



Behavioural Habits of Alcohol Abusing Students at a State University in Zimbabwe

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Authors' contributions

This work was carried out in collaboration between all authors. Author LM designed the study, performed the literature searches, wrote the protocol and the first draft of the manuscript. Author MM collected the data and analyzed it. Author EM participated in the literature searches and edited the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JAMMR/2018/34607

Editor(s):

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Complete Peer review History: <http://www.sciencedomain.org/review-history/24038>

Original Research Article

Received 1st June 2017
Accepted 26th March 2018
Published 7th April 2018

ABSTRACT

Background: Hazardous alcohol consumption among university students has an adverse impact on public health and economic development.

Aim: The study aimed to describe behavioural habits of alcohol abusing students at a State University in Zimbabwe.

Methods: A cross-sectional study was done, and a sample of 100 students with a history of alcohol abuse was recruited using snowballing technique. The Alcohol Use Disorders Identification Test (AUDIT) was used to determine behavioural habits among the University students. Data were collected in April - May 2015. Data were analyzed using descriptive statistics.

Results: The results showed that the alcohol beverage commonly abused by the students were spirits (42%), followed by other alcohol-containing drinks (38%) with 32% reporting taking six or

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more drinks on one occasion, which according to the AUDIT, reflects a state of hazardous alcohol use. Forty-two percent had failed to stop once they had started drinking alcohol, while 36% had been unable to perform customarily expected behaviours. Fifty percent (50%) needed a drink in the morning after a heavy drinking session. This trend indicates alcohol dependence that can lead to negative consequences for the drinker. Most of the respondents (58%) never had feelings of remorse after drinking while 64% had failed to remember the previous night's events because of drinking. This indicates harmful alcohol use among the students.

Conclusion: This study revealed that university students who hazardously drink alcohol have behaviours that are detrimental to health. These students perform poorly academically and have risky sexual behaviours that expose them to sexually transmitted illnesses including HIV. Their conduct poses a concern for public health professionals and economic development.

Recommendations: It is recommended that instead of reacting to consequences of alcohol abuse among students, Universities need to develop strategies for early detection of students at risk of alcohol abuse as well as implement primary, secondary and tertiary interventions. Community mental health services, school health programmes and school psychological services that provide care and rehabilitation of students with alcohol use disorders must be strengthened.

Keywords: Behavioural habits; AUDIT score; alcohol abusing university students; Zimbabwe.

1. INTRODUCTION

Alcohol use disorders which include alcohol abuse and alcohol dependence are regarded as one of the most important public health problems [1,2]. The Diagnostic and Statistical Manual of Mental Disorders IV [3] describes alcohol abusers as those who drink despite recurrent social, interpersonal and legal problems as a result of alcohol use. The highest proportion of people with alcohol use disorders are aged 18 to 29 years [4,5,6] an age bracket that includes the majority of university students. The transition from adolescence to youth and study time at University is marked by greater vulnerability to alcohol abuse [5]. University studentship is a time of independence and separation from parents and therefore, a time that affords exposure to a vast array of new experiences and choices, during which unhealthy behaviours are often initiated and developed [7].

A study conducted in Malawi reported hazardous or harmful alcohol use (72%) among university students [8]. In the study conducted in Malawi, the overall AUDIT score of male students was above the threshold of 8.0 while that of females was below the critical score. Another study was conducted in Zambia [9] which showed that 35% females and 33% male students were taking alcohol occasionally in the past 12 months. The study also revealed that students from the fourth year of study were more likely to report receiving alcohol occasionally (44% females and 36% males) compared to those from the first year of study (27% females and 29% males). Alcohol consumption is the leading risk factor for disease

burden in low mortality developing countries and the third largest risk factor in developed countries [10]. A survey conducted in Zambia indicated that 26.7% of road traffic accident cases showed a blood concentration higher than the statutory limit of 80 mg% and 50% of the drinking drivers were below the age of 30 years [11]. Using a cut-off score of 8 to 19 for the AUDIT analysis in a University in South Africa, the results showed that 23.1% of all men and 7.2% of all women were classified as hazardous drinkers [12]. At another university in South Africa, the mean AUDIT scores differed according to accommodation, with students living in private accommodation reporting higher scores than those in residency or a family home [13].

