

## Alcohol Use by Students at an Emerging University in South Africa

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**ABSTRACT** The excessive drinking of alcohol by students, enrolled in institutions of higher learning, is an issue which has been reported in literature globally. As South Africa has a very high alcohol consumption rate per capita, this problem is compounded. This study aimed to gain knowledge and understanding of alcohol use amongst first year students enrolled at an emerging university in South Africa. A quantitative research approach using a cross-sectional survey design was utilised. Open-ended questions were added to the survey protocol to add a holistic element to the research. Quantitative data were analysed using descriptive statistics, the Chi square test and an independent t-test. Thematic Content Analysis (TCA) was used to analyse data gleaned from open-ended questions. Results indicated that first year students aged 18-26 years (SD=3.37) used alcohol with negative academic and social consequences. Male and female students reported similar drinking patterns in terms of when, how much and the types of alcohol they drink. The majority of students acknowledged that moderate and responsible alcohol consumption is necessary. However, this does not generally translate into responsible drinking behaviours.

### INTRODUCTION

South Africa has one of the highest alcohol consumption rates per capita of any country in the world (Seggie 2012), resulting in high alcohol related death rates (Parry and Bennet 2006; Seggie 2012). First year university students are away from parental supervision for the first time which often means that they have an unrealistic sense of freedom (Peltzer and Phaswana 1999), during which they engage in many social activities. Peer pressure plays a role in high alcohol consumption amongst students as they need to feel accepted and be part of the perceived in-group (Mogotsi 2011). According to Visser et al. (2012) peer influence is not affected by parents' perceptions of their children's peers and their individual self-control mechanisms. However, Cruz et al. (2012) reported that higher rates of drinking can be predicted, to a degree, by peer friendships in adolescents and young adults' particularly in close friendships (Osgood et al. 2013). Research conducted by Moreno et al. (2014) indicates that predictors of alcohol use

can be found on first year college students' Facebook pages. They recommend that tertiary institutions use social media for informing students about alcohol use and misuse. Morojele et al. (2006) suggest that students drink alcohol over weekends because they are bored as they do not have enough to do. This implies that there are not enough recreational facilities on many emerging institutions campuses in South Africa.

Alcohol use amongst students worldwide is often regarded as a rite of passage. Ham and Hope (2003) report 75% of both male and female students in Israel report to consuming alcohol whilst in the United States of America (USA) 65% of college students report the same. Mogotsi (2011) found that the use of alcohol amongst female students is on the rise and reported that, as females are less able to tolerate alcohol physiologically, it poses both health and psychological risks. In a recent study in the United Kingdom (UK), with a large sample group (13 000), the association between alcohol and smoking was determined to be correlated by the time adolescents reached the age of 14 years (Hagger - Johnson et al. 2013). This suggests that addictive behaviours are observable in adolescence. Karam et al. (2007) propose that international alcohol related research that investigates risk factors and protective influences for alcohol use is undertaken.

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Students are more likely to engage in risky sexual behaviour(s) when under the influence of alcohol. This increases the risk of pregnancy, HIV infection, and other sexually transmitted diseases (Mogotsi 2011; Pithey and Morojele 2002). According to Foster et al. (2014) females are more likely to experience negative outcomes linked to alcohol use than males. For instance, females are more vulnerable to HIV infection because of the large area of mucous membrane around the vagina (Maponyane 2012). Female students who drink alcohol are also more likely to engage in risky sexual behaviours than those who do not (Partington 2003). Studies suggest however, that males are more likely to engage in risky drinking behaviours than females (Ketoja et al. 2014; Kilmer et al. 2014). However, research by Iwamoto and Smiler (2013) indicates that females who subscribe to masculine norms, which are associated with higher levels of peer pressure, general conformity and alcohol use, may behave in a more masculine manner (which may be indicative of higher alcohol use amongst this female group). However, females are also more likely to seek help earlier than males if they think they have an alcohol related problem (News Release 2013).

