

Patterns of Alcohol Use among Students in Private Faith-based and Public Universities in Kenya

Rebecca Njambi Wachira^{1*}, Aggrey Sindabi,² Michah Chepchieng²

¹*Kenya Methodist University, P.O. Box 45240-00100, Nairobi, Kenya.*

²*Egerton University P.O Box 536 Egerton 20115 Kenya*

**Correspondence email:* beckymugow@gmail.com

Abstract

Alcohol use and associated risky behaviours is a leading cause of injury and death among university students and young adults in many parts of the world. Despite growing problems of global alcohol abuse among university students, accurate information on the patterns of alcohol use among university students in Kenya remain sparse. The objective of this study was to establish alcohol use patterns among students in both private faith-based and public universities in Kenya. The study was carried out in 2 private faith based universities and 2 public universities. A total of 374 students responded to a structured self-administered questionnaire (a response rate of 98%). Alcohol use patterns were measured by AUDIT and CAGE questionnaires. Data was analyzed using SPSS version 21.0. Alcohol use in the last month prior to the study was reported by 30.5% of the respondents. Alcohol use was more prevalent among the fourth years and those living off campus but not with their parents. Low risk alcohol use pattern was reported by 83.4% of the respondents. About 11.0% reported hazardous drinking pattern while only 1.6% and 4.0% were at harmful and alcohol dependence levels. Only 8.4% displayed problem drinking pattern. A significant relationship was found between patterns of alcohol use on AUDIT scale and type of university, however, problem drinking did not differ by university. It was recommended that university management and all the stake holders implement screening for alcohol use among students because there are students who engage in harmful and hazardous use and may not voluntarily seek help. Harmful and hazardous alcohol use patterns among students are a detriment to their health and negatively impact those around them.

Key Words: *Alcohol use, behavior, Patterns, Students, Universities*

IJPP 8(1), 1-12

1.0 Introduction

Harmful use of alcohol ranks among the top five risk factors for disease, disability and death throughout the world (World Health Organization [WHO], 2011). Overall, about 3.3 million deaths in 2012 are estimated to have been caused by alcohol consumption

(WHO, 2014). Alcohol use and associated risky behaviours in young people is the leading cause of injury and death among university students and young adults in the USA, particularly those who engage in heavy

episodic drinking (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2005; Libatique, 2011). Globally, 320,000 people aged 15-29 years die annually, from alcohol-related causes, making up 9% of all deaths in that age group (WHO, 2011). Hanson et al. (2014) observed that, alcohol use among university students is associated with unsafe and unintended sexual activities, deaths due to falls and other personal injuries; alcohol overdose and suicide. Alcohol use is also associated with academic problems such as missing classes and poor academic performance; vandalism and property damage; as well as alcohol abuse and dependence.

The pattern of use of alcohol among university students is varied. According to Lorant et al. (2013), the drinking pattern of many university students is one of episodic excess and intoxication. University students report high levels of hazardous alcohol consumption, though quite a number report low risk levels of alcohol use (Akmatov et al., 2011; Heather et al., 2011; Kypri et al., 2009). Burns et al, (2015), for instance reported that among the Australian university students who had consumed alcohol in the last 12 months prior to the study, 60.3% were low risk users, 32.6% were hazardous users, 4.4% were harmful users and 2.7% were dependent. A different study carried out by Young and Klerk, (2008) in Rhodes university in South Africa, revealed that the levels of low risk, hazardous, harmful and dependent use were 48.8%, 32.8%, 8.5% and 9.9% respectively.

Similarly, a study by Utpala-Kumar and Deane, (2012) on current alcohol users among university students in the University of Wollongong revealed that majority (38.4%) were harmful users, followed by hazardous (34.4%) and low-risk users (27.2%). Problem alcohol use pattern is not only a concern in the general population but

also among university students. Akmatov et al, (2011) for instance, documented that 20% of the university students in 16 universities in Germany displayed problem drinking behaviour. Further, Pengpid et al. (2013) also observed that 22.2% of the students in one public university in South Africa were problem drinkers. However, empirical data on the prevalence of problem drinking pattern among university students in Kenya is still unavailable.

