

Prevalence of Psychoactive Substance Use and Associated Factors among Undergraduate Students Attending Kampala International University-Western Campus

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ABSTRACT

Psychoactive substance use is a significant social issue in developing countries like Uganda, impacting academic, social, psychological, economic, and physiological development. A study was conducted at Kampala International University (KIU)'s western campus to determine the prevalence and factors associated with substance use among undergraduate students. A cross-sectional design was used, with 160 respondents, 121 of whom were male. The majority were aged 21-24 years, with a lifetime prevalence of 28.1%. Alcohol was the most commonly used substance, followed by cigarettes (18.3%). The study found that gender, age, marital status, upkeep, and year of study were statistically significant factors associated with substance use among KIU students. The study highlights the need for education and awareness campaigns regarding the dangers of substance use, especially among male students, to address this issue and improve the overall well-being of students. The study underscores the importance of addressing the issue of substance abuse in universities and promoting responsible behavior among students.

Keywords: Psychoactive substance, Drug and substance abuse, Students, Marijuana.

INTRODUCTION

Psychoactive substances (PAS) are defined by the World health organization (WHO) as substances that, when taken in or administered into one's system, affect mental processes like perception, consciousness, cognition or mood and emotions. This includes alcohol, tobacco and illicit drugs [1]. Some medicinal plants with hypnotic properties are commonly abused by youths causing to mental aberrations. An example of such plant Jimson weed popularly called thorns apple [2, 3]. Jimson weed produces psychotic due to its chemical constituents [4, 5]. Previous studies indicate that psychoactive substance use attributes to negative social, physical and mental health consequences. According to Ikoh et al., [6, 7], University or college, students have been found to be more vulnerable to psychoactive substance use as compared to other age groups [8]. This is because joining university often leads

to new opportunities, independence from family control, self-decision making, and peer-pressures which often leads them to try psychoactive substances [9]. Determining the prevalence of psychoactive substance use among university students underpins evidence for decision makers and program implementers to look at the trend of the practice and the dynamic webs of its negative consequences. Psychoactive substance use is concerning in students attending higher education institutions as it is associated with low educational achievement, conflict with parents, loss of friendship, financial hardship, limited creativity and intellect, risky sexual behavior leading to HIV, crime and violence, injuries and suicide [10-12]. Previous university-based studies indicated that students' perceived performance on reading for longer hours, pleasure, socialization and relief from

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tension are some of the reasons for psychoactive substance use. Being male, more senior, coming from urban areas and having a family history of substance use were also associated with psychoactive substance use at university [13, 14]. A recent population-based study among Egyptian adolescents also showed that the perceived availability of drugs, a family history of use and peer pressure are positively correlated with substance use [15]. Similarly, a systematic review and meta-analysis of the prevalence and risk factors of psychoactive substance abuse among students in Ethiopia also revealed that a range of individual, interpersonal (relational) and organizational factors drive university students toward psychoactive substance use [16].

However, there is a paucity of evidence regarding its prevalence and associated factors among the university students in Uganda and KIU western campus in particular. A few studies previously done in Uganda were done in the general public and indicate that the prevalence of psychoactive substance use range from 10.5% to 70.1% [17-19] with the highest prevalence reported in Kampala city. Therefore, this study determined the prevalence of psychoactive use and identified the factors associated with its use among undergraduates at KIU western campus, western Uganda.

Psychoactive substance use is one of the major social problems that most universities in developing countries like Uganda are hassling with as far as administration of the universities is concerned. The consequences of substance use on the students are terrible and devastating. It is likely to lead to chronic use and abuse which may lead to cardiovascular and respiratory effects, substantial damage of the liver and the kidney, especially when such substances are combined [20]. Similarly, drug and substance abuse can impact negatively on the academic, social, psychological, economical, and physiological development among the student who abuses them. Although Uganda has received less media coverage regarding drug and substance abuse, a few cases and documentaries on its use and abuse do highlight a deep-rooted problem. Many people are reportedly becoming mentally ill or die from substance use. In fact, anecdotal reports from Butabika- a Uganda National mental hospital indicate that most of the patients they receive nowadays are those with complications of drug abuse. Despite all these associated complications, the psychoactive substance use seems to be increasingly witnessed in Ugandan communities including tertiary institutions. This study therefore sought to investigate the prevalence of and factors associated with psychoactive substance use which could help in providing benchmarks upon which specific interventions would be pegged and appraised in order to control and curb down the problem in KIU western campus.