According to Mogotsi (2011) the consumption of large amounts of alcohol leads to students having various problems in daily living and academic studies (Mallet et al. 2013), rendering them a vulnerable population. This covers areas such as depression, conflict, inadequate nutrition, negative health outcomes and physical injuries such as those incurred in motor-vehicle accidents, physical fights and work-related accidents. Breen et al. (2010) investigated populations vulnerable to alcohol in Australia. They concluded that excessive drinking is linked to both the characteristics of individuals and the community in which they reside. First year students can be considered a vulnerable community as they are still integrating into university life and may be influenced negatively by their peers. Alminhana and Farais (2014) report that religiosity has not been positively associated with responsible alcohol use. However, a nationwide study in Brazil by Lucchetti et al. (2014) indicates that participants who displayed high levels of religiosity, and who drink, are more likely to be supportive of policies which legis-

late against alcohol than participants who reported lower levels of alcohol consumption.

The media play a role in glamorising alcohol use. Grenard et al. (2013) report that exposure to the advertising of alcohol in various forms of media facilitates drinking problems in some older adolescents. For example, the use of high profile sportsman in the advertising of alcohol encourages students to drink as they want to identify with their sporting heroes (Taylor et al. 2003). Research by Lang and Yegiyani (2014) found that individuals who consume large amounts of alcohol respond more positively and, on the other hand, more negatively to pictures of alcohol than non-drinkers who tend to react more positively to pictures of alcohol overall. According to Parry et al. (2012) the Minister of Health in South Africa announced that a total ban on alcohol promotion should be considered. This is supported in research by Ramsoomar and Morojele (2012) who looked at the trends in alcohol prevalence amongst youth in South Africa and noted its implications for government policy making. It must be further stated that tougher legislation on alcohol and alcohol related products has been introduced for instance, into the UK in the last decade.

It was thus considered appropriate to investigate the phenomena in a higher education setting in Gauteng, South Africa.

## METHODOLOGY

### Research Design

The aim of the study was to gain knowledge about the alcohol use of 1<sup>st</sup> year students at an emerging university. The research adopted a cross-sectional survey research design utilising systematic random sampling.

### Hypotheses

The study had the following hypotheses:

- ♦ most students at the campus drink alcohol during their first year of study;
- ♦ a proportion of first year students are likely to have experienced social and academic problems due to alcohol use;
- ♦ first year students have limited knowledge about alcohol;
- ♦ the drinking patterns of male and female first year students differ.

### Sample

The study population consisted of all first-year psychology students at an emerging university in Gauteng. The institution attracts mostly Black students from both rural and urban backgrounds. It was considered appropriate to draw the sample from first-year psychology students as these students are often away from home for the first time in their lives with no parental or guardian supervision. They are exposed to situations where alcohol is frequently used and many do not have the necessary social skills to deal with peer pressure which dictates the use of alcohol as a norm. Systematic random sampling was used to enhance the representativeness of the population. All registered first-year students had an equal chance of participating in the study. A sample of three hundred (300) first-year students was drawn from the total first-year population of 972. Seventy two percent (72%) of the survey protocols were returned.

### Data Collection Methods

Students were contacted by putting a list of all student numbers drawn from the sampling frame in each department at the institution. These students were asked to collect the questionnaires from the relevant departments' office, complete and return them. A covering letter provided information about the study and instructions on how to complete the survey. A consent form was attached which participants signed.

### The Instrument

The research instruments used was the Student Alcohol Questionnaire (SAQ) standardised, updated and validated in 1990 and 2002 (Engs 2007). Questions are written in English, the language used to communicate and teach at the emerging institution. The questionnaire consisted of seventy-two (72) items. The first seven questions were demographic in nature. The remaining sixty-five (65) items were related to drinking patterns, knowledge and opinions. The survey elicits mostly categorical data and some interval data. The last section of the questionnaire included several open – ended questions which collected qualitative data in order to elicit information about how students' felt about their use of alcohol.

### Reliability and Validity

The reliability of the SAQ has been verified over time as similar results have been reported (Dusek 1987; Richardson and Barrow 2000). The reliability coefficient ranges from .50 to 0.84 and a Cronbach Alpha of 0.73 and 0.86 for the different subscales (Engs 2007). Bias was minimized by using random sampling and by combining qualitative and quantitative approaches (Yoshikawa et al. 2008).

