fail to set clear 'family standards'.

Psychological factors in a sample of 12-18 years old in treatment for cannabis abuse or dependence, most had a range of psychological and behavioural problems (Tims et al., 2002).

There are associations between various psychological and behavioural problems and problematic drug use including problematic cannabis use.

The objective of the study is to begin 1) to determine the level of use of marijuana among youth aged 12-19 years in Botswana.2) to identify predictors of marijuana use among youth aged 12-19 years in Botswana. The focus of the study is to determine the level of marijuana use among youth aged 12-19 years in Botswana in order to inform health policies and interventions.

METHODS

STUDY SETTING

The study was carried out in Botswana. Botswana is a landlocked country in Africa. One of the fastest growing countries in the world in terms of economy. It has a mid-sized population of just over 2 million population. One of the most sparsely populated countries in the world. About 10% of the population lives in the capital city, Gaborone. It is boarded by South Africa, Zimbabwe and Namibia. At 581,730 km² (224,607 sq mi) Botswana is the world's 48th-largest countries .The economy is dominated by mining, cattle, and tourism. Botswana is the continent's oldest democracy. The constitution of Botswana is the rule of law, which protects the citizens of Botswana and represents their rights. The politics of Botswana take place in a framework of a representative democratic republic, whereby the President of Botswana is both head of state and head of government, and of a multi-party system. Executive power is exercised by the government. The official language of Botswana is English although Setswana is widely spoken across the country. Botswana has 10 districts.



STUDY DESIGN

The data used in this study comes from the Botswana AIDS Impact Survey IV, which is a cross-sectional study. The BAIS IV was designed to provide current information on the behavioral patterns of the population aged 10-64 years and the HIV prevalence and incidence rates.

THE POPULATION AND SAMPLE

Data from BAIS IV survey is being used to conduct a current research, implying that this research is based on secondary data. The study covered people aged between 12-19 years with a population of 1759. Out of 1759 adolescents, only 1163 were respondents.

MEASUREMENT OF VARIABLES

DEPENDENT VARIABLES

Dependent variables examined are: whether the respondents have ever taken marijuana (motokwane) in the past 12 months. The question on whether the respondents have ever taken marijuana (motokwane) in the last 12 months was coded yes (which was considered to be taken) or 0 if it was no.

INDEPENDENT VARIABLES - The analysis examines effects of independent variables (socio-demographic variables) on the two outcome variables. These include the respondents

- (a) Age :(12-15 years and 16-19 years)
- (b) Type of locality: (categorized by rural or urban)
- (c) Educational level :(None/primary and Secondary/Higher).
- (d) Religion :(Christians and other religions/none).
- (e) Sex :(male and female)

DATA ANALYSIS (STATISTICAL ANALYSIS)

Respondents were chosen with differing probabilities of selection, the data had to be weighted to obtain unbiased estimates of the parameters of interest in the study. The analysis is performed in three parts. First, the characteristics of the sample are described. Second, cross-tabulations between dependent and independent variables are performed to assess associations. Finally, logistic regression analysis is used to estimate the influence of each of the knowledge variables (have ever taken marijuana in the past 12 months), and the socio-demographic variables such as age, residence, education and religion.

Because our dependent variables are categorical, the most appropriate method for estimation is logistic regression analysis. Logistic regression analysis is used because it provides an interpretable linear model for a binary dependent variable and also allows the testing of significance of a given predictor while controlling for all predictors in the model. All analyses are conducted using **STATISTICAL PACKAGE FOR SOCIAL SCIENCES (SPSS)** computer software.

RESULTS

Table 1 showing the background characteristics of respondents

<i>Background characteristics</i>		Frequency	Percent
<i>Age groups</i>	12-15	909	51.7
	16-19	850	48.3
<i>Type of place of residence</i>	Cities	161	9.2
	Towns	432	24.6
	Urban villages	500	28.4
	Rural	666	37.9
<i>Educational level</i>	None/Primary	604	34.3
	Secondary/Higher	1155	65.7
<i>Sex</i>	Male	841	47.8
	Female	918	52.2
<i>Religion</i>	Christianity	1594	90.6
	Other religions	165	9.3

Table 1 shows the background characteristics of respondents in which 51.7% of the respondents were aged 12-15 years and 48.3% of respondents were aged 16-19 years. About 37.9% of respondents reside in rural areas while 37.9%, 28.4%, 24.6% and 9.2% were from urban, towns and cities. More than 60% of the respondents attended secondary/higher education while 34.3% of the respondents attended primary, none/non formal schools. About 52.2% of the respondents were females and 47.8% were males. And 90.6% of the respondents were Christians while 9.3% were from other religions.

BIVARIATE ANALYSIS

Table 2 shows the bivariate analysis

BACKGROUND CHARACTERISTICS	VARIABLES	EVER USE OF MARIJUANA IN THE PAST 12 MONTHS			
		NO		YES	
		N	%	N	%
AGE	12-15	621	99.8%	1	0.2%
	16-19	542	97.7%	13	2.3%
TYPE OF LOCALITY	Cities	72	98.6%	1	1.4%
	Towns	315	98.4%	5	1.6%
	Urban villages	290	99.3%	2	0.7%
	Rural	486	98.8%	6	1.2%
EDUCATIONAL LEVEL	None/Primary	425	98.8%	5	1.2%
	Junior/Senior secondary	738	98.8%	9	1.2%
RELIGION	Christians	1043	99.1%	10	0.9%
	Other religions	119	96.7%	4	3.3%
SEX	Male	549	97.9%	12	2.1%
	Female	614	99.7%	2	0.3%
TOTAL		1163	66.1%	14	1.2%