A limited number of research studies have revealed the differences in alcohol use patterns among students in religious universities and those in state/public universities. Two such studies found out that students in conservative religious sub-cultural settings, tend to exhibit less substance use overall, compared to students in other university settings (Felt et al., 2010; Wells, 2010). This, according to Ghandour et al. (2009) can be attributed to the fact that students belonging to such conservative religious settings may be shielded from the opportunity to try alcohol. According to Baker (2008), faith-based institutions such as Christian universities provide a greenhouse environment that is both protected, and yet not isolated from the world around them. Students in this kind of environment are prohibited from several common elements.

They are required in varying degrees to abstain from alcohol and illegal drugs, premarital sex, viewing pornography among others. Faith-based universities are affiliated with specific denominations, and have very strict policies concerning use of alcohol and other drugs. Alcohol use within private faith based university is highly prohibited, and students caught drank are summoned to disciplinary committees. On the other hand, some public universities are relatively permissive to alcohol use in that sale of

alcohol is done in the student centers within the universities (Wells, 2010).

It was in the interest of this study to establish the alcohol use patterns among students in both private faith-based and public universities in Kenya. The objectives of the study were to i) to establish the patterns of alcohol use among students in private faith based and public universities in Kenya; and ii) to establish the relationship between patterns of alcohol use among students and type of university.

2.0 Materials and Methods

The study was *ex post facto* in approach and adopted the causal comparative research design. According to Salkind (2010), causal comparative research design is a research design that seeks to find relationships between independent variables and dependent variables after an event has already occurred. Investigators attempt to determine the causes or consequences of differences that already exist between or among groups of individuals without manipulation. Thus, patterns of use, variables that have already occurred among students in two types of universities, then, causal comparative was the most appropriate.

The study was carried out in two private faith-based and two public universities (names withheld because of the sensitivity of the issue under study). These universities are located in four different counties in Kenya. The target population consisted of 31,869 regular students from the four universities, while accessible population which consisted of 19,177 was drawn from the main campuses of these four universities. This consisted of 1,731 from University A (University A records, 2011); 985 from University B (University B Students Records, 2011); 10,044 from University C (University C Students

Records, 2011); and 6,417 from D (University D Students Records, 2011). According to Krejcie and Morgan (1970) table of determining the sample size, for a population of 19,177, the sample size is 377.

Three subjects were added to take care of attrition, resulting to a sample size of 380. Due to the small size of accessible population in private faith-based universities, 100 subjects were purposively drawn from the two private faith-based universities; hence, translating to a sample size of 380 students. This ensured reasonable representation of private universities for logical results. With the assistance of the Deans of students and Student counsellors in the two categories of universities, students were accessed in the common course classes.

A structured self-administered questionnaire was used to collect data from the students. The questionnaire contained items focusing on student demographic details, namely; age, gender and living arrangements. Student drinking component included general drinking patterns and alcohol-related behaviours. To ensure content validity of the instrument, the questionnaire was piloted prior to the study with 30 regular students from Meru University and Nazarene University (Meru Campus).

Prevalence of alcohol use was assessed from responses to questions on “ever use of alcohol in one’s lifetime” (lifetime use), “alcohol use in the last 12 months” (past year use), and “whether used in the last 30 days” (current use). AUDIT and CAGE scales were also included to assess the alcohol use patterns among the respondents. The AUDIT scale provides an assessment of levels, patterns and problems associated with alcohol use. The total score (range = 0-40) is the sum of scores on individual questions (ranges = 0-4). Higher scores indicate greater likelihood of hazardous and

harmful drinking patterns as well as dependence.

Consistent with the analysis of AUDIT, scores were computed into four ordinal categories of alcohol use patterns: low risk (0 - 7); hazardous (8-15); harmful (16 - 19) and high risk (20 and over) (Baer & Blais, 2009). CAGE scale was used to assess problem drinking for the current users. The CAGE was developed in the 1970s as a short interviewer-administered test to screen for alcoholism or covert drinking problems. CAGE is an acronym referring to four questions pertaining to the lifetime drinking experience of the drinker.

It consists of 4 dichotomous questions: “Have you ever felt you should CUT down on your drinking?” “Have people ANNOYED you by criticizing your drinking?” “Have you ever felt bad or GUILTY about your drinking?” and “Have you ever had a drink first thing in the morning (as an ‘EYE opener’) to steady your nerves or get rid of a hangover? Problem drinking is defined as a CAGE score of 2 or more (Bisson et al., 1999).

