

## STRESSFUL LIFE EVENTS AND ALCOHOL USE AMONG UNIVERSITY STUDENTS IN BOTSWANA

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### ABSTRACT

Stressful life events are known to be associated with substance use, especially among young adults. In this study, the association between stressful life events and alcohol use among young adults pursuing university education in a university in Botswana was studied. A total of 312 young adults participated in the study (55.4% females, mean age = 21.58 (SD =1.87)). Student Stress Scale adapted from Holmes and Rahe's Social Readjustment Rating Scale (1967) was used to assess stressful life events. Alcohol use was assessed using a self-reported alcohol use scale. A majority (59%) of participants reported drinking alcohol. Stressful life events correlated moderately and positively with different types of alcohol use: quantity of alcohol consumed, the frequency of drinking beer, and lifetime drunkenness. Gender differences were observed for all types of alcohol use. The main reasons for drinking alcohol were to: celebrate special occasions, feel better, and enjoy the taste and effects of alcohol. In multiple regression analyses, stressful life events significantly and independently predicted quantity of alcohol consumed [ $(\beta=.25, (95\% \text{ CI: } .05, .45))$ ], frequency of drinking beer [ $(\beta=.28, (95\% \text{ CI: } .11, .45))$ ], frequency of drinking wine [ $(\beta=.18, (95\% \text{ CI: } .04, .32))$ ], drinking liquor [ $(\beta=.17, (95\% \text{ CI: } .02, .32))$ ], drinking power drinks [ $(\beta=.28, (95\% \text{ CI: } .06, .49))$ ], cocktail drinks [ $(\beta=.32, (95\% \text{ CI: } .13, .50))$ ], and lifetime drunkenness [ $(\beta=.29, (95\% \text{ CI: } .11, .47))$ ] but not age at first use. Stressful life events are strong predictors of alcohol use among young adults at university levels. More interventions are needed to tackle the adverse effects of stressful life events at university level and to teach students better coping strategies and better education on alcohol use.

**Key words:** Stress, alcohol use, Botswana, university students, life events

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### INTRODUCTION

Alcohol consumption among young adults in developing countries is on the

rise and constitutes a major health problem (WHO, 2011; Gonzales-Alcaide *et al.*, 2013; WHO, 2014; Obot, 2006). Different contexts contribute to differences

in alcohol consumption among young adults in developing countries. One such context is the university setting where young adults will have attained the legal age for drinking, are unsupervised by parents or university authorities, are transitioning from adolescence to adulthood, and enjoy enormous freedom (Roche, 1998; Dumbili, 2013; Gilmore, Granato, & Lewis, 2013; Pearson, Kite, & Henson, 2013; Shumba & Ncube, 2011). Thus, the university context presents a distinct setting for excessive and often harmful and unhealthy alcohol consumption (Roche & Watt, 1999).

Another contributory factor to harmful alcohol consumption may be the experience of stressful life events. Previous studies have associated stressful life events with alcohol use (O'Connor & Colder, 2005). Many young adults pursuing university education often experience numerous life stressors such as academic, financial, time, health-related, and self-imposed stressors (Misra & Castillo, 2004). Stressful life events may be linked to alcohol abuse through about three pathways. First, stressful life events are known to be associated with mental health problems such as depression, which, in turn, have been linked to alcohol abuse (Read, Ouimette, White, *et al.* 2011). Second, alcohol abuse may be a maladaptive coping mechanism employed to deal with life stressors and frustrations resulting from the stressors (Rice & Arsdale, 2010; Park & Levenson, 2002). Finally, stress is associated with low self-control, which has been associated with increased alcohol use due to failure to restrain oneself (Morutwa & Plattner, 2014; Baumeister & Heatherton, 1996). Consequently, we hypothesize that experiencing stressful life events increases the likelihood of alcohol use.

Alcohol consumption is reported to have a euphoric effect that alters mood and is associated with temporary relief from stress, thus making alcohol consumption as one mechanism for avoidance coping (O'Connor & Colder, 2005). Although excessive alcohol consumption is widespread among university students globally, most studies are from Western countries (Dumbili, 2013; Gilmore, Granato, & Lewis, 2013; Pearson, Kite, & Henson, 2013; Shumba & Ncube, 2011).

