

# The use and abuse of alcohol among students in the University of Botswana – The case study of undergraduate students

Lesego Tswiio<sup>1</sup>, Lesego Selotlegeng<sup>2</sup>

<sup>1</sup>Department of Development Studies, Zimbabwe Open University, Harare, Zimbabwe, <sup>2</sup>Department of Business and Information Resource Management, Institute of Development Management, Gaborone, Botswana

**Correspondence to:** Lesego Tswiio, E-mail: tswiiolesh@gmail.com

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## ABSTRACT

**Background:** The high rates of the adult per capita consumption of alcohol in Botswana are considered to be the high-risk behavioral pattern, contributing to the escalation of economic. **Objective:** The objective of this study was to examine the use and abuse of alcohol among the University of Botswana students. **Materials and Methods:** This study was carried out in the University of Botswana main campus. It consists of faculties of science, social sciences, business, humanities, and health sciences and engineering and technology. The study population consists of the undergraduate students residing on campus. The target population consisted of University of Botswana undergraduate students. Sample size was 362 students. **Results:** The study indicated that majority of students who consumed alcohol were aged 20-24 years with 72.4% (110). The smallest group age was 15–19 with 6.6% (10). A higher percentage of 51.3% (78) was females and was males while 48.3% (74). For both on campus and off campus, experiencing unwanted parenting was positively associated with beer consumption, while off-campus students, lecture disrupted was associated with beer consumption. **Conclusion:** Majority of respondents indicated that they did not care whether the University of Botswana campus regulations change to be alcohol free followed by those who disagreed. Respondents have experienced or knew someone who had experienced various negative consequences of the influence of alcohol. In general, the analysis points out that alcohol use and abuse among the learners are common and this could be due to the diverse cultural background that exists on campus.


**KEY WORDS:** Alcohol Consumption; University of Botswana Students; Alcohol Abuse

## INTRODUCTION

Alcohol abuse is among the most common social problems in Botswana where the society is negatively affected by the consequences associated with the increasing rate of irresponsible use or abuse of alcohol.<sup>[1]</sup> The high rates of adult per capita consumption of alcohol in Botswana are considered to be high-risk behavioral pattern, contributing

to the escalation of economic and social problems in many households or families, in particular, the society at its various levels. The most common problems associated with alcohol abuse are; the spread of HIV/AIDS and gender-based violence,<sup>[2,3]</sup> and aggressive and antisocial behaviors among secondary school students.<sup>[4]</sup> Accordingly, the Government of Botswana has introduced new laws and other initiatives aimed at curbing alcohol abuse. For example, the operation hours for liquor outlets were reduced and 30% of alcohol levy was introduced to reduce the affordability of alcoholic beverages with the aim of reducing its excessive consumption.

High alcohol per capita consumption has been reported to be a widespread problem across the general adult population from the age of 15+ in Botswana.<sup>[5]</sup> In the 1990s, the annual

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per capita recorded alcohol consumption was 2.7 L pure alcohol per adult above 15 years.<sup>[1]</sup> The rate of alcohol consumption has since increased over the years and the Government of Botswana is putting in place stringent measures to reduce excessive and dangerous intoxication which affects productivity in the workplace, compromises safety on the roads, and the evidence of many diseases including HIV/AIDS among the sexually active population. In relation to the problem of HIV/AIDS in the country, the latest Botswana AIDS Impact Survey III (2009) identifies alcohol as one of the factors contributing to increasing rates of HIV/AIDS infection, which currently stands at 17.6%.<sup>[6]</sup> Population Services International in its campaign against multiple concurrent partners in Botswana identified that high alcohol consumption is a major contributing factor to HIV/AIDS epidemic, the previous study also found that for both men and women, heavier drinking was associated with higher odds of all risky behaviors including unprotected sex, multiple partners, and paying for men or selling/trading (women) sex. The more people reported drinking, the more likely they were to report risky behavior.<sup>[7]</sup>

Many social problems such as poverty, domestic violence, unemployment, and unwanted pregnancy are often associated with intoxication due to excessive consumption of alcohol. The background of the study will, therefore, give attention to implications on human behavior. It will further address the consequences associated with abuse of alcohol in communities. In the context of the University of Botswana, the previous study states that common issues affecting the progression of students from year to year include low/poor academic performance that leads to retaking or repeating of courses, and in some extreme cases, discontinuation or dropout of students from university programs of study.<sup>[8]</sup> In common, most of the University of Botswana citizen students depend on the government bursaries to pursue their programs of study. However, the university is affected by high alcohol consumption by students. High consumption rate of alcohol is likely to affect the student budget priorities due to the recently introduced alcohol levy. As a result, students may resort to further financial support from the working people in exchange for sexual relationships where there are little negotiations for safer sex since the decisions are based on financial gain rather than the risk associated with unprotected sex. The main reason for this study is to establish the use and abuse of alcohol among the University of Botswana students.

