

Review Article

Patterns of Alcohol Use amongst Undergraduate Students at a Health Sciences University, South Africa

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Abstract

Background: Alcohol use among university students is a common aspect of student extramural activities outside the lecturing setting on campus. The increasing use of alcohol during these periods relates to harmful disorders and predicts substance related problems in later life.

Purpose: The purpose of the study was to investigate the prevalence and factors of alcohol use among the undergraduate students at Sefako Makgatho Health Sciences University, South Africa.

Methodology: A quantitative design was used to collect data through a self-administered questionnaire from 377 undergraduate students in different study professions at Sefako Makgatho Health Sciences University, South Africa.

Results: The findings indicate that student's alcohol use is moderate to heavy with a Spearman coefficient pattern indicating strong correlations between worries and stress, alcohol taste and feeling good as motives for alcohol use.

Conclusion: Lack of knowledge about alcohol use, as well as absence of specific policies on alcohol use depict a concerning gap in efforts to combat alcohol use among undergraduate students.

Keywords: Alcohol use; Undergraduate students; Motives

Introduction

Alcohol consumption at universities is poorly controlled, irrespective of the policies that are in place to monitor and control alcohol use. For these students, this is the first step

to adult freedom and experimentation with alcohol. Alcohol misuse is a threat to public health, as its consumption impacts negatively on the development of students, as well as on their academic performance, which leads to promiscuous behaviour [1].

Globally, alcohol use remains a serious health hazard among students, and studies found that alcohol intake amongst all students is on the rise and, as a result reported health risks, such as development of schizophrenia, lower levels of psychological well-being, and subsequent disruption of executive mental function [2-5]. Alcohol misuse also contributes to high diseases and injury related health conditions, mostly alcohol dependence, cancers, and injuries. Alcohol misuse is classified as the leading risk factor of premature death globally; among people between the ages of 15 and 49 years [3-5].

Alcohol use amongst university students in South Africa

It is well known that South Africa takes an unaccepted position among universities and colleges in developed countries regarding the alcohol consumption. In South Africa, it is estimated that there is high alcohol intake of between 10.3 to 12.4 litres per person. South Africa is among a number of the countries where alcohol use is high, with an alarming statistic 50%-57% for university campus students [5,6]. The prevalence of hazardous and harmful alcohol use was found at an Eastern Cape university where more than 50% use alcohol excessively [7].

Research indicates hazardous or heavy drinking among

university students. This pattern of drinking by university students may be a cause for concern, as these youths are starting new life. Alcohol use in most families plays an important part in cultural and religious life. Students are often leaving home for the first time and experiencing freedom with the use of drugs such as alcohol. This causes billions of rand wasted per year because alcohol misuse remains a cause of concern that still needs to be researched [6].

All South Africa universities faces similar challenges where identified young adults as having the high levels of alcohol drinking patterns, consequently drastic policy changes are needed [8].

Methodology

Objective of the research

To investigate the prevalence and reasons of alcohol use among the undergraduate students at a Health Science University in South Africa.

Study area

The target population was all undergraduate students following different courses from the 1st to the 3rd year of their studies, and the sampling was recruited from students following BSc, Medicine, and Dental and Nursing degrees.

Sampling

In this study an infinite student population was used, determining the sample size based on a proportion of the overall student registration registered in 2016, using Slovin's formula between the ages of 19 and 25 years. The significant level is set at 0.05 ($Z=1.96$) with an error of margin at 0.05. The exclusion criteria are those beyond and above the age category. Three hundred and seventy seven students responded randomly according to class lists to share their views on alcohol use on campus life [9].

Data collection instrument

The English version of the Alcohol Use Disorders Identification Test (AUDIT) questionnaire was used to measure alcohol consumption [10]. The AUDIT test is a standard tool to assess the drinking behaviours with reference to frequency and amount of alcohol intake based on gender

Data analysis

Raw data collected was captured, cleaned, validated, coded and entered in Microsoft Excel 2010 by the researcher, who then imported the data into Stata version 15.1 for analysis, in order to calculate and interpret the mean, median, standard deviations and range of variables that are investigated. Descriptive statistics was used to describe the data and exploring relationships between multiple variables in relation to the motives for alcohol use, which were presented in the form of the frequencies, graphs and tables from which interpretations were made.

Ethics

Ethical clearance and approval of the study was obtained from Sefako Makgatho Health Science University Research and Ethics Committee with reference number SMU-REC/H/233/2015: PG. Permission to conduct the study was obtained from Sefako Makgatho Health Science University, School of Health Care Science. Respondents to the study were voluntary, after informed consent was obtained.

Results

The majority of students (female 70%) across the age bracket 19-25 years of age at the university are abstaining from alcohol use. Alcohol behaviours change as student life become a norm, which can be classified into three levels; hazardous drinking (62%), harmful drinking (25%) and alcohol dependence (14%) respectively (Table 1).

Table 1: Details of top 5 Up and down-regulated differentially expressed genes.