METHODOLOGY

Study design

The current study was quantitative in nature and utilized a cross-sectional study design.

Area of Study

This study was done at KIU western campus located in Ishaka town, Bushenyi Ishaka municipality, Bushenyi District, South western Uganda. The campus is approximately 330 kilometers by road, southwest of Kampala, Uganda's capital city. The coordinates of

KIU western campus are; 00° 32'19" S, 30°08'40" E. The Western campus majorly offers Medical related courses at both undergraduate and postgraduate levels with addition of business, education and computer faculties.

Study population

The study included any undergraduate student of KIU western campus, irrespective of gender and the course being undertaken.

Inclusion criteria

All undergraduate students at KIU western campus who were available at time of data collection and were a willing to participate in the study were eligible.

Exclusion criteria

Students who had any medical emergency at the time of data collection that made them unable to respond to study questionnaire were not included in the study.

Sample size determination

The number of the study participants recruited in this research was calculated using the Kish's formula below.

$$\text{Sample size } n = \frac{z^2(p(1-p))}{w^2}$$

Where;

p= proportion of students using psychoactive drugs.

A study in Kampala among university students reported a prevalence of 10.5% [17].

w-margin of error

z- normal standard deviation at 95% confidence interval.

Substituting the values for each of these variables in the above formula,

$$n = \frac{1.96^2(0.105(1-0.105))}{0.05^2}$$

The sample size estimated was 144. Adding a 10% to compensate for unavailable respondents. The final sample size was 160

Sampling and recruitment procedures

Consecutive sampling method was used in this study to recruit 160 study participants. Any undergraduate student who met the inclusion criteria was enrolled for the study. Participants were approached during their free time at the university campus and the objectives of the study were explained after which

Socio-demographic characteristics of respondents

The study comprised of 160 respondents of whom 121 (75.6%) were males. Majority of the respondents, 125 (78.1%) were in the age group of 21-24 years and the

written informed consent was obtained prior to administration of study tools. This process was repeated until the required sample was reached.

Data collection

Self-administered structured questionnaires were used to collect data from the selected participants. The questionnaire was written in English since all undergraduates were assumed to understand basic English that was used in writing the questionnaire. The questionnaire collected data on socio-demographic characteristics, history of psychoactive substance used and common substances used.

Quality control

Before data collection, the questionnaires were pre-tested and piloted on 10% of the sample and the questions were revised based on the responses obtained so that questions that induced ambiguity are rephrased. Results of pretesting were not used in the final data analysis. After data collection, the questionnaires were checked for completeness before being coded for entry in the computer for analysis.

Data Analysis

The data analysis was done with the computer software IBM SPSS version 25.0. Results were presented in tables and charts. Prevalence of psychoactive substance abuse was expressed as a proportion of the total number of participants. Pearson Chi-squared analysis and logistic regression were performed to determine the factors associated with psychoactive substance use and interpreted as significant if p-value was <0.05 at 95% Confidence Interval.

RESULTS

mean age was 22.3 ± 2.4 (standard deviation) years. One hundred and fifty-three respondents (95.6%) were single and more than fifty percent (56.9%) were residing in private rooms outside hostels. Table 1 below shows details.