## MATERIALS AND METHODS

The study was carried out in the University of Botswana main campus. It consists of faculties of science, social sciences, business, humanities, and health sciences and engineering and technology. Definition of alcohol abuse is an individual use of alcoholic beverages to excess as a regular practice while alcohol use involves drinking beer, wine, or hard

liquor. The study population consists of the undergraduate students residing on campus. The target population consisted of University of Botswana undergraduate students. Sample size was 362 students. A random sample of male and female students was done separately in each stratum. Two-stage stratified probability sampling was used, on which two frames consisting of list of blocks for each stratum and list of room numbers were used. Stage 1 involved probability proportional sampling method with systematic method for the selection of blocks in each stratum. Probability proportional sampling method is a type of sampling, whereby probability of selection is proportional to the size of the unit. Stage 2 involved systematic selection of student rooms. In the sampling procedure, the first clusters were selected and then a specified number of elements from each selected cluster were selected. The first stage of the selection process involved the selection of blocks/halls of residence. Once a random sample of blocks was drawn, the second stage was selection of student's rooms from the selected blocks. The blocks of students were stratified into male blocks and female blocks. Clusters which formed the units of sampling at the first stage are called the primary stage unit and the elements within clusters are called the second stage units. There were 3835 undergraduate students accommodated in 22 halls of residence (1263 females and 1572 males) excluding 708 students residing at faculty of engineering technology. Students from faculty of engineering technology were excluded due to limited resources in terms of money, time, and accessibility.

$$\text{The sample size } (n) = N/1+N(e)^2$$

Where,

N = The total population, e = marginal error

$n = 3835/[1+3835(0.05)^2]=362$ , hence, the sample size = 362

The study used a questionnaire in the official language of the country being analyzed, and it was completed voluntarily. The amount of alcohol consumed was estimated on the basis of information obtained from the respondents on the frequency of alcohol consumption (beer, wine, and traditional beer), including one of consumption, in the past 6 months before the study. The quantity method has been used in this study of drinking consumption. The frequency of drinking was measured as follows: Never drink alcohol; monthly, 2–3 times/week; 4 or more times/week; and every day. Descriptive statistics were performed on the main independent variables. The panel data have been used for bivariate and multivariate linear regression analysis. Dependent variable “use and abuse of alcohol” has been used for multivariate linear regression analysis. Explanatory variables were selected based on theoretical considerations. To compare outcomes of the use and abuse of alcohol, multiple variables Poisson regression models adjusting for overdispersion were used to compute rate ratios with 95% confidence intervals. All the variables were transformed into natural logarithms to avoid

outliers and normalize the variables. All statistical modelings were carried out using the Statistical Package for the Social Sciences (SPSS) version 21. The Committee of Zimbabwe Open University sanctioned this study.

## RESULTS

### Descriptive Results

#### Demographic results

Table 1 shows the alcohol use which comprised 152 students, of which the majority was at the age group of 20–24 (72.4%) (110). The smallest group age was 15–19 with 6.6% (10). A higher percentage of 51.3% (78) was females while 48.3% (74) were male. The university student population is skewed toward females. This is in line with the overall Botswana population which showed that majority are females. Among the students who drink alcohol, only 6.6% were married. This is because most of the university students are straight from five and few have

**Table 1:** Demographic characteristics

Demographic characteristics	Alcohol use		$\chi^2$	df	P-value
	No, n (%)	Yes, n (%)			
<b>Age</b>					
15–19	20 (9.5)	10 (6.6)			
20–24	149 (71.0)	110 (72.4)	0.12	1	0.03
25–29	23 (11.0)	10 (6.6)			
30+	18 (8.5)	22 (14.5)			
Total	210	152			
<b>Sex</b>					
Male	74 (35.2)	74 (48.7)			
Female	136 (64.8)	78 (51.3)	2.467	3	0.66
Total	210	152			
<b>Marital status</b>					
Never married	210 (100)	142 (93.4)	2.387	1	0.02
Married	0 (0)	10 (6.6)			
Total	210	152			
<b>Religion</b>					
Protestant	166 (79)	120 (79.0)		1	0.25
African tradition	44 (21)	32 (21.0)	3.613		
Total	210	152			
<b>Year of study</b>					
1 <sup>st</sup>	25 (11.9)	10 (6.6)			
2 <sup>nd</sup>	50 (23.8)	38 (25.0)	0.128		0.04
3 <sup>rd</sup>	65 (31.0)	44 (28.9)			
4 <sup>th</sup>	28 (13.3)	20 (13.2)			
5 <sup>th</sup>	42 (20.0)	40 (26.3)			
Total	210	152			