Factors that are associated with alcohol abuse among Nigerian University students included parental drinking, higher economic class and being non-religious [14]. Alcohol use predictors included being male, higher level (second year to penultimate year), non-satisfaction with courses being studied and sexual activity [7]. Although the family might be a decisive factor for the initiation of alcohol, the university environment [15] increased the possibility of maintaining the alcohol drinking behaviour. Peer influence was also seen to influence alcohol consumption as it set the tone for accepted and admired behaviour leading to reinforcement [16].

Frequent binge drinkers were found to be 21 times more likely than non-binge drinkers to miss classes, fall behind in school work [17]. These binge drinkers were also found to engage in vandalism and be injured or hurt; engage in the

unplanned sexual activity, not use protection when having sex as well as get in trouble with the police or drive a car after drinking [18]. Students attending schools with high rates of binge drinking experience a greater number of second-hand effects such as disrupted sleep or study; property damage and verbal, physical or sexual violence than those attending schools with low rates of binge drinking [18]. Olley and Allade [7] found that men tended to become heavy drinkers and are least worried about the consequences such as skipping classes as well as developing risky behaviours with negative consequences to themselves and the society. Brandao, et al. [5] found that 17.7% of male students and 9.8% of females skipped class after using alcohol (Odds = 0.52; CI = 0.38 – 0.72; p-value = 0.000023).

Harmful use of alcohol is related to premature death and avoidable diseases, increasing risk factors for neuropsychiatric disorders, cardiovascular diseases [19], cirrhosis and cancer of the liver as well as alcohol-induced diabetes mellitus [16]. It is also implicated with several infectious diseases such as HIV and AIDS, tuberculosis and can contribute to intentional and unintentional injuries including road crashes and suicide [16]. Excessive drinking can be harmful to the liver and other vital organs; however, there is another less obvious body system that is also vulnerable to the adverse effects of alcohol: the immune system [20]. This makes people who drink alcohol to be at increased risk of contracting infectious diseases, take longer to recover from an illness [6], suffer complication after surgery as compared to those who drink more responsibly.

In order to reduce alcohol misuse among youths, strategies may focus on modifying expectations, limiting access to alcohol at young ages [21], targeting students of higher socio-economic status and those living away from home [22]. Another study conducted in the United Kingdom, focusing on dimensions of masculinity revealed an association between heavy episodic drinking and negative consequences [23]: the playboy, violent dimensions of masculinity and risk/aggressive alcohol expectancy.

In Zimbabwean universities, peer pressure, inadequate parental supervision, the need to reduce stress and the relief obtained from alcohol were highlighted as reinforcing agents for continuing alcohol use [24] among the youth, although other factors like availability, advertising

and affordability have also been reported to contribute to the increase in alcohol consumption. New drugs such as *nyaope* (a mixture of marijuana, rat poison and antiretroviral medicines), broncleer (a cough mixture) and Nintendo have been reported in some Universities in Zimbabwe [25]. In rural areas, alcohol is freely available due to unmonitored and unregistered indigenous breweries which result in cheap brews that have unproven concentrations of alcohol. This has prompted the researcher to conduct the present study on behavioural habits of alcohol abusing students.

Few research studies have been conducted on alcohol use disorders in Universities in Zimbabwe as most studies have focused on cigarette smoking and illicit drug use among school going children either in primary or secondary schools. Male students at another State university in Zimbabwe said that the frequency of drinking alcohol is determined by their 'pockets' and hence if they have money, they can even drink during the week [24]. Other students cited that parents rarely asked them about school work and do not visit them whilst they are on campus and without supervision, they can go and come whenever they want. These students stated that they were experiencing problems such as absconding lectures, having problems with the police, facing disciplinary measures by the university and not studying well. Reckless sexual activity has also been reported [26,27,28] in Universities which is assumed to be a major driver of HIV prevalence.

Although most Universities in Zimbabwe have policies that aim to instill healthy lifestyles in students through sport and other recreational activities, alcohol use remains a major cause for concern. Students are seen to brew substances that affect both their health, social and academic performance. The study findings might assist University authorities, mental health and public health professionals to plan interventions that will reduce alcohol abuse among the youth as well as rehabilitate youths with alcohol use disorders.