This study will focus on the role of stressful life events on alcohol use among young adults following university education in Botswana. Botswana is an upper middle income country with a high prevalence of alcohol abuse (WHO, 2011), which, in turn, has been associated with high prevalence of HIV/AIDS (Gupta, Dandu, Packel, *et al.*, 2010; Weiser, Leiter, Heisler, *et al.*, 2006), motor accidents (Mupimpila, 2008), and other social ills. Yet, studies on alcohol use among young adults in Botswana, particularly university students, are scarce (Weiser, Leiter, Heisler, *et al.*, 2006). Furthermore, young adults are a subpopulation where excessive alcohol use is reported to have a debilitating effects on later health (WHO, 2014) and impedes upward social mobility due to truancy, poor academic outcomes or school drop out altogether (Wicki, Kuntsche, & Gmel, 2010). Subpopulation differences have been suggested by previous studies. For example, various studies have found that males drink substantially more alcohol than females (Velazquez, Poulos, Latimer, & Pasch, 2012), other studies have found age differences in alcohol consumption (Gross, 1993; Leigh & Stacy, 2004) while others did not (Park & Levenson, 2002).

Additionally, previous studies suggest gender differences in the relationships between stressful life events and alcohol use with females using less alcohol than males (Sacco, Bucholz, & Harington, (2014). Similarly, gender differences have been reported in the distribution of traumatic and stressful life events with women reporting more traumatic and stressful life events than men (Hatch & Dohrenwend, 2007; Larsen, Engels, Wiers, Granic, & Spijkerman, 2012; Peltzer *et al.*, 2012; Tangney *et al.*, 2004; Teesson *et al.*, 2010; Weiser *et al.*, 2006). For these reasons, we studied gender differences in our sample with respect to stressful life events and alcohol use.

The current study aimed to investigate the extent to which stressful life events predict alcohol use among young adults pursuing university education. Specifically, the objectives of the study were to: 1) investigate the level of alcohol use among the students, 2) explore the reasons for drinking alcohol, and 3) quantify the extent to which stressful life events predicts alcohol use. Further, based on the literature, we hypothesized that more stressful life events experienced is strongly associated with increased alcohol use.

The current study is embedded within the *Motivational Model* of alcohol use (Cooper, 1994; Cooper, Frone, Russell, & Mudar, 1995). The *Motivational Model* proposes a coping motive for alcohol use based on the principle of negative reinforcement and involve drinking to ease psychological distress such as those resulting from stressful life events and to make them more bearable. For example, experiencing stressful life events and resulting negative emotions like anxiety or depression leads to the expectations that alcohol will relieve one of the negative

feelings, and adopting maladaptive rather than adaptive coping styles, all motivate an individual to drink to cope with stress (Cooper *et al.*, 1992; Cooper *et al.*, 1995; Kushner *et al.*, 1994). Consequently, the *Motivational Model* will be used to explain the results of the current study.

## METHOD

### Study design and sample

In this study, cross-sectional design was employed. Participants were selected using a convenient sampling strategy. The population in this study were young adults pursuing tertiary education. To achieve a more representative sample, the sample was drawn from the first, second, third, fourth, and fifth years of study and from different faculties and institutes at the University of Botswana. Overall, 312 young adults (55% female,  $n= 173$ ) agreed to participate in the study. The response rate was 92.6% with 25 questionnaires excluded from the study due to old age (e.g. students above 28 years of age).

### Instruments and Measures

**Demographic characteristics**— A questionnaire specifically designed for the current study was used to collect information on demographic characteristics such as age, gender, year of study, faculty, and whether someone was brought up in urban or rural setting.

**Stressful life events** - To measure the stressful life events, the Social Readjustment Rating Scale (Holmes and Rahe, 1967) was used. The scale consists of 26-items and was modified to include stressful life events relevant to young adults in Botswana. The stressful life events ranged from family to school-

related events such as divorce between parents or failing an important course. The students were given the list of 26 stressful life events and asked to indicate which events they experienced over the past six months (the stressful life events are listed in Table 1). The events were binary coded as "yes=1" to indicate the occurrence and "no=0" to indicate no occurrence. The higher the score the more the number of stressful life events experienced. In this study, the stressful life events yielded a KR-20 reliability score of 0.78.