NB: 5<sup>th</sup> year of study represented the retaking students

worked before. A higher percentage of students 28.9% (44) was doing the 3<sup>rd</sup> year and followed by the fifth which is mainly represented by retake students.

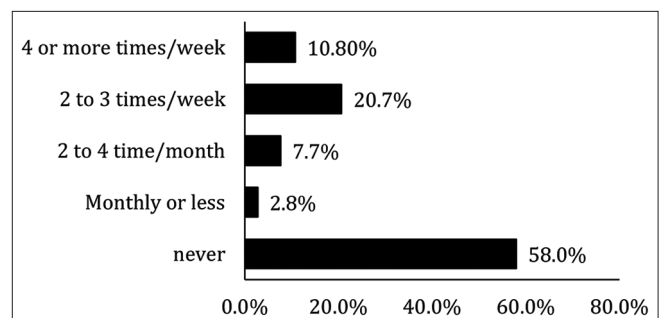
#### Prevalence of Alcohol abuse among students

The study sought to examine the prevalence of alcohol abuse among the University of Botswana students. Figure 1 shows that majority of the respondents 58.0% claimed to have never taken a drink containing alcohol. This was followed by 20.7% of respondents who took alcoholic drink 2–3 times per week.

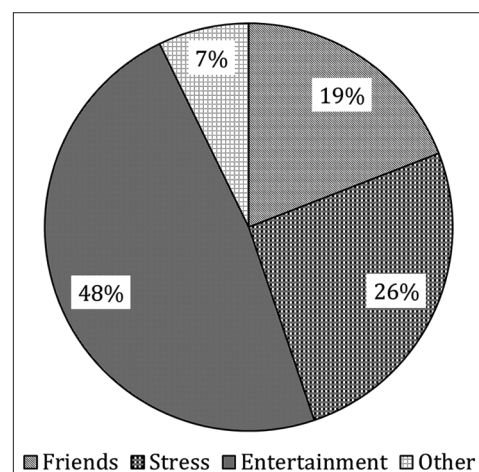
#### Push factors to alcohol intake

Figure 2 shows that the highest factor that influenced alcohol consumption among the students was entertainment with 48%. Those who reported to have been influenced by stress, friends, and other factors were 25.7%, 19.1%, and 7.2%, respectively.

Table 2 indicates that sexually transmitted infections were frequent in students who take beer by 37.8% and only 2.9% for those who take traditional beer. The study also revealed students who had problems with authorities for driving under the influence of beer by 67.4%. The study also shows statistical significance association ( $P < 0.05$ ). A statistical association between alcohol consumption and traffic accident was also observed in the study ( $P < 0.01$ ). Among those presenting risk drinking, 44.2% were student who takes beer.



**Figure 1:** Frequency of alcohol drink consumption



**Figure 2:** Push factors to alcohol intake

**Table 2:** Alcohol consumption and related personal problems ( $n=152$ )

Personal problem	Yes, $n$ (%)	No, $n$ (%)	Total	$P$ -value
Infection with sexually transmitted infection				
Beer	36 (37.8)	59 (62.2)	95	0.05
Wine	1 (4.5)	21 (95.5)	22	
Traditional beer	1 (2.9)	34 (97.1)	35	
Unwanted parenting				
Beer	18 (18.9)	77 (81.8)	95	0.48
Wine	4 (18.1)	18 (81.9)	22	
Traditional beer	14 (40.0)	21 (60.0)	35	
Physical aggression				
Beer	62 (65.3)	33 (34.7)	95	0.02
Wine	1 (4.5)	21 (95.5)	22	
Traditional beer	10 (28.6)	25 (71.4)	35	
Traffic accident as a driver or passenger				
Beer	42 (44.2)	53 (55.8)	95	0.01
Wine	3 (13.6)	19 (86.4)	22	
Traditional beer	8 (22.9)	27 (77.1)	35	
Problem with the authorities for driving under influence of alcohol				
Beer	64 (67.4)	31 (32.6)	95	0.28
Wine	18 (81.8)	4 (18.2)	22	
Traditional beer	5 (14.3)	30 (85.7)	35	
Health problems				
Beer	28 (29.5)	67 (70.5)	95	0.32
Wine	1 (4.5)	21 (95.5)	22	
Traditional beer	1 (2.9)	34 (97.1)	35	