2. METHODOLOGY

2.1 Study Design

In this study, an analytical cross sectional study design was used. When conducting a cross-sectional study, data was collected on the whole study population at a single point in time. Analytical cross sectional study designs have

been found to be ideal in determining an association between a putative risk factor and a health outcome.

2.2 Setting

The study was conducted at a State university in Zimbabwe which has an average population of seven thousand students per semester. The University offers diploma, undergraduate and post graduate programmes and has an average intake of more than seven thousand students per semester. There are two hostels that are not adequate to house students on campus and this makes a majority of students to reside in private accommodation that is offered by residents in the town.

2.3 Sampling Procedure and Sample Size

Only registered students both male and female who drink alcohol were eligible to participate in the study. These students were drawn from all the faculties. Students who do not drink alcohol and those on industrial attachment were excluded from the study. Snow balling was used until a sample size of a hundred (100) students was obtained. This sampling technique was chosen as students are aware that they are not expected by authorities to abuse alcohol. They do not readily come forward and admit that they use alcohol even though alcohol is not considered an illicit drug. This makes them hard to find.

A trained researcher assistant identified an index student and it is from this student that the next student was identified. Most questions on the AUDIT could only be answered by those students who drink and this criterion was used when deciding to select only those students who drink alcohol.

2.4 Data Collecting Tool

Demographic data was captured on a segment added to the Alcohol Use Disorders Identification Test (AUDIT) in order to collect information on characteristics such as age, sex, marital status, level of study, age at initiation of alcohol and whether parents drink alcohol.

The AUDIT questionnaire, an English version [29] was used to assess the prevalence of alcohol use among the University students. The respondents did not have any problems in understanding the items on the research

instrument since they are literate and fluent in English. The AUDIT was developed by World Health Organization (WHO) as a guideline for use in primary care. It provides a framework for intervention to help risky drinkers reduce or cease alcohol consumption and thereby avoid harmful consequences of their drinking. The AUDIT was developed as a simple screening tool for excessive drinkers to assist in brief assessment. The first edition was published in 1989 (document No. WHO/MNH/DAT/89.4) and later updated in 1992. The instrument is divided into 3 distinct domains:

1. Hazardous alcohol use in questions 1 – 3 that look at the frequency of drinking, quantity and frequency of heavy drinking
2. Alcohol dependence symptoms in questions 4 -6 that focus on impaired control over drinking, increased salience of drinking and morning after drinking.
3. Harmful alcohol use in questions 7 -10 that focus on guilt, blackouts, alcohol related injuries or other peoples' concern on the drinking behavior.

2.5 Data Collection

The research assistant ensured that the questionnaires were filled in private. Data was collected during the daytime (8 hours) in order to allow the students enough time to participate in other activities. The research assistant later thanked the respondents who were advised that they could leave after completing the questionnaire. All the questionnaires were reviewed by the researchers and checked for completeness. Data was analyzed using descriptive statistics.

2.6 Ethical Considerations

Permission to conduct the study was obtained from the Dean of students and the Registrar. Ethical clearance was granted by the Medical Research Council of Zimbabwe (MRCZ) (Approval number MRCZ/B/871). The MRCZ recognizes the principles enshrined in the Helsinki Declaration (2013). Respondents were informed that participation should be voluntary and they could refuse participation even after having consented to participate. The consenting respondents were advised that all the information that they disclose would be used only for the purposes of the research study and the concept of confidentiality was also explained. The respondents were also told that the only benefit they would get was information on alcohol, its

adverse effects and available services for those who want to quit alcohol abuse. Those who agreed to participate in the study were given a written consent form which they signed. A witness was asked to countersign the consent form. Data was collected in May 2015 by the trained research assistant.

3. RESULTS

3.1 Demographic Characteristics

Seventy nine percent of the respondents were aged between 18 and 25 years, 75% of the respondents were single and the majority (95%) professed to be Christians. Of the respondents 66% were males. Fifty eight percent of the students were in their first year. The majority (53%) of the students' parents do not drink alcohol. Eighty nine percent of

respondents started drinking alcohol after the age of eighteen.

3.2 Hazardous Alcohol Use

Forty two percent drank alcohol 4 times or more in a week. The majority (38%) took 7 – 9 alcohol containing drinks in a single occasion and 32% drank 6 or more drinks four (4) or more times in a week.