**Alcohol use-** To measure alcohol use, a self-report alcohol use scale was specifi-

cally developed for this study. The scale had five items: age at first use of alcohol, frequency of drinking beer, wine, liquor, power drinks, and a mixture of alcohol and power drinks (cocktail). The response format to the items on the alcohol scale ranged from never (=0) to every day (=4). Other alcohol use items included quantity of alcohol consumed during a drinking session (ranged from 1 to 10 or more drinks), reasons for drinking alcohol (e.g. my friends drink, I feel better when I drink) and lifetime drunkenness ranging from never (=0) to more than 10 times (=5). The more the student scored on quantity

**Table 1.** Frequency of stressful life events among students in the study (N=312)

| S/No | Stressful life event  | N   | %    |
|------|---|-----|------|
| 1    | Failing to get the desired grade  | 270 | 86.5 |
| 2    | Problems with assignments, tests, and exams                               | 234 | 75.0 |
| 3    | Financial problems (debts, lack of pocket money, etc.)                    | 226 | 72.4 |
| 4    | Troubles with registration (e.g. timetable clashes, system failure, etc ) | 220 | 70.5 |
| 5    | Change in living conditions or accommodation                              | 203 | 65.1 |
| 6    | Troubles with transport   | 168 | 53.8 |
| 7    | Death of a relative or close friend                                       | 167 | 53.5 |
| 8    | Breaking up with a boy or girlfriend                                      | 163 | 52.2 |
| 9    | Failing a course  | 162 | 51.9 |
| 10   | Entering a new relationship (e.g. new boyfriend/girlfriend)               | 155 | 49.7 |
| 11   | Having to retake or write supplementary exams                             | 151 | 48.4 |
| 12   | Loss of a computer, cell phone, or tablet                                 | 146 | 46.8 |
| 13   | Personal injury or illness  | 143 | 45.8 |
| 14   | Serious argument with a close friend                                      | 142 | 45.5 |
| 15   | Illness in the family (e.g. cancer, diabetes, HIV/AIDS, etc.)             | 130 | 41.7 |
| 16   | Death of a family member (e.g. parents or sibling)                        | 123 | 39.4 |
| 17   | Arguments with parents (dressing, curfew, etc)                            | 97  | 31.1 |
| 18   | Change in acceptance by peers   | 89  | 28.5 |
| 19   | Trouble with parents  | 80  | 25.6 |
| 20   | Serious argument with a lecturer  | 43  | 13.8 |
| 21   | Problems with alcohol or drugs  | 38  | 12.2 |
| 22   | Have you ever had any problems with the Police?                           | 31  | 9.9  |
| 23   | Excessive alcohol use by parents  | 28  | 9.0  |
| 24   | Trouble with Law enforcement( e.g. fraud, parents in jail etc )           | 26  | 8.3  |
| 25   | Unplanned pregnancy   | 19  | 6.1  |
| 26   | Getting married   | 14  | 4.5  |

of alcohol consumed and lifetime drunkenness the heavier the students are perceived to use alcohol.

### **Procedure**

Data was collected by a trained researcher who went around the university asking for permission from randomly picked lecturers in different departments to collect data from their classes. During data collection 330 questionnaires were distributed in seven different faculties of the University of Botswana (Education, Humanities, Health Sciences, Engineering and Technology, Medicine, Social Sciences, and Business). In the end, a total of 173 female and 139 male undergraduate students in their first, second, third, fourth, and fifth years of study supplied data for the current study.

Before the questionnaires were distributed to the participants, the background and importance of the study were explained to the participants who were also informed that participation was voluntary. The questionnaire consisted of three sections; demographic characteristics, stressful life events and alcohol use. The questionnaire took approximately 10 minutes to complete.

### **Ethical Consideration**

Approval for this study was sought from the Institutional Review Board of the University of Botswana through the Department of Psychology. Only students aged 18 and above were included in the study. Participants were assured that information obtained from them was confidential and their names or identity were not required for the purpose of the study. The researcher explained to the participants that if they were emotionally affected by any question in the questionnaire, they

could seek help from the Psychology Department where they would subsequently be referred to an appropriate agency for psychological help. In addition, a debriefing statement was also handed to those who completed the questionnaire. The debriefing statement reiterated the same information on where to seek help in case of psychological problems resulting from participating in the study.