Gastrointestinal problems, headache, malnourishment, and vitamin deficiencies. Significance at  $P < 0.05$

Physical aggression is also common among the University of Botswana student, especially those that take beer 65.3% ( $P < 0.02$ ).

### Bivariate Results

The associations between alcohol consumption and behavioral outcome are presented in Table 3. Unwanted parenting and lecture disrupted were associated with beer consumption in both on-campus and off-campus students. Gender difference in terms of females consuming more alcohol was only indicated in off-campus respondents. Involving in an accident was associated with beer consumption in the off-campus students but less among on-campus students. Experiencing unprotected sexual intercourse was positively associated with alcohol consumption in both on-campus and off-campus students. Poor academic was positively related to problem

drinking among off-campus students. Both on-campus and off-campus students, sexual assault was associated with alcohol consumption.

### Multivariate Results

Table 4 indicates the significant associations between alcohol consumption and behavioral outcomes in multivariable logistic regressions. For both on campus and off campus, experiencing unwanted parenting was positively associated with beer consumption, while off-campus students, lecture disrupted was associated with beer consumption. Sexual advance showed a positive association with beer consumption among on-campus students but negative association among off campus. With off-campus students, alcohol consumption was associated with involving in an accident and sexual assault.

### DISCUSSION

The results of the study indicate that use and abuse of alcohol among the University of Botswana students has been found to be prevalent. The most consumed type of alcohol students consume was beer. Using the method of the previous author on measuring alcohol use, the majority of respondents were moderate drinkers. The results also show that more females drink compared to males.<sup>[7]</sup> This is in contrast to that the previous study which showed that men in Botswana generally drink more compared to women. The culture has changed in Botswana and world over probably this contributed to observed trends that were characterized by females having high drinking prevalence compared to males. The culture may have contributed to the changes that were found out in this study. The previous study indicated that the environment is important as it shapes the behavior which is in line with the peer pressure as environment may include anything around us.<sup>[9]</sup> The University of Botswana students are aware of the effects of alcohol use on academic performance. Despite the knowledge, their behavior on alcohol intake does not change. This is demonstrated by higher number of students aged 20–24 who performed badly as a result of alcohol use. A survey that was conducted by a National Health College showed that alcohol use and abuse are among the top 10 factors hamper good academic performance among students.<sup>[10]</sup> This finding correlates with the findings of this study as it was found that it impeded academic performance among university students. In another study that involved a population of 41,581, it indicated that 26% of drinkers had poor performances in examination while 28% had missed lessons.<sup>[11]</sup> Unwanted parenting caused by alcohol consumption among university students is a legitimate concern in this study for both students who stay on campus and off campus. The previous study indicated that 68 adolescent girls first sexual intercourse was a reason of being drunk.<sup>[12]</sup> In America, the previous study reported that sexually experienced between the ages of