Social demographic and other related variables

Information on sex, age, year of study and place of residence during the semester was based on self-report. Further, additional information on age of onset of alcohol use and persons who influenced the respondents into alcohol use was also assessed for lifetime users. Further, students who had used alcohol in the last month prior to the study were asked to report sources of alcohol supply, days of the week when they mostly consumed alcohol, company of use, type of alcoholic beverage mostly consumed and circumstances leading to alcohol use.

2.2 Statistical analysis

Data from the questionnaires was processed, edited, coded and entered in SPSS version

21.0 for Windows, to be analyzed. Chi-square was performed to determine any significant relationship between patterns of alcohol use among university students and the university type. Descriptive statistics such as frequencies, percentages, and tables were used to present data.

3.0 Results and Discussion

Description of the sample

Out of 380 questionnaires distributed, 374 were duly filled and completed, while six were discarded because of incompleteness. Table 1 shows that about 26.7% of the respondents were drawn from private faith-based universities while 73.3 % were drawn from public universities. Majority (44.9%) resided in the university hostels while 43.6% were living off campus, but not with their parents. Only 9.4% lived with the parents while taking their studies. About 20.9% were first years, 28.9% were second years, 20.1% third years, and 30.2% were fourth years and above.

Alcohol use and other related variables

Table 2 shows the prevalence of alcohol use across various socio-demographic characteristics of the respondents. Alcohol use at least once in one’s lifetime was reported by 52.4 % of students, whereas 39.0% reported alcohol use in the past year. About 30.5% of students reported alcohol use at least once in the last one month prior to the study.

Private faith-based universities reported higher prevalence at 60.0% using alcohol at least once in lifetime; 44.0% having used alcohol at least once in the last month prior to the study; and 43.0%. Public universities on the other hand reported 49.6%, 37.2% and 25.2% of lifetime, past year and current use respectively. Alcohol use was more prevalent among the male students than

female students. About 61.8%, 49.5% and 34.4% of male students had used alcohol in their lifetime, in the past year and in the past month respectively. On the other hand, 43.1%, 28.7% and 26.6% of the female students were lifetime, past year and current users respectively. About 47.2% of students living off campus but not with the parents had used alcohol in the past year; while 35.6% of them had used alcohol in the past month. In comparison, 36.9% and 32.1% of the students living in the university hostels had used alcohol in the past year and in the past month respectively.

Alcohol use was more prevalent among fourth years with 40.7% reporting alcohol use a month prior to the study. Second years came second at 30.6%, and first years at 29.5%, however, only 16.0% of the third years sampled had used alcohol a month prior to the study. Majority (27.3%) of the respondents took their first alcoholic drink between the ages of 18 and 21 years. About 16.0 % used alcohol for the first time before they attained the age of 18 years, and only 7.8% used alcohol for the first time at the age of 22 years and above.

Further, 15.5 % of the respondents were introduced to drinking by friends at primary or secondary level of education, 11.5% by friends at home, 9.4% by family members, and only 7.5% by friends at the university. The major sources of supply of alcohol were bars/club houses and wine and spirit shops according to 15.5% and 8.8 % of the

respondents respectively. Spirit was the popular alcoholic beverage as reported by 36.0% of the current users (11.0% of the total respondents), followed by beers at 30.7% and wines at 22.8%.

Patterns of alcohol use

Patterns of alcohol use according to AUDIT scores

Table 3 shows that 83.4% were at low risk of alcohol use, while 11.0% were hazardous users, and only 1.6% and 4.0% were at harmful and alcohol dependence levels of alcohol use respectively. When chi-square was performed, a statistically significant relationship was found between levels of alcohol use according to AUDIT scores and type of university ($\chi^2= 19.624$, $df=3$, $p=0.000$).

The results indicate that among the past year users who meet the criteria for higher risk with definite harm, majority (11.0%) came from private faith-based universities, while 10.6% came from public universities met the criteria for risky/hazardous level of use.

Problem drinking

Overall, 8.6% of the respondents met the criteria for problem drinking, while 10.7% and 11.8% met the criteria for low and least alcohol problem respectively, as shown in Table 4. Further, Table 4 shows that levels of problem drinking did not differ by university ($\chi^2=1.028$, $df= 2$, $p= 0.598$).