### **Data Analyses**

Descriptive statistics (mean, standard deviation, and range) were used to compute the demographic characteristics of the participants. In addition, the relationship between variables in the study (e.g. stressful life events and all the alcohol items) was computed using Pearson correlation analyses. A list of the stressful life events and their occurrence, the quantity of alcohol consumed, and the reasons for alcohol consumption were computed and presented. To assess the extent to which the number of stressful life events experienced predicted alcohol use among the students was assessed in a multi-variable regression model where different types of alcohol use were regressed on the number of stressful life events experienced each at a time. Both the experience of stressful life events and alcohol use are known to vary with gender (O'Connor & Colder, 2005; Sacco, Bucholz, & Harrington, 2014) and for this reason, all analyses were adjusted for gender. Preliminary analyses showed that age was not a significant predictor of the outcome variables and consequently, it was removed from further analyses. All the statistical procedures were performed using IBM SPSS version 23.0 (IBM SPSS, 2014). Associations with a *p* value less than 0.05 were considered statistically significant.

## RESULTS

A total of 312 students participated in the study of whom 173 (55.4%) were females. On average, the students were 21.58 (SD= 1.87; range 18-25) years old with males significantly older than females ( $t(267) = 4.78, p < 0.01$ ).

Table 1 represents the frequency of the stressful life events. Significantly higher numbers of stressful life events reported by the students were related to their education (e.g. failing to get a desired grade, problems with tests or exams) followed by personal circumstances such as death of relatives or friends, entering new relationships, illness in the family, etc. (Table 1). The mean score for the number of stressful life events reported for the total sample was 10.47 (SD = 4.37, range 1-22). Male participants reported experiencing significantly higher numbers of stressful life events than females ( $t(307) = 2.69, p < 0.01$ ).

Male participants consumed larger quantities of all types of alcohol and reported more incidents of lifetime drunkenness than their female counterparts. A total of 183

students (59%) reported that they drink alcohol. Significantly more male participants indicated that they consumed larger quantities of alcohol ( $t(257) = 4.46, p < 0.01$ ), more beer ( $t(189) = 5.74, p < 0.01$ ), and experienced more lifetime drunkenness ( $t(204) = 4.51, p < 0.01$ ) than female participants. Among participants who reported using alcohol, 46 % (n=42) of the female students use alcohol regularly (3 – 8 drinks or more per day) while 57% of the male students were regular users (5-10 drinks or more per day). Those who indicated that they drink alcohol experienced significantly high number of stressful life events than those who do not consume alcohol ( $t(310) = -4.53, p < 0.05$ ). Likewise, differences based on place of up-bringing (rural or urban setting) were found for quantity of alcohol consumed ( $t(186) = -4.14, p < 0.01$ ), frequency of drinking beer ( $t(152) = -2.43, p < 0.01$ ), wine ( $t(142) = -2.48, p < 0.05$ ), and liquor ( $t(126) = -2.63, p < 0.05$ ).

Stressful life events significantly correlated with frequency of different types of alcohol and lifetime drunkenness (Table 2). On the other hand, different

**Table 2.** Bi-variate correlations between variables in the study (N=312)

|   | 1 | 2      | 3     | 4    | 5     | 6a     | 6b    | 6c    | 6d    | 6e    | 7      |
|---|---|--------|-------|------|-------|--------|-------|-------|-------|-------|--------|
| 1 Age                                   | 1 | -.28** | .08   | -.12 | .18** | .17*   | .08   | -.03  | .14   | .13*  | .14*   |
| 2 Gender                                |   | 1      | -.15* | .15* | .25** | -.38** | .07   | -.18* | .05   | -.05  | -.28** |
| 3 Stressful life events                 |   |        | 1     | -.07 | .26** | .36**  | .22** | .24** | .29** | .35** | .31**  |
| 4 Age of first use of alcohol           |   |        |       | 1    | -.08  | -.21** | .17*  | .20** | -.12  | -.09  | -.24** |
| 5 Quantity of alcohol consumed          |   |        |       |      | 1     | .58**  | .46** | .46** | .30** | .38** | .57**  |
| 6a How often do you drink beer?         |   |        |       |      |       | 1      | .45** | .49** | .45** | .53** | .67**  |
| 6b How often do you drink wine?         |   |        |       |      |       |        | 1     | .73** | .45** | .51** | .50**  |
| 6c How often do you drink liquor?       |   |        |       |      |       |        |       | 1     | .46** | .53** | .53**  |
| 6d How often do you drink power drinks? |   |        |       |      |       |        |       |       | 1     | .71** | .39**  |
| 6e How often do you drink a cocktail?   |   |        |       |      |       |        |       |       |       | 1     | .43**  |
| 7 Lifetime drunkenness                  |   |        |       |      |       |        |       |       |       |       | 1      |

Key: \*\* correlation significant at 0.01 level (2 tailed).