### Ethical Issues

The key issues in ethics in any study are to ensure the anonymity and confidentiality of participants. As the study was self-report in nature, names or student numbers were not asked and confidentiality of respondents was assured. The protocol was passed by the ethical committee of the emerging institution where the research was undertaken. The investigation also adhered to the ethical guidelines as specified by the Health Professions Council of South Africa (HPCSA).

### Data Analysis

#### *Quantitative Data*

Quantitative data were analysed using descriptive statistics which summarises the data in a clear and concise manner. A chi-square test was used to test for the association between two nominal variables (Terre Blanche et al. 2009). An independent t-test, which ascertains if the means of two groups differ in terms of statistical significance, was also used on appropriate data.

#### *Qualitative Data*

Qualitative data were analysed using Thematic Content Analysis (TCA). According to Terre Blanche et al. (2009) the key to ensuring a suitable interpretive analysis is to stay close to the data and to interpret it from a position of empathic understanding. TCA allowed immersion with the data which facilitated the emergence of themes from participants' responses to the open-ended questions.

## ANALYSIS AND DISCUSSION

The quantitative results of the study are discussed in terms of the demographics, drinking

patterns, knowledge about alcohol and the study hypotheses. This is followed by a discussion of the themes generated by an analysis of the qualitative results.

### Discussion of Demographic Results

Of the 217 respondents 91% were Black, 7% White and 2% Coloured and Indian respectively. Of this sample 41% were males and 59% females. This reflects the demographic of the municipal area (Statistics SA 2010). Sixty-three percent (63%) of the sample was aged between 18 and 25 years and 37% were 26 years of age or older ( $SD=3.37$  years).

The entire sample reports to being Christian (different denominations). The majority of the sample (95%) reported that their religion is very, moderately important or important to them. An independent t-test indicated that there was no significant difference between the male and female groups ( $p=0.163$ ), which suggests that both male and female respondents assign the same level of importance to the Christian religion. As values associated with Christianity uphold moderation it would follow that the majority of participants would report conservative drinking habits and behaviours (Lucchetti et al. 2014). However, the following results do not generally support this observation.

### Drinking Patterns

The following summary of research results indicates that they generally support the study hypothesis which states that, most students at the campus drink alcohol during their first year of study. However, the study assumption that the drinking patterns of male and female first year students differ, is not upheld. Males and females reported similar drinking patterns. The study hypothesis that, a proportion of first year students are likely to have experienced social and academic problems due to alcohol use is upheld, as a number of respondents reported to being arrested for drunk driving, being involved in fights and missing classes after drinking.

The majority of respondents (55%) report to drinking beer at least once a week. Thirteen percent (13%) report to drinking beer every day. Fifty-five percent (55%) drink between one and four cans of beer a week and 30% report to drinking 5 to 6 beers or over 6 beers each time they

drink. There is no statistically significant difference between the male and female groups in terms of how often they drink beer ( $p=0.824$ ) and how much beer they drink ( $p=0.361$ ). Fifty percent (50%) of the sample report to drinking wine once a week and 12% report to drinking wine every day. Fifty-seven percent (57%) of the entire sample reported that they drink 5 to 6 glasses of wine or more on every occasion they drink it. There is no statistically significant difference between the male and female groups in terms of how often they drink wine ( $p=0.475$ ) and how much wine they drink ( $p=0.495$ ). Sixty percent (60%) of the sample report to drinking spirits (distilled alcohol) at least once a month. There is no statistically significant difference between the male and female groups in terms of how often they drink spirits ( $p=0.872$ ) and how much spirits they drink ( $p=0.316$ ). The majority, that is 87% of respondents, reported that they had drunk alcohol at least once during the two months before the survey. There is no statistically significant difference between the male and female groups in terms of when they last consumed an alcoholic drink ( $p=0.682$ ). This is an important finding as previous literature has generally reported that males are more likely to drink more, or participate in risky drinking behaviours than females (Ketoja et al. 2014; Kilmer et al. 2014). It does lend support to findings by Iwamoto and Smiler (2013) who suggest that peer pressure and conformity generally, for alcohol use, are more likely for females who adopt more masculine norms. It may be that females are unconsciously adopting more masculine norms.