Table 1

Demographic Characteristics of the Respondents

Variable	Frequency	Percentage (%)
Type of University		
Public Universities	274	73.3
Private Faith Based universities	100	26.7
Gender		
Male	186	49.7
Female	188	50.3
Place of Residence		
In the university hostels	168	44.9
Off campus with my parents	35	9.4
Off campus but not with my parents	163	43.6
Other	8	2.1
Year of Study		
First year	78	20.9
Second year	108	28.9
Third Year	75	20.1
Fourth year and above	113	30.2

Table 2

Prevalence of Alcohol Use across Sociodemographic Factors

Socio-demographic characteristics	Alcohol consumption					
	Lifetime use		Past year use		Past month use	
	Yes	No	Yes	No	Yes	No
	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)
Gender						
Male	115(61.8)	71(38.5)	92(49.5)	94(50.5)	64(34.4)	122(65.6)
Female	81(43.1)	107(56.9)	54(28.7)	134(71.3)	50(26.6)	138(73.4)
Academic year						
First	43(55.1)	25(44.9)	30(38.5)	48(61.5)	23(29.5)	55(70.5)
Second	46(42.6)	62(57.4)	36(33.3)	72(66.7)	33(30.6)	75(69.4)
Third	36(48.0)	39(52.0)	19(25.3)	56(74.7)	12(16.0)	63(84.0)
Fourth	71(62.8)	42(37.2)	61(54.0)	52(46.0)	46(40.7)	67(59.3)
Place of residence						
University hostels	77(45.8)	91(54.2)	62(36.9)	106(63.1)	54(32.1)	114(67.9)
Off Campus with parents	24(68.6)	11(31.4)	7(20.0)	28(80.0)	2(5.7)	33 (94.3)
Off campus but not with parents	92(56.4)	71(43.6)	77(47.2)	86(52.8)	58(35.6)	105(64.4)
Other	3(37.5)	5(62.5)	0(0.0)	8(100.0)	0(0.0)	8(100.0)

Table 3
Levels of Alcohol use According to AUDIT Scores and Type of University

Level of alcohol use according to AUDIT Scores		Type of University		Total
		Private faith based	Public	
Low risk	Count	77	235	312
	% within Type of University	77.0%	85.8%	83.4%
	% of Total	20.6%	62.8%	83.4%
Risky/ hazardous level	Count	12	29	41
	% within Type of University	12.0%	10.6%	11.0%
	% of Total	3.2%	7.8%	11.0%
Higher risk/harmful level	Count	0	6	6
	% within Type of University	0.0%	2.2%	1.6%
	% of Total	0.0%	1.6%	1.6%
Higher risk/definite harm	Count	11	4	15
	% within Type of University	11.0%	1.5%	4.0%
	% of Total	2.9%	1.1%	4.0%
Total	Count	100	274	374
	% within Type of University	100.0%	100.0%	100.0%
	% of Total	26.7%	73.3%	100.0%

$\chi^2=19.624$ $df= 3$ $p=0.000$

Table 4
Levels of use according to CAGE Scores and Type of University

Levels of Use		Type of University			Total	% of the total (n=374) %
		Private based	Faith	Public		
Least alcohol problem	Count	14	30	44	11.8	
	% within Type of University	32.6%	41.1%	37.9%		
	% of Total	12.1%	25.9%	37.9%		
Low alcohol problem	Count	17	23	40	10.7	
	% within Type of University	39.5%	31.5%	34.5%		
	% of Total	14.7%	19.8%	34.5%		
Alcohol problem Clinically significant	Count	12	20	32	8.6	
	% within Type of University	27.9%	27.4%	27.6%		
	% of Total	10.3%	17.2%	27.6%		
Total	Count	43	73	116	31.1	
	% of Total	37.1%	62.9%	100.0%		

$\chi^2=1.028$ $df= 2$ $p=0.598$

Overall alcohol use among university students in both private faith-based universities and public universities in Kenya was found to be prevalent with 52.4% reporting lifetime alcohol use, 39.0% and 30.5% reported past year and current use respectively. The prevalence of lifetime, past year and current use among their college counterparts in the USA and Brazil was much higher at 78.0%, 75.6% and 63.1%, (Johnston et al., 2014) and 86.2%, 72.0% and 60.5% respectively (Andrade et al., 2012)