\* correlation significant at 0.05 level (2 tailed).

aspects of alcohol use correlated significantly among themselves (Table 2).

Participants differed widely with respect to the reasons for using alcohol. However, many indicated special occasions, liking the effects of alcohol, feeling better after consuming alcohol, and enjoying the taste of alcohol as the main reasons for using alcohol (Table 3). In general, nearly all the reasons were emotional in nature (e.g. drinking during special occasions, liking the effects of alcohol, feeling better after drinking, and enjoying the taste of drinking).

Stressful life events (adjusted for gender) significantly predicted all the aspects

of alcohol use except 'age at first use' (see Table 4). The coefficient after the regression of different aspects of alcohol use on stressful life events ranged between  $\beta = .17$  (95% confidence interval (CI): .02, .32) for using liquor to  $\beta = .32$  (95% CI: .13, .51) for using cocktail drinks (mixture of alcohol and power drinks). Each regression coefficient represents the number of standard deviation (SD) change in the outcome variable per SD change of the independent variable. For example, the regression of cocktail drinks on stressful life events means that a change of 1 SD in stressful life events is associated with a 0.32 SD increase in using cocktail drinks.

**Table 3.** Reasons for alcohol use, number of users, and correlations with SLE

| Reasons for alcohol use       | Number of users |      | Correlation with SLE |
|-------------------------------|-----------------|------|----------------------|
|                               | n               | %    | r, p value           |
| During special occasions      | 136             | 43.6 | 0.18, <b>0.00</b>    |
| I like the effects of alcohol | 73              | 23.4 | -0.14, <b>0.04</b>   |
| Feel better when I drink      | 68              | 21.8 | 0.12, <b>0.00</b>    |
| Enjoy taste of alcohol        | 66              | 21.2 | -0.15, <b>0.03</b>   |
| It's legal to drink           | 60              | 19.2 | 0.08, 0.24           |
| My friends drink              | 53              | 17.0 | -0.13, 0.06          |
| To try                        | 48              | 15.4 | -0.09, 0.20          |
| It's a habit in my family     | 19              | 6.1  | -0.04, 0.55          |

Key: SLE=stressful life events; n= number, r= correlations

**Table 4.** Multivariable analyses of alcohol use and stressful life events experienced

| Variable Name          | Stressful life events as a predictor of alcohol use |                 |
|------------------------|---|-----------------|
|                        | $\beta$   | (95% CI)        |
| Quantity consumed      | <b>0.25</b>   | <b>.05, .45</b> |
| Beer frequency         | <b>0.28</b>   | <b>.11, .45</b> |
| Wine frequency         | <b>0.18</b>   | <b>.04, .32</b> |
| Liquor frequency       | <b>0.17</b>   | <b>.02, .32</b> |
| Power drinks frequency | <b>0.28</b>   | <b>.06, .49</b> |
| Cocktail frequency     | <b>0.32</b>   | <b>.13, .51</b> |
| Lifetime drunkenness   | <b>0.29</b>   | <b>.11, .47</b> |

Key:  $\beta$  = Beta (adjusted for age and gender),  
CI = Confidence Intervals

## DISCUSSION

The objectives of the current study were to assess the level of alcohol use, reasons for alcohol use, and to determine the extent to which stressful life events predict alcohol use among students at a university in Botswana. The findings showed that more than half of the participants in the study use alcohol with male students reporting more alcohol use than female students. The students reported that they use alcohol mainly during special occasions and because they like its effects, feel better after consuming it, and that they enjoy the taste. Stressful life events significantly predicted all aspects of alcohol use except age at first use. The higher the number of stressful life events experienced the more the likelihood of using alcohol. This finding supported the hypothesis of the study.