3.3 Alcohol Dependence

Forty two percent had failed to stop once they had started drinking in a month and 36% reported failing to perform normally as expected of students monthly. Fifty percent needed a drink in the morning 2–3 times a week.

Table 1. Demographic variables (N = 100)

Variable		Frequency N (%)
Age (in years)	18 – 25	79 (79%)
	26 – 35	20 (20%)
	36 – 45	1 (1%)
Gender	Male	66 (66%)
	Female	34 (34%)
Marital status	Single	75 (75%)
	Married	24 (24%)
	Divorced	1 (1%)
Level of study	1 st Year	58 (58%)
	2 nd Year	24 (24%)
	4 th Year	18 (18%)
Age of initiation	Below 12 years	2 (2%)
	13 -17 years	9 (9%)
	18 years and above	89 (89%)
Parents who drink		47 (47%)

Table 2. Alcohol drinking behaviours: Hazardous drinking (N = 100)

Parameter		Frequency N (%)
Number of times of drinking alcohol:	monthly or less	8 (8%)
	once a month	22 (22%)
	2 -3 times a week	28 (28%)
	4 or more times a week	42 (42%)
Number of drinks containing alcohol	1 -2 alcohol containing drinks	7 (7%)
	3 – 4 alcohol containing drinks	13 (13%)
	5 -6 alcohol containing drinks	32 (32%)
	7 – 9 alcohol containing drinks	38 (38%)
	10 or more alcohol containing drinks	10 (10%)
Six or more drinks on one occasion	Never	12 (12%)
	Less than monthly	10 (10%)
	Monthly	16 (16%)
	2 – 3 times per week	30 (30%)
	4 or more times per week	32 (32%)

Table 3. Alcohol drinking behaviours: Alcohol dependence (N = 100)

Parameter	Frequency N (%)	
Failure to stop once started	Never	22 (22%)
	Less than monthly	18 (18%)
	Monthly	42 (42%)
	2 -3 times a week	6 (6%)
	4 or more times a week	12 (12%)
Failure to perform as normally expected of them because of drinking:	Never, in the last year	18 (18%)
	Less than monthly per year	8 (8%)
	Monthly per year	36 (36%)
	2 -3 times per week	26 (26%)
	4 or more times per week	12 (12%)
Needed a drink in the morning after a heavy drinking session:	Never	20 (20%)
	Less than monthly in the past year	15 (15%)
	Monthly	9 (9%)
	2 – 3 times a week	50 (50%)
	4 or more times a week	6 (6%)

Table 4. Alcohol drinking behaviors: Harmful alcohol use (N = 100)

Parameter	Frequency N (%)	
Feel guilty or remorseful after drinking:	Never	58 (58%)
	Less than monthly in the past year	20 (20%)
	Monthly	9 (9%)
	2 -3 times in a week	8 (8%)
	4 or more times in a week	5 (5%)
Failure to remember previous night's events	Never	69 (69%)
	Failed to remember within the last month	31 (31%)
Sustained injuries following a drinking episode	Never	50 (50%)
	Injured but not in the past year	28 (28%)
	Injured in the past year	22 (22%)
Relatives or health workers were concerned about the drinking:	Never	54 (54%)
	Not in the past year	16 (16%)
	They now worry about drinking	30 (30%)

3.4 Harmful Alcohol Use

Fifty eight (58%) respondents never had feelings of guilt or remorse after drinking and only 5 (5%) of the respondents had feelings of guilt or remorse after drinking four or more times in a week. Thirty one (31%) failed to remember previous events because of drinking the night before within the previous month. Twenty eight (28%) respondents had injuries as a result of their drinking but not in the last year while 22 (22%) had sustained injuries during the previous year. Sixteen (16%) respondents had either a friend or a health worker expressing concern about their drinking but not in the last year while

30 (30%) of the respondents had either a friend or health care worker concerned about the drinking.

4. DISCUSSION

This study gathered data on the behavioural habits of alcohol abusing students at a State University which was measured by an established and validated instrument (AUDIT) in a sample of students with a history of alcohol use.