However, these levels in the Kenyan Universities are rather high considering the general population in Kenya (National Authority for the Campaign against Alcohol and Drug Abuse [NACADA], 2012). The prevalence of alcohol use among university students could be attributed to the new found freedom, away from parental figures and high level of peer influence among others. Alcohol use was more prevalent among the male students than female students. These findings are consistent with other findings in different parts of the world (Seguel et al., 2013; Adewuya et al., 2007; Sebena et al., 2011; Abayomi et al., 2013). Alcohol use was more prevalent among students living off-campus than those living in the hostels.

Similarly, Özgür İlhan et al., (2008) found out that a significantly smaller number of students living in university hostels consumed alcohol compared to students living outside the campus. Majority of the alcohol users began drinking way before joining the university. This early onset of alcohol use has widely been documented (Liang et al., 2012; Thombs et al., 2009; Tesfaye et al., 2014); and is associated with development of alcohol use disorders and involvement in other illicit drugs (O'Grady et al., 2008). Peers played a major role in the

initiation of alcohol use. Houghton and Roche, (2013) noted that drinking among the youth is either a family activity or a peer activity.

Alcohol use pattern by majority of the respondents was at low risk as reported by 83.4% while 11.0% were hazardous users, and only 1.6% and 4.0% were at harmful and alcohol dependence levels of alcohol use respectively. These findings were relatively lower than those in other parts of the continent and in world in general. For instance, a study carried out by Young and Klerk, (2008) in Rhodes university in South Africa, revealed that the levels of low risk, hazardous, harmful and dependent use of alcohol were 48.8%, 32.8%, 8.5% and 9.9% respectively.

In Australia, a study by Utpala-Kumar and Deane (2012) on current alcohol users among university students in the University of Wollongong revealed that majority (38.4%) were harmful users, followed by hazardous (34.4%) and low-risk users (27.2%). When chi-square was performed ($\chi^2= 19.624$, $df=3$, $p=0.000$), a significant relationship was found between levels of alcohol use according to the AUDIT scale and type of university. The results indicated that among the past year users who met the criteria for higher risk with definite harm, majority (11.0%) came from private faith-based universities while public universities had the highest number of respondents (29) who met the criteria for risky/hazardous level of use.

Though literature comparing the patterns of alcohol use between students in public universities with those in private faith-based universities is still limited, Hawthorne (2014) alludes that faith based institutions are not all places of purity in spite of strict rules and public/secular institutions are not

all dens of iniquity. However, the peer group one associates with greatly influence alcohol use attitudes and behaviours. Among the students who used alcohol at higher risk of definite harm, students from faith-based universities were the majority. This could be attributed to a number of factors. One, high economic power, and as posited by Kendler et al. (2014), high social economic status tends to predict increased alcohol consumption in later adolescence and young adulthood since students can afford greater amounts of alcohol. Secondly, due to early onset of alcohol use discussed earlier, these students might have developed alcohol use disorders (Thombs et al., 2009)

About 8.6% of university students met the criteria for problem drinking. The chi-square results indicated no significant relationship between problem drinking levels on the CAGE scores and type of university. While there are limited studies comparing problem drinking among students between private and public universities, a study assessing problem drinking among students in 16 universities in Germany revealed that 20% of the respondents displayed problem drinking (Akmatov et al, 2011). This implies that in as much as alcohol use is prevalent among university students, problem drinking is not as prevalent. Confirming these findings Özgür İlhan et al, (2008) had earlier found out that among the students surveyed

in five universities in Turkey, only 9.7% displayed problematic alcohol use.

4.0 Conclusion

Alcohol use is prevalent among students in both private faith-based and public universities. Alcohol use was more prevalent among the fourth years than students in other years of study. A higher number of students living off campus without their parents reported alcohol use than those living in the hostels within the universities. The patterns of alcohol use among university students was at low risk level on the AUDIT scale and only 8.6% met the criteria for problem drinking on CAGE scale. Levels of alcohol use on AUDIT scale were related to the type of university. However, problem drinking was not associated with type of university.