Table 2 shows a statistically significant relationship between the ever use of marijuana in the past 12 months and the background characteristics. The table generally shows that a total of 1163 respondents were asked whether they had ever used marijuana in the past 12 months or not, a higher percentage reported that they have not used marijuana in the past 12 months (66.1%). Out of 1163, 99.8% of the respondents who were aged 12-15 years old did not take marijuana in the past 12 months while 97.7% of the respondents aged 16-19 years did not take marijuana in the last 12 months. About 99.3% of the respondents resided in urban while 98.8% ,98.6%,98.4% of the respondents were from the rural villages, cities and towns respectively, responded to have ever used marijuana in the past 12 months. Ninety eight percent of the respondents attended all educational level did not take marijuana in the past 12 months .99.1% of the respondents who were Christians had ever taken marijuana in the past 12 months while 96.7% were from other religions. About 99.7% of females responded to have ever used marijuana than males (97.9%).

MULTIVARIATE ANALYSIS

Table 3 shows the odd ratio indicating the likelihood of respondents who have ever used marijuana in the past 12 months preceding the survey.

Variables in the Equation

				95% C.I. for EXP(B)		
<i>Background Characteristics</i>		Referenc e	Significanc e	Exp(B)	Lower	Upper
<i>Age groups</i>	12-15	1				
	16-19		0.017	6.602	1.397	31.186
<i>Type of locality</i>	Cities	1				
	Towns		0.884	0.851	0.097	7.434
	Urban		0.562	2.047	0.182	22.999
	Rural villages		0.743	1.442	0.162	12.828
<i>Education level</i>	None/Primary	1				
	Secondary/Higher		0.921	0.944	0.299	2.977
<i>Religion</i>	Christians	1				
	Other religions		0.033	0.260	0.075	0.897
<i>Sex</i>	Male	1				
	Female		0.017	6.602	1,397	31.186

a. Variable(s) entered on step 1: Age groups, Type of locality, Educational level, Religion, Sex.

Table 3 displays odds ratio of all explanatory variables' (socio demographic factors) used to measure independent variable considered by multivariate logistic regression analysis. Age, type of locality, educational level, religion and sex were not significantly associated with marijuana use. Adolescents aged 16-19 years were close to 7 times more likely to use marijuana as compared to those aged 12-15 years. Adolescents who reside in towns were less likely, who reside in the urban areas were 2 times more likely and who resided in rural villages were more likely to use marijuana than adolescents who reside in cities. Adolescents had higher/secondary education were less likely to use marijuana than those of none/primary educations. Other religion were about less likely to use marijuana as compared to of Christian adolescents. Female adolescents were 7 times more likely not to use marijuana than male adolescents.

DISCUSSIONS

The purpose of the study was to investigate the level of use of marijuana among adolescents in Botswana. Unlike in any other sub-Saharan countries, the percentage use of marijuana by youth in Botswana is very low. This has shown that the program interventions dealing with the drugs and behaviours both governmental and nongovernmental organisations related to youth are succeeding. Although youth aged 16-19 years were more likely to use marijuana in the past 12 months than those aged 12-15 years old. Youth who reside in towns were less likely, who reside in the urban areas were 2 times more likely and who resided in rural villages were more likely to use marijuana than youth who reside in cities. A study by Peltzer and Ramlagan (2007) shows that marijuana was mostly used by youth in urban areas than other areas. Youth had higher/secondary education were less likely to use marijuana than those of none/primary educations. A study in 2005, the WHO-developed Global School-based Health Survey (GSHS) showed that 7.5% used illicit drugs aged 13- to 15-year-old secondary school students in Botswana. With regard to religion, other religions (non-Christians and those with no religious affiliation) were less likely to use marijuana in the past 12 months than Christians. Marijuana use among female youth is lower than that of the male youth. Findings in the study shows that female youth were more likely not to use marijuana in the past 12 months. The lifetime use of marijuana was reported to have been tried by about 13.2% (10.9- 15.8) of the youth and this proportion was dominated by male youth (15.3%) compared to female youth (11.4%) (Letamo, bowelo and majelantle, 2016).

Results shows that there is a lower use of marijuana by adolescents in Botswana. More male youth than female youth. Programs related on the drugs and alcohol abuse and youth should keep on providing guidance and education on the effects of Drugs and alcohol use and prevention and how to reduce the use of marijuana.

STUDY LIMITATIONS

Data was not accurate and there was lack of information needed to assess the credibility of the data and also the data is outdated. The number of studies, articles and research papers concerning level of use of marijuana in Botswana among youth is limited and not specific.

CONCLUSIONS AND RECOMMENDATIONS

The study found out that adolescents of Botswana aged 12-19 years in regard to marijuana use is low. According to this study, Sixty-six percent of adolescents did not use marijuana in the past 12 months. The study also found out that there are no predictors or factors that contribute to the use of Marijuana. The background characteristics that were used such as Age, sex, type of locality, religion and educational level they are not associated with the use marijuana among adolescents. The MOH shall formulate an alcohol and substance policy. They shall ensure the availability of counselling and interventions regarding substance abuse in health facilities, especially at primary care level, and in other settings. It is recommended that adolescents' exposure to marijuana marketing should be minimized. They should be policies to reduce adolescents' recreational marijuana use, parents should start to talk about marijuana with their adolescents. Communities and schools should support marijuana prevention and offers additional resources. It reviews adolescent marijuana use, health effects.

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