Seventy-six (76%) percent of the sample report to smoking 2 or 3 cigarettes when they drink alcohol and the rest of the sample (both males and females), report to smoking at least 1 cigarette every time they drink alcohol. There is no statistically significant difference between the means of the male and female groups with reference to how many cigarettes are smoked while drinking ( $p=0.5863$ ). Hagger - Johnson et al. (2013) indicate that smoking and drinking are positively correlated at a young age which this research reinforces, as it is likely that the majority of the young adults in the sample have followed this behavioural pattern. This also underpins the suggestion that drinking alcohol is negatively associated with good health (Mogotsi 2011) as both smoking and drinking are health risks. However, the sample reported very low



levels of having a hangover or becoming nauseous and vomiting from drinking. Only 6 respondents reported to being nauseous or vomiting (2 males and 4 females) and 10 respondents reported to having a hangover (5 males and 5 females) after drinking. There is no statistically significant difference between the means of the male and female groups in both of these categories however, the numbers are small so should be interpreted with caution.

Nearly two-thirds of the sample report to driving after having had several drinks. Further, 53% reported to having driven a car knowing that they were over the limit. A third of the participants reported to driving while drinking. There is no significant difference between the means of the male and female groups in terms of driving after having several drinks ( $p=0.998$ ), driving knowing they have had too much to drink ( $p=0.305$ ) and driving while drinking ( $p=0.371$ ). This self-reported behaviour which often results in motor-vehicle accidents, where minor to severe physical injuries occur, is a negative health outcome (Mogotsi 2011).

Seventeen percent (17%) of the sample reported to having missed a class as a result of drinking and a 20% missed classes because of a hangover. This result is in conflict with the result that only 5% of the sample reported having a hangover. Forty-four percent (44%) of participants reported to attending class after having several drinks. There is no statistically significant difference between the means of the male and female groups in terms of missing class ( $p=0.346$ ), or attending class after having several drinks ( $p=0.470$ ) or missing a class because of a hangover ( $p=0.526$ ). Negative academic outcomes are associated with drinking, as are hangovers (Mallet et al. 2013; Mogotsi 2011). This may suggest that some respondents were not truthful in answering questions relating to having a hangover.

Ninety-six percent (96%) of respondents reported that they have not had trouble with the law because of drinking. Over ninety percent (90%) of the sample reported that they had never had trouble with the law or university administration because of poor behaviour as a result of over consumption of alcohol. However, 22% reported that they had been arrested for drunk driving. This infers that some questions were not answered honestly or that respondents do not think that being arrested for drunk driving is

the same as trouble with the law. There is no statistically significant difference between the means of the male and female groups for trouble with the law ( $p=0.219$ ), trouble with the university administration ( $p=0.481$ ), damage or misbehaviour ( $p=0.511$ ) and being arrested for drunk driving (0.614). The percentage (22%) of the sample who reported drunk driving may drive when drunk because of peer pressure (Osgood et al. 2013) and experience negative outcomes in terms of daily living and, by inference, academic progression (Mallet et al. 2013; Mogotsi 2010).

No respondents had lost a job due to drinking alcohol. However, 25% reported to getting lower marks. Ninety seven percent (97%) indicated that they have never been involved in a fight after drinking. Sixteen percent (16%) had participated in a drinking game. There is no statistically significant difference between the means of the male and female groups in terms of getting lower marks ( $p=0.847$ ), getting into a fight after drinking ( $p=0.94$ ) and participating in a drinking game (0.472). These statistics appear to support the research by Iwamoto and Smiler (2014) which suggests that some females may adhere to masculine norms in terms of drinking alcohol. It may be that this occurs in competitive environments which were traditionally male.

The majority of respondents do not think they have a problem related to drinking. There was a significant difference between the means of the male and female groups in thinking they might have a problem related to drinking ( $p=0.102$ ), with females thinking they might have a drinking problem. This finding is linked to literature suggesting females are more likely to seek help about drinking problems earlier than males (News Release 2013).