5.0 Recommendations

Since alcohol use exists among university students, university management, in collaboration with the students counselling office should be vigilant to screen and identify alcohol users especially those who engage in harmful and hazardous drinking levels. Private faith-based universities need to devise strategies to enforce their alcohol use policies because banning of alcohol use within the universities is not necessarily restrictive enough because alcohol use does exist among their students.

References

- Adewuya, A. O., Ola, B. A., Aloba, O. O., Mapayi, B. M., Ibigbami, O. I., & Adewumi, T. A. (2007). Alcohol use disorders among Nigerian University students: Prevalence and sociodemographic correlates. *Nigerian Journal of Psychiatry*, 5(1), 5–9. <http://doi.org/10.4314/njpsyc.v5i1.39893>
- Akmatov, M. K., Mikolajczyk, R. T., Meier, S., & Kramer, A. (2011). Alcohol Consumption among university students in North Rhine-Westphalia, Germany-results from a Multicenter Cross-sectional Study. *Journal of American College Health*, 59(7), 620–626. <http://doi.org/10.1080/07448481.2010.520176>

- Andrade, A. G. de, Duarte, P. do C. A. V., Barroso, L. P., Nishimura, R., Alberghini, D. G., & Oliveira, L. G. de. (2012). Use of alcohol and other drugs among Brazilian college students: effects of gender and age. *Revista Brasileira de Psiquiatria*, 34(3), 294–305. <http://doi.org/10.1016/j.rbp.2012.02.002>
- Baker, B., (2008) *Leadership orientation and effectiveness of chief student affairs officers on coalition of Faith colleges and universities campuses*. Ann Arbor: ProQuest
- Baer, L., & Blais, M. A. (2009). *Handbook of Clinical Rating Scales and Assessment in Psychiatry and Mental Health*. Springer Science & Business Media.
- Bisson, J., Nadeau, L., & Demers, A. (1999). The validity of the CAGE scale to screen for heavy drinking and drinking problems in a general population survey. *Addiction*, 94(5), 715–722. <http://doi.org/10.1080/09652149933522>
- Burns, S., Crawford, G., Hallett, J., Jancey, J., Portsmouth, L., Hunt, K. and Longo, J. (2015) Consequences of Low Risk and Hazardous Alcohol Consumption among University Students in Australia and Implications for Health Promotion Interventions. *Open Journal of Preventive Medicine*, 5, 1-13. doi: [10.4236/ojpm.2015.51001](http://doi.org/10.4236/ojpm.2015.51001)
- Connaway, L. S., & Powell, R. R. (2010). *Basic Research Methods for Librarians*, (5th ed.) ABC-CLIO.
- Felt, J. N., McBride, D. C., & Helm, H. W. (2008). Alcohol, Tobacco, and marijuana use within a religious affiliated university. *Journal of Drug Issues*, 38(3), 799–819. <http://doi.org/10.1177/002204260803800307>
- Ghandour, L. A., Karam, E. G., & Maalouf, W.E. (2009). Lifetime alcohol use, abuse and dependence among university students in Lebanon: exploring the role of religiosity in different religious faiths. *Addiction*.104(6), 940-8. doi: [10.1111/j.1360-0443.2009.02575.x](http://doi.org/10.1111/j.1360-0443.2009.02575.x).
- Hanson, G. R., Venturelli, P. S., & Fleckenstein, A. E. (2014). *Drugs and society*. Jones & Barlett Learning.
- Hawthorne, J. W. (2014). *A first step into a much larger world: the Faith university and beyond*. Wipf and Stock Publishers.
- Heather, N., Partington, S., Partington, E., Longstaff, F., Allsop, S., Jankowski, M., Gibson, A. S. C. (2011). Alcohol Use Disorders and Hazardous Drinking among Undergraduates at English Universities. *Alcohol and Alcoholism*, 46(3), 270–277. <http://doi.org/10.1093/alcalc/agr024>
- Helm, H.W., Boward, M.D., McBride, D.C., & Del Rio, R.I. (2002). Depression, drug use, and gender differences among students at a religious university. *North American Journal of Psychology*. 4, 183-198.