**Table 3:** Bivariable associations between alcohol consumption and behavioral outcomes

Variable	OR (95% CI)					
	On campus			Off campus		
	Beer	Wine	Traditional beer	Beer	Wine	Traditional beer
Gender	0.88 (0.72–1.06)	1.04 (0.78–1.50)	1.28 (0.81–1.35)	1.22 (0.90–1.52)	0.42 (0.32–0.68)	1.48 (1.24–1.88)
Unwanted parenting	1.48*** (1.08–1.68)	1.32*** (1.12–1.50)	0.89 (0.70–1.01)	1.44*** (1.12–1.72)	0.88 (0.77–1.01)	0.90 (0.76–1.28)
Sexual advance	3.10*** (2.12–4.52)	1.02 (0.84–1.26)	1.26 (1.20–2.40)	1.12 (0.96–1.61)	3.25*** (2.25–4.16)	0.98 (0.45–1.14)
Physically assaulted	0.76 (0.55–1.08)	0.74 (0.44–1.25)	0.82 (0.70–0.97)	1.10 (0.99–1.18)	1.48 (1.20–1.77)	1.30 (1.28–1.55)
Lecturer disrupted	0.67** (0.50–0.88)	0.62* (0.57–0.81)	0.88 (0.62–1.01)	0.78** (0.61–0.95)	0.66* (0.48–0.96)	0.95 (0.88–1.29)
Sexually assaulted	0.70 (0.62–0.99)	0.48* (0.41–.8)	0.85 (0.71–0.97)	0.84* (0.70–1.05)	0.75 (0.71–0.86)	0.80 (0.68–1.10)
Accident	0.95 (0.90–1.44)	1.18 (1.11–1.51)	1.16 (1.22–1.63)	1.35*** (1.21–1.56)	1.02 (0.98–1.44)	1.08 (0.91–1.26)
Unprotected sex	1.14 (1.08–1.35)	1.16 (1.12–1.62)	1.02 (0.91–1.33)	1.28*** (1.12–1.47)	1.22*** (1.08–1.54)	1.04 (.97–1.68)
Poor academic performance	1.03 (0.99–1.73)	1.19 (1.01–1.33)	1.11 (0.97–1.46)	2.52*** (2.06–2.88)	2.06*** (1.38–2.66)	1.38 (1.20–1.77)

Significance \* $P<0.05$ ; \*\* $P<0.01$ ; \*\*\* $P<0.001$ . OR: Odds ratio, 95% CI: 95% confidence interval

**Table 4:** Multivariate regression: OR and 95% CI for alcohol consumption and behavioral outcomes

Variable	OR	95% CI
Beer versus wine <sup>a</sup> (on campus)		
Experience unwanted parenting	1.48**	1.35–1.88
Sexual advance	0.76*	0.58–0.98
Unprotected sex	0.70*	0.42–0.93
Traditional beer versus wine <sup>a</sup> (on campus)		
Experience unwanted parenting	4.25***	2.60–6.21
Poor academic	0.27***	0.15–0.49
Beer versus wine <sup>a</sup> (off campus)		
Experience unwanted parenting	0.41***	0.28–0.63
Lecture disrupted	1.33*	1.02–1.72
Sexual assault	0.68**	0.51–0.91
Involve in accident	0.97*	0.94–1.02
Traditional beer versus wine <sup>a</sup> (off campus)		
Unprotected sexual intercourse	0.77*	0.55–0.97

Significance \* $P<0.05$ ; \*\* $P<0.01$ ; \*\*\* $P<0.001$ . <sup>a</sup>Reference category of the dependent variable. OR: Odds ratio, CI: Confidence interval

13–19 year olds was due to alcohol consumption. The study also indicated that among university students who consume alcohol were not found to be associated with condom use during their first sexual intercourse.<sup>[13]</sup> However, another previous study found that students who drink beer were significantly less likely than students who were sober to use a condom at first intercourse. The interaction of university students, alcohol consumption, and accidents has been the leading contributor to mortality in Botswana among persons under the age of 30. Drink driving is a factor in about one in every seven crashes in African countries where someone

loses their life. Of the drink drivers/riders who were killed in the 3-year period from 2014 to 2017, 64% were students.<sup>[14]</sup>

## CONCLUSION

The results of this study indicated a high prevalence of alcohol abuse among the University of Botswana students. There was correlation between alcohol abuse and the level of alcohol consumption. With regard to push factors, there was strong association between alcohol abuse and push factors. The analysis also showed that the academic performance by the student is negatively affected by high alcohol consumption. Majority of respondents indicated that they did not care whether the University of Botswana campus regulations change to be alcohol free followed by those who disagreed. Respondents have experienced or knew someone who had experienced various negative consequences of the influence of alcohol. In general, the analysis points out that alcohol use and abuse among the learners are common and this could be due to the diverse cultural background that exists on campus. There is a need for further review of regulations on alcohol use on campus. Despite the efforts made by the government to reduce the use of alcohol, the findings still show that a lot of students still take alcohol. Based on the research findings, there is a need for the government to make more recreational facilities and to develop policy framework for addressing alcohol abuse. There is also a need for shift in emphasis from mere provision of information about the effects of alcohol use and abuse to ways of influencing positive behavioral change among university students. It might be effective to sponsor more musicians to sing songs aimed at exposing the dangers of alcohol. The campaign should also target young

children even those at primary schools. There should be also supported services for those who abuse alcohol. The support services could be guidance and counseling and mentoring the targeted individuals.

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