### First Year Students' Knowledge about Alcohol

The majority of the sample showed large gaps in factual knowledge about alcoholic beverages as well as very limited knowledge about social, historical and commonplace or general knowledge about alcohol. The results are discussed in two sections firstly, factual knowledge about alcoholic beverages and secondly, social, general and historical knowledge about alcoholic beverages. The study hypothesis that first year students have limited knowledge about alcohol is upheld. Although much research has been conducted on drinking behaviour little recent

research has been found pertaining to students' actual knowledge about alcohol and alcohol related products in South Africa. It is likely that research on alcohol use is mostly behavioural and does not take into account students' factual knowledge and that more research, using systematic methodologies, is required (Karam et al. 2007).

### ***Factual Knowledge about Alcoholic Beverages***

Forty-eight percent (48%) of the participants thought that eating while drinking slowed down the absorption of alcohol, which is false, 41% did not know the answer and only 11% answered the question correctly. Sixty-nine percent (69%) believed that wines are made by fermenting grains, 12% were correct in stating this is false and a further 19% did not know the answer. Sixty-five percent (65%) believe that alcoholic beverages do not provide weight increasing calories. This could account for the tendency for many students to be observably overweight. Fifteen percent (15%) did not know the answer and 20% of the sample answered correctly. Similarly, sixty-one percent (61%) of the sample believe that alcohol is classified as a stimulant, 28% did not know and only 11% of the sample answered the question correctly. Forty-seven percent (47%) believe that alcohol is not a drug and a further 36% did not know, while 17% answered correctly. Fifty-six percent (56%) did not know if a blood alcohol content of 0.1% is the legal definition of alcohol intoxication in most countries, 10% thought this was false while 34% answered correctly.

Fifty-seven percent (57%) of the sample did not know that table wines contain from 2-12% alcohol by volume, 16% did not think this true and 27% were correct in responding that table wines contain 2 – 12% alcohol by volume. Thirty-five percent (35%) were incorrect in thinking that alcohol mixed with a soft drink will affect the body faster than alcohol taken neat (straight, that is without a mix), 41% did not know and 23% answered correctly that the statement is false. In recent years some studies have suggested that alcohol mixed with carbonated water or cool drinks will aid the absorption of alcohol into the bloodstream however, the term carbonated is not used on the SAQ. The question pertaining to whether a 68kg person would have

to drink less than three beers in an hour to keep their blood alcohol content below the legally intoxicated limit provided the following responses 53% answered the question correctly whereas 32% did not know the answer and 15% answered that the statement is false (which is incorrect). Sixty-eight percent (68%) of the sample did not know if distilled spirits contain about 15-20% of alcohol by volume while 24% were incorrect in their belief that this is true (it is a higher percentage of alcohol by volume), only 8% answered correctly. Sixty percent (60%) of the sample did not know that it takes as many hours as number of beers drunk to completely burn up the alcohol ingested. Seventeen percent (17%) of the sample answered incorrectly and 23% answered correctly. Forty-six percent (46%) of the sample did not know if the proof on a bottle of alcohol represents half the percent of alcohol contained in the bottle while 37% thought it was true, only 17% answered the question correctly (the statement is false the proof is double the percentage of alcohol). Fifty percent (50%) of respondents knew that the statement that alcohol taken straight will affect you faster than when mixed with water is correct, while 35% did not know, 15% answered incorrectly.

### ***Social, General and Historical Knowledge***

Sixty-four percent (64%) of the sample thought that the statement that in South Africa drinking is usually considered an important socialising custom in business, for relaxation and for improving inter-personal relationships is false while 15% stated that they didn't know 21% answered correctly (that is, it is an important socialising custom). The statement that, it is estimated that approximately 85% of adults in South Africa misuse or abuse alcoholic beverages is false however, 51% of the sample did not know this, 29% believed it to be true while 21% of the sample answered the question correctly. Forty-seven percent (47%) of the sample thought that it was false that many people drink to escape from problems, loneliness and depression. A further 29% stated that they did not know the answer while 24% answered the statement correctly. Fifty-one percent (51%) of respondents were not aware that many people drink for social acceptance because of peer group pressures. Eighteen percent (18%) thought this statement false and a third answered that it is true,

which is correct. The statement that South Africa lacks a national consensus on what constitutes the responsible use of alcoholic beverages was answered incorrectly by over a third (41%) of respondents who thought the statement true. A quarter of the sample (25%) know that South Africa does have a consensus on responsible alcohol use (Laws governing the use, sale and consumption of alcohol constitute a national consensus). Forty-five percent (45%) of respondents answered correctly that it is true that there is usually more alcoholism in a society that accepts drunken behaviour while 38% weren't sure and 17% answered incorrectly.