<https://doi.org/10.1177%2F002204260803800307>

- Johnson, B. & Christensen, L. (2012). *Educational research: quantitative, qualitative, and mixed approaches*. Sage
- Kypri, K., Paschall, M. J., Langley, J., Baxter, J., Cashell-Smith, M., & Bourdeau, B. (2009). Drinking and Alcohol-Related Harm Among New Zealand University Students: Findings From a National Web-Based Survey. *Alcoholism: Clinical and Experimental Research*, 33(2), 307–314. <http://doi.org/10.1111/j.1530-0277.2008.00834.x>
- Kendler, K. S., Gardner, C. O., Hickman, M., Heron, J., Macleod, J., Lewis, G., & Dick, D. M. (2014). Socioeconomic status and alcohol-related behaviors in mid- to late adolescence in the Avon Longitudinal Study of Parents and Children. *Journal of Studies on Alcohol and Drugs*, 75(4), 541–545. doi: 10.15288/jsad.2014.75.541
- Libatique, K. (2011). *A toast to the Holy Ghost? A dispassionate look at alcohol and the Bible*. Strategic Book publishing.
- Lorant, V., Nicaise, P., Soto, V. E., & Hoore, W. (2013). Alcohol drinking among college students: College responsibility for personal troubles. *BMC Public health* 13(615) doi:10.1186/1471-2458-13-615
- National Authority for the Campaign against Alcohol and Drug Abuse (2012). *Rapid situation assessment of drug and substance abuse in Kenya*. <https://nacada.go.ke/node/157>
- National Institute on Alcohol Abuse and Alcoholism (2005). *Module 1: Epidemiology of alcohol use*. Retrieved March 10, 2014, from <http://pubs.niaaa.nih.gov/publications/Social/Module1Epidemiology/Module1.html>
- Pengpid, S., Peltzer, K., Heever, H., & Skaal, L. (2013). Screening and brief interventions for Hazardous and harmful alcohol use among university students in South Africa: Results from a randomized controlled trial. *Int. J. Environ. Res. Public Health* 2013, 10, 2043-2057; doi:10.3390/ijerph10052043
- Özgür İlhan, İ., Yıldırım, F., Demirbaş, H., & Doğan, Y. (2008). Alcohol use prevalence and sociodemographic correlates of alcohol use in a university student sample in Turkey. *Social Psychiatry & Psychiatric Epidemiology*, 43(7), 575–583. <http://doi.org/10.1007/s00127-008-0335-z>
- Sebena, R., Orosova, O., Mikolajczyk, R. T., & van Dijk, J. P. (2011). Selected sociodemographic factors and related differences in patterns of alcohol use among university students in Slovakia. *BMC Public Health*, 11(1), 849. <http://doi.org/10.1186/1471-2458-11-849>
- Seguel Palma, F., Santander Manríquez, G., & Alexandre Barriga, O. (2013). Validity and reliability of the Alcohol Use Disorder Identification

- Test (AUDIT) In a Chilean University. *Ciencia Y Enfermería*, 19(1), 23–35. <http://doi.org/10.4067/S0717-95532013000100003>
- Thombs, D. L., O’Mara, R., Tobler, A. L., Wagenaar, A. C., & Clapp, J. D. (2009). Relationships between drinking onset, alcohol use intensity, and nighttime risk behaviors in a college bar district. *American Journal of Drug & Alcohol Abuse*, 35(6), 421–428. <http://doi.org/10.3109/00952990903414501>
- Utpala-Kumar, R., & Deane, F. P. (2012). Heavy episodic drinking among university students: drinking status and perceived normative comparisons. *Substance Use & Misuse*, 47(3), 278–285. <http://doi.org/10.3109/10826084.2011.636134>
- Wells, G. M. (2010). The effect of religiosity and campus alcohol culture on collegiate alcohol consumption. *Journal of American College Health*, 58(4), 295–304. doi: 10.1080/07448480903380250
- World Health Organization (2011). *Global Status Report on Alcohol and health* https://www.who.int/substance_abuse/publications/alcohol_2011/en
- World Health Organization (2014). *Global status report on alcohol and health*. Retrieved August 11, 2015, from http://www.who.int/substance_abuse/publications/global_alcohol_report/en/
- Young, C., & Klerk, de V. (2008). Patterns of alcohol use on a South African university campus: the findings of two annual drinking surveys. *African Journal of Drug & Alcohol Studies*, 7(2), 101-112. <https://doi.org/10.4314/ajdas.v7i2.46367>