Hazardous use of alcohol was found in the evaluated university students and this indicates a

challenge especially in first year students. Initiatives targeting the health of this population must be prioritized. The students showed both dependence and harmful use of alcohol. This finding is contrary to the study conducted in Zambia where fourth year students were more likely to report taking alcohol [8] as compared to those from the first year of study. The sex of students, their marital status and parents who do not drink alcohol are factors related to alcohol related disorders in this study. Male students consumed more alcohol than their female counterparts, which is consistent with reports from international literature [6,7,10]. Most studies show male students as heavy alcohol drinkers who do not worry about the consequences of their drinking habits, as norms of masculinity has been seen to be associated with heavy episodic drinking and negative consequences. In this study only 47% had parents who drink alcohol whilst factors associated with alcohol abuse among Nigerian University students included parental drinking [12]. The development of strategies for detection of individuals more likely to have hazardous use of alcohol and of situations that trigger this pattern of consumption may become a health priority in the establishment of preventive and rehabilitative interventions.

Despite the high rates of risky consumption of alcohol among university students, alcohol use is rarely indicated as a reason for seeking assistance from university support services. Even when a student's academic performance declines, risky behaviours such as alcohol use are not investigated. In most cases, the university support systems react only after the student has offended, been arrested or is injured. This concurs with students in another study who expressed that they faced disciplinary measures by the university [21]. Yet poor grades for the students associated with skipping lectures, sleeping poorly, damaging property or being physically and sexually abused should be indicators for preventive strategies to be implemented. Other studies [16] also indicate higher scores of academic problems, interference with academic performance and assignments among students with alcohol use disorders. The possible hazards of alcohol consumption in this age group justify routine screening of risky behaviours and indicate the need for recreation and optimizing primary, secondary and tertiary strategies to address this problem. Targeting university students might assist in awareness creation on the negative

consequences of alcohol use as this age group would influence peers even after graduating from the university.

Zimbabwean universities have been reported as having higher incidence of HIV infections than the general populations which reflects risky sexual activity [23,24,25], engaging in unplanned sexual activity and not using protection when having sex. This is in agreement with a study done in Nigeria which showed that binge drinkers were 21 times more likely to engage in unplanned sexual activity and not to use protection when having sex [15]. This also confirms that alcohol increases the risk for HIV transmission in the youth.

5. LIMITATION OF THE STUDY

An important strength of this study lies in the use of expert consensus on the appropriate grading criteria used in the evaluation of behavioural habits of alcohol abusing students: the AUDIT score. The AUDIT has recognized psychometric qualities and is one of the most widely used scales to evaluate alcohol abuse or dependence and it was well adapted for this study. A weakness of the study is that the sample size was small, thus limiting generalizability of the study findings to the Zimbabwean university student population. The other weakness was the snowballing sampling technique that was used to recruit only those students who drink alcohol. Nevertheless, the study findings are similar to other studies that have been conducted in universities in the sub region, which indicate a reflection of alcohol abuse in university settings.

Despite this limitation, the study contributes to the national data base on the hazardous use of alcohol and factors associated with this pattern of consumption that shall be considered as tools for preventive strategies that may be used in university settings.

6. CONCLUSION

The study reported that students at the evaluated University in Zimbabwe have negative behavioural habits that are detrimental to health due to hazardous alcohol abuse. This problem is not limited to Zimbabwe but affects other countries regionally as well as internationally. Despite the fact that alcohol is a culturally accepted beverage in Zimbabwe, students who are having alcohol use disorders are not openly seeking medical help. This calls for stronger

national leadership to finalise and enact the current draft Alcohol Policy which should also address the mental health needs of youths in tertiary institutions. The community mental health services, school health programmes and school psychological services should be strengthened to provide care of high quality, improve access to care as well as rehabilitation to those with alcohol use disorders. Nationally agreed minimum data set needs to be put in place and an information system established to consistently monitor hazardous use of alcohol at local and national levels.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard, written approval of Ethics committee has been collected and preserved by the authors.

ACKNOWLEDGEMENTS

We thank the students who participated in this study as well as the Dean of students and the Registrar (Academic). We also want to thank the research assistant for the support that made this work a success.

COMPETING INTERESTS

Authors have declared that no competing interests exist

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Peer-review history:
The peer review history for this paper can be accessed here:
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