AUDIT score drinking level	Classification	Gender		Age		Student group			
		Female	Male	19-22	23-25	BSc	Medicine	Dental	Nursing
0-7	Abstainers	170 (70%)	40	191	55	148	57	23	22
			-29%	-66%	-64%	-72%	-86%	-66%	-31%
Aug-15	Hazardous drinking	60 (25%)	51	23	5	29	8	5	15
			-37%	-8%	-6%	-14%	-12%	-14%	-21%
16-19	Harmful drinking	7	29 (22%)	37	10	23	0	3	10
		-3%		-13%	-11%	-11%	0%	-9%	-14%
20-40	Alcohol dependence	4	16 (12%)	37	17	6	1	4	23
		-2%		-13%	-19%	-3%	-2%	-11%	-33%

Respondents with AUDIT scores above 8 were regarded as frequent and risky alcohol user.

As shown in Table 2, the motives for alcohol use are affected by factors such as; frequent, been popular, stress free, habit of drinking and energy booster.

Table 2: Motives for use of alcohol (n=167)

Motives for drinking	Popular	Frequent	Forget worries	Like tastes	Free from parents	Feel good	Stress relief	Habit to drink	Energy boost
Free from parents	0.285 *	0.117	0.269	-0.010	0	0	0	0	0
Feel good	-0.147	0.109	0.219	0.347*	0.091	0	0	0	0
Stress relief	-0.105	0.316 *	0.339 *	0.028	0.056	0.285 *	0	0	0
Habit to drink	-0.049	0.285 *	-0.050	0.195	-0.003	0.195	0.038	0	0
Energy boost	-0.096	-0.074	0.203	0.28	-0.117	0.562 **	0.074	0.224	0

* p<.05, and ** p<.001

In order to delve deeper into the motives of respondents' alcohol usage, a correlation matrix was used to explore the potential relationships between variables in order to highlight particular correlations. Weak correlations are marked with one asterisk (*), and two asterisks (**) representing a moderate strength correlation with p values. The Spearman's rho correlation revealed a weak relationship among "Been popular" and "Free from parents" as motives for drinking alcohol (rs [167]=0.285, p<0.05) and in terms of "Feel Good" and "Like the taste" of alcohol at (rs [167]=0.347, p<0.05). With reference to "Stress relief" as the second highest motivation factor to use alcohol and "Frequency of drinking", "Forget University worries" and "Feel good" the relationships were weak at (rs [167]=-0.316, p<0.05, rs [167]=0.339, p<0.05, and rs [167]=0.285, p<0.05) respectively. In terms "Habit of drinking" and "Frequency of drinking" the relationship was (rs [167]=0.285, p<0.05). It seems that the "Feeling good attitude" motivates respondents to use alcohol as an "Energy boost" with a moderate relationship at (rs [167]=0.562, p<0.001).

Discussion

The aim of the study was to investigate the motives for alcohol drinking among different undergraduate student groups of a South Africa Health Science University. The majority of students entering tertiary level of education are confronted with the use of alcohol [11]. Global status report on alcohol consumption among young adults has increase, which mirrors the drinking pattern of the population. Prevalence rates of current drinkers among the population 15–19 years of age, amounts to 155 million adolescents (Africa: 22.5 million; Americas: 29.9 million; Eastern Mediterranean region: 0.7 million; Europe: 22.3 million; South East Asia region: 37.9 million; Western Pacific region: 41.9 million) [12]. In terms of comparison studies on gender of alcohol consumption, males are consuming more alcohol than females [13].

For the younger generation that commences their training at tertiary level there are a few motives for alcohol consumption; social pressure to fit in, coping with the academ-

ic program and social enhancement among students [14]. Research indicated that young tertiary students develop drinking patterns to relief social pressure and stress which can be associated with poor performance during tertiary education, similar to the results from this study [13,15]. It is clear that alcohol seems to be used as a measure for the motives behind drinking at tertiary level, where social activities been the primary motive. Tertiary students experience a level of freedom and may have difficulty to restrain them from using alcohol [15-18].

Conclusion

In the present study, approximately half of the patients had relatively mild to moderate symptoms. The treatment was not standardized for all patients and it was physician dependent. Compliance to the treatment prescribed and follow up FeNO was not ascertained, and this might have affected the level of asthma control. It is quite evident that FeNO measurement has the advantage of ease of performance even in patients with severe airflow obstruction. It is also obvious that monitoring FeNO for a long period of time on a follow up basis in a comparatively larger sample size would have been a better approach. FeNO may be a useful adjunctive tool for monitoring asthma and the present study supports the association between FeNO levels with bronchial asthma severity. It should also be borne in mind that serial measurements of FeNO would be more informative than single time values.

Study limitations

Results from this study need to be interpreted with caution as the instrument for data collection used in the study is a self-report questionnaire and responses may be considered as socially desirable and acceptable.

Competing Interests

The authors declare that they have no personal relationships which may have inappropriately influenced them in writing this article.

Disclaimer

The views expressed in this article are the authors', and not an official position of any of the institutions affiliated with the authors.

Authors' Contributions

The first author was involved in protocol development, data collection and data analysis. The second authors were responsible for writing up of the article.

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