Table 1: Socio-demographic characteristics of respondents

Characteristics	Frequency	Percent
Gender		
Female	39	24.4
Male	121	75.6
Age		
≤19	21	13.1
20-24	125	78.1
≥25	14	8.8
Religion		
Catholic	24	15.0
Protestant	56	35.0
Muslim	56	35.0
Pentecost	24	15.0
Marital status		
Married	7	4.4
Single	153	95.6
Residence		
Hostel	60	37.5
Private room	91	56.9
Home with family	9	5.6
Year of Study		
First	37	23.1
Second	70	43.8
Third	27	16.9
Fourth	18	11.3
Fifth	8	5.0

Prevalence of psychoactive substance (PAS) use among the undergraduate students

Out of the 160 respondents, 45 (28.1%) them stated that they have ever used a

psychoactive substance while 115 (71.9%) had never used any psychoactive substance in their life time as shown in figure 2 below.

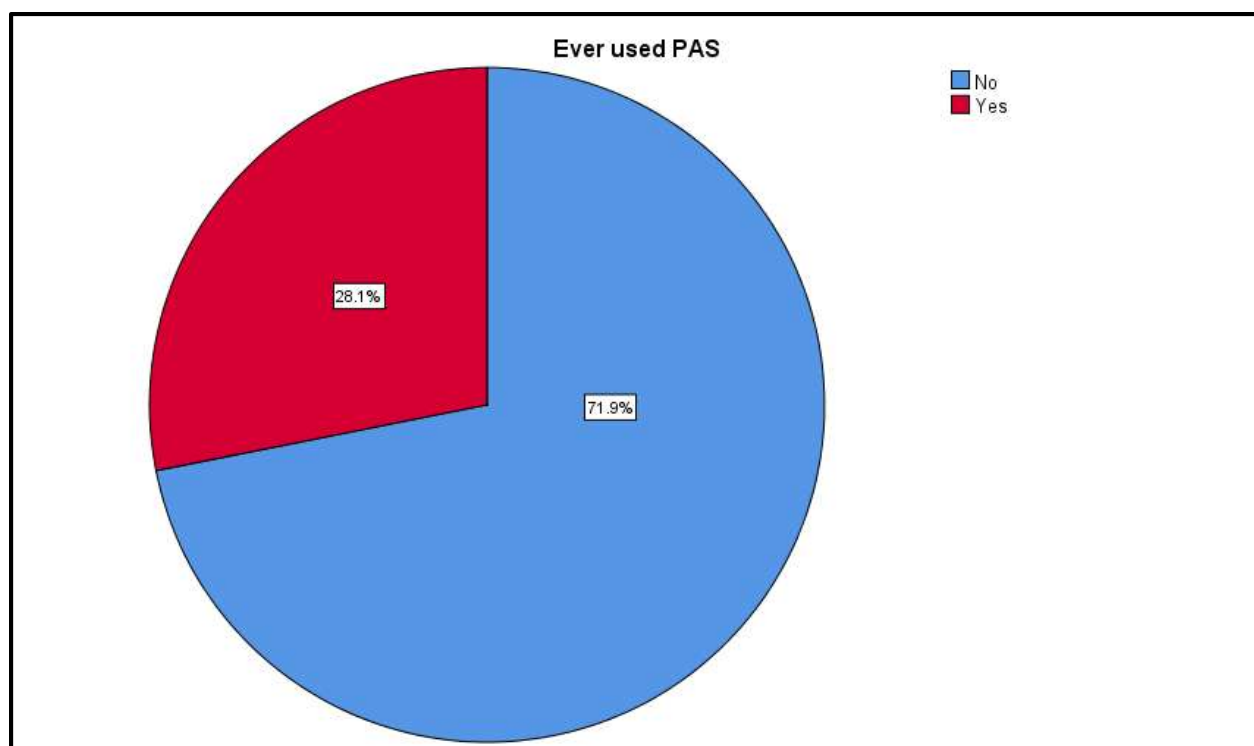


Figure 1: Prevalence of psychoactive substance (PAS) use among the undergraduate students

Common psychoactive substances used among the undergraduate students

Table 2 below shows the prevalence of various psychoactive substance use. The commonest psychoactive substance used

was alcohol 29 (18.1%) followed by cigarettes 18 (11.3%) while the least used substance was marijuana 10 (6.3%). Table 2.