Sixty-one percent (61%) of the sample answered incorrectly that approximately 10% of fatal highway (road) accidents are alcohol related while 5% did not know the answer, only 4% knew this statement is false. In South Africa approximately 39% of all fatal road accidents are alcohol related (Arrive alive 2010). Fifty-four percent (54%) of the sample were not aware that it is true that a person can become an alcoholic by just drinking beer, while 32% thought that a person cannot become an alcoholic by just drinking beer, 14% answered correctly. Thirty-eight percent (38%) of respondents answered incorrectly that it is true that drinking coffee or having a cold shower are effective ways of sobering up while 35% reported to know knowing and just over a quarter (27%) of the sample answered correctly.

It is true that historically alcohol was used as a medicine in childbirth, for sedation and surgery, 75% of the sample answered correctly while 17% did not know and 8% answered incorrectly. It is also true that wines throughout history have been commonly drunk at ceremonies and family gatherings, of the sample 45% did not know this, 20% answered incorrectly and just over a third (35%) answered correctly. The statement that alcohol has only been used in a few societies' throughout history is incorrect, 29% of the sample thought the statement true and 71% answered correctly. Fifty percent (50%) of respondents thought that it was true that no alcohol was drunk in South Africa before the British and Dutch settlers colonised the country, which is incorrect. Thirty-five percent (35%) of the sample did not know the answer while 15% answered correctly.

### Qualitative Results

The following themes were collected from qualitative data: well-being, students felt that drinking too much affected their general well-being. These respondents felt that their peers drank too much; b) abstinence, respondents who did not drink felt that drinking was unchristian and that individuals who drank alcohol displayed poor moral values c) relaxation, some respondents felt that drinking alcohol helped them to relax if they used alcohol in moderation; d) regulation, several respondents suggested that the sale and use of alcohol should be more regulated by government and e) the final theme indicated that the majority of the respondents felt that more research into the reasons for drinking needed to be undertaken.

These results suggest that although the quantitative results indicate that both male and female respondents are using, and to an extent abusing alcohol, many of them are aware that the consumption of alcohol can have many negatives. A minority of the respondents, some of whom answered the qualitative questions, have never drunk alcohol or have given it up. They indicated that this was because of their cultural and/or religious beliefs or a result of having bad experiences after drinking. The themes generated from the qualitative data also indicate that respondents think that there is an over-use or abuse of alcohol amongst their peers.

### CONCLUSION

The results underpin previous research that students have a tendency to use and abuse alcohol with negative academic and social consequences. It was found that both males and females have similar drinking patterns in terms of when they drink, how much they drink and what type of alcohol they drink. The study hypotheses namely: most students at the campus drink alcohol during their first year of study; a proportion of first year students are likely to have experienced social and academic problems due to alcohol use and first year students have limited knowledge about alcohol, were upheld. However, the hypothesis which stated that the drinking patterns of male and female first year students differ was not upheld. The research found that the self-reported drinking patterns of first year female students do not differ significantly

from males. Qualitative results also suggest that some students are aware that moderate and responsible consumption of alcohol is appropriate and excessive consumption is not, as it has many serious negative consequences. Generally, the results indicate that there is a problem with alcohol use and abuse amongst first year students at the emerging institution.

### RECOMMENDATIONS

The study makes the following recommendations.

The institution should initiate a policy on alcohol use at the institution, particularly in the student residences.

More workshops should be conducted to educate students on all aspects of alcohol use and abuse.

The institution should forge relationships with rehabilitation centres and invite officials and/or experts to meet with students who are identified as needing help because of alcohol addiction.

In acknowledging that some students who binge drink or drink alcohol to excess, could be in denial, the institution should be proactive in determining ways of identifying students with drinking problems.

The use of Facebook or other social media should be considered by the institution when disseminating information about alcohol use and abuse.

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