Table 2: Common psychoactive substances used among the undergraduate students

Characteristics	Frequency	Percent
Khat		
No	145	90.6
Yes	15	9.4
Alcohol		
No	131	81.9
Yes	29	18.1
Cigarette		
No	142	88.8
Yes	18	11.3
Marijuana		
No	150	93.8
Yes	10	6.3

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Factors associated with psychoactive substance (PAS) use among the undergraduates

This study found that gender ($X^2=4.141$; $P=0.043$), age ($X^2=21.613$; $P<0.001$), marital status ($X^2=6.791$; $P=0.009$), upkeep

($X^2=6.957$; $P=0.008$) and year of study ($X^2=22.552$; $P<0.001$) were the statistically significant factors associated with psychoactive substance use among the respondents. Details are shown in table 3 below.

Table 3: Factors associated with psychoactive substance (PAS) use among undergraduates

Variables	Ever used PAS		Pearson Chi-square X^2	Adjusted odds ratio	P-value
	No	Yes			
Gender			4.141	2.31	0.043*
Female	33 (28.7%)	6 (13.3%)			
Male	82 (71.3%)	39 (86.7%)			
Age			21.613	3.72	<0.001*
<19	19 (16.5%)	2 (4.4%)			
20-24	93 (80.9%)	32 (71.1%)			
>25	3 (2.6%)	11 (24.4%)			
Religion			5.735	1.77	0.125
Catholic	13 (11.3%)	11 (24.4%)			
Protestant	39 (33.9%)	17 (37.8%)			
Muslim	44 (38.3%)	12 (26.7%)			
Pentecost	19 (16.5%)	5 (11.1%)			
Marital status			6.791	1.45	0.009*
Married	2 (1.7%)	5 (11.1%)			
Single	113 (98.3%)	40 (88.9%)			
Upkeep			6.957	6.86	0.008*
Adequate	17 (14.8%)	15 (33.3%)			
Inadequate	98 (85.2%)	30 (66.7%)			
Residence			3.136	1.20	0.209
Hostel	48 (41.7%)	12 (26.7%)			
Private room	61 (53.0%)	30 (66.7%)			
Home	6 (5.2%)	3 (6.7%)			
Year of study			22.552	5.11	<0.001*
First	34 (29.6%)	3 (6.7%)			
Second	51 (44.3%)	19 (42.2%)			
Third	20 (17.4%)	7 (15.6%)			
Fourth	6 (5.2%)	12 (26.7%)			
Fifth	4 (3.5%)	4 (8.9%)			

*Significant factors

DISCUSSION

Prevalence of psychoactive use

In this study the lifetime prevalence of psychoactive substance use was 28.1% while the current use was 12.5%. This finding although significant, is lower than that reported by similar studies in USA 91.3% [20], Nigeria 43.5% [9], Kampala Uganda 70.1% [19], Ethiopia 64.3% [21] and Kenyan 52.3% [22]. The difference in prevalence found by this study and the above-mentioned studies could be attributed to possible limited accessibility of illicit drugs in Uganda and difference in demographics and culture of the participants in different studies. For instance, a systematic review and meta-analysis of the prevalence and risk factors of psychoactive substance abuse among students in Ethiopia revealed that there was easy availability and accessibility of substances especially that and alcohol which were frequently taken by students and are relatively socially acceptable [16].

Common psychoactive substances used

The common substances used by respondents in this study in their descending order were; alcohol (18.1%), cigarettes (11.3%), that (9.4%) and marijuana (6.3%). The prevalence of lifetime alcohol use in this study was 18.1%, which is lower than the Sub Saharan Africa average of 32.8% [12] and that found by studies in Nigeria 32.0% [23], Kenya 51.9% [24], and Ethiopia 31.4% [25]. The difference could be due to the difference in study participants where by this study involved majority of medical students while in the afore mentioned studies, selection of participants was equally distributed across different courses offered at the respective universities. In the current study the life time prevalence of cigarette smoking was 11.3% which is lower than a study in Egyptian students 14.5% [26], Northern Greece 42.8% [27] and a study in Cross River State, Nigeria 46% [28]. The lower prevalence as compared to afore mentioned studies may be attributed to the low use of that among students in this study as there is relationship between that chewing and cigarette smoking. The

lifetime prevalence of khat chewing was 9.4% in this study. This result is lower than the results of various previous studies in Nairobi Kenya 24.3% [29], North West Ethiopia 26.7% [16], and Eastern Ethiopia 21.4% [21]. The difference may be attributed to the fact that that is not freely sold in Uganda unlike Other countries like Ethiopia and Kenya. Finally, the life time prevalence of marijuana use in the current study is 6.3%, which was the least substance used by the students. It is seeming from this finding that very few students had tried marijuana as compared to other substances. This finding is consistent with other studies in Northern Tanzania [30], Southwest Nigeria [23] and Eastern Ethiopia [21]. The lower prevalence might be due to the fact that students do not get marijuana easily, and the possession and use of this drug results in penalty under the law of Uganda. Furthermore, it could have resulted from underreporting due to self-reporting. Nevertheless, this finding appears lower than a study in USA 26.2% [20].

Factors associated with psychoactive substance use

This study found that gender was significantly associated with psychoactive substance use. Results show that majority of the substance abusers in this study were males (86.7%) and this was significant ($P=0.043$). This finding is consistent with those of studies in Nigeria [23], Ethiopia [21] and Egypt [26] in which majority of substance abusers were males. The explanation may be that in most cultures, boys are usually free than girls who are usually over protected. So, the boys are more likely to be exposed to substance use than girls or females. This study further found that age was significantly associated with psychoactive substance use. In this study, results showed that substance use was more prevalent in the age group of 20-24 (71.1%) and this was significant ($P=<0.001$). At this age, adolescents think they are now old and a chance try many things which were previously prohibited from them by their parents and

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psychoactive substances are no exception. This agrees with findings from studies in Kenya [24], Nigeria [9] and Ethiopia [25]. The current study also found that marital status was significantly associated with psychoactive substance use ($P=0.009$). Most of the respondents who were using psychoactive substances were single (88.9%). This could be due to the fact that the majority of respondents (95.6%) were indeed not married which could have influenced the prevalence under this category. In addition, married individuals are likely to be more responsible and committed to their family affairs which leaves them less chance of substance use. Similar findings were reported in Ethiopian [8] and Kenyan [24] studies. This study also found that upkeep of the student was associated with substance use ($P=0.008$). It was shown that respondents who had inadequate were

The overall life time prevalence of substance use among undergraduate university students in KIU western campus was low compared to other studies in the region and beyond. The most commonly used substance among students was alcohol and cigarette smoking. Gender, age, marital status, upkeep and year of study were found to be independent predictors of substance use among students. These findings indicate that psychoactive use among KIU students is highly prevalent which puts their mental health at risk. The influencing factors include both

more likely to use substances (66.7%). One would assume that the ones with enough upkeep would be the ones to use these substances since they involve some cost. However, a study in Ethiopia [16] reported similar findings and the reason was that students had inadequate upkeep had a lot of stress which forced them to resort to such substances to help the relieved from stress. Finally, this study also found that year of study was associated with psychoactive substance use ($P<0.001$). Almost half of the substance users (42.2%) were in second year of study. The reason could be that students in second year are now used to the university thus are likely to explore the so-called opportunities like going to clubs where they learn such habits like psychoactive use. This was also reported by studies in Northeastern Ethiopia [25], USA [20], Nigeria [9] and Greece [27].

CONCLUSION

modifiable (such as upkeep, marital status and year of study) and non-modifiable (such as gender and age) psychosocial factors.

Recommendations

Based on the findings of the study the researcher recommends the following; Education and awareness creation on dangers of substance use especially among male students should be done. The dean of students should arrange counseling of students with problems and follow-up measures should be instituted to prevent depression.

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