In general, the results of the current study support previous studies where alcohol use was found to be more common among male than female participants (Velazquez, Poulos, Latimer, & Pasch, 2012). Among the students who use alcohol, almost half of the female students (46 %) and more than half of the male were regular users (3 – 8 drinks or more per day for females and 5-10 drinks or more per day for males). The alcohol per capita consumption (APC) is higher in Botswana (8.4 litres of pure alcohol) compared to the global figure of 6.13 litres (WHO, 2011). Similarly, the prevalence of heavy episodic drinking (consuming at least 60 grams or more of pure alcohol on at least one occasion in the past 30 days) is even higher in Botswana at 17.2% among drinkers and 7.2% among the population (WHO, 2011). The level of alcohol consumption among the students

as reflected in the results of this study could be an indication of what takes place in the community and society in which the students find themselves. Previous studies showed that college drinking behaviour mirrors what happens in the “wet environment” where alcohol is cheap and easily accessible (Weitzman, Nelson, & Wechsler, 2003, p. 26).

Reports of using alcohol during special occasions, because of liking its effects, the feelings that ingesting alcohol generate, and its taste, all pointing to the idea and perception that alcohol is not only used for recreational and leisure activities (Pearson, Kite, & Henson, 2013; Seloilwe, 2005) but also for emotional reasons. All the above reasons are affective and could be linked to emotional-focused coping where the students drink alcohol as a response to their emotional states (Staiger *et al.*, 2009) and especially when they feel they may not be in control anymore. This finding is corroborated with previous studies where alcohol use was found to significantly relate to lack of self-control (Morutwa & Plattner, 2014). Negative affect may include stress, anxiety, and depression resulting from the stressful life events encountered. This emotional reason may be understood within the framework of the *Stress Reduction Model* of explaining alcohol use (Cooper, Frone, Russell, & Mudar, 1995; Cooper, Russell, Skinner, Frone, & Mudar, 1992; Kalodner, Delucia, & Ursprung, 1989). In this model, experiencing stressful life events and resulting negative emotions like anxiety or depression, motivates a person to use alcohol with the expectation that it will relieve one of the negative feelings, thus adopting an avoidant coping strategy to cope with stress (Cooper, Frone, Russell, & Mudar, 1995; Cooper, Russell, Skinner,



Frone, & Mudar, 1992; Kalodner, Delucia, & Ursprung, 1989).

Similarly, the *Motivational Model* may explain the findings in the current study where students who experienced higher number of stressful life events would use more alcohol. Stressful life events are known to be associated with depression, anxiety, and more psychosocial distress (Cooper, 1994; Cooper, Frone, Russell, & Mudar, 1995), which may be linked to the notion that drinking will relieve one of the negative feelings associated with stressful life events.

Previous studies have also associated the temperamental typology of novelty seeking to drug and substance use (Chartier, Hesselbrock, & Hesselbrock, 2010). Novelty seekers are known to be impulsive, excitable, extravagant, disorderly, with poor self-regulation, all characteristics that predispose to novel and exploratory behaviours (Cloninger, 1986; 1987; Pfohl, Black, Noyes, Kelley, & Blum, 1990; Morutwa & Plattner, 2014), which, in turn, may put novelty seekers at risk of experiencing stressful life events which may eventually predispose them to further alcohol use. Therefore, it is possible that it is a combination of personality (e.g. temperament) and environmental **factors** (e.g. life stressors, “**wet environment**”, etc.) that predispose young adults to more alcohol use.

Gender differences were observed in alcohol use and this is consistent with previous studies (e.g. Weiser *et al.*, 2006). Males were more likely to drink larger quantities of alcohol, scored higher on frequency of drinking beer and liquor, and lifetime drunkenness than female participants. Moreover, gender differences have been found in stressful life events in many studies (e.g. Sacco *et al.*, 2014).

Surprisingly, in the current study, males were more likely to experience stressful life events than females. It is possible that in this sub-population, the density of life stressors is more among male than female participants.

### Limitations

The study findings should be cautiously interpreted due to a number of limitations. First, stressful life events and alcohol use were self-reported. This could have limited the reliability of the scales as participants could have under-reported alcohol use due to social desirability. Second, other predictor, moderator, and mediator variables such as depression or anxiety were not assessed and adjusted for due to the limitations in the cross-sectional design which do not allow for causal inference. Third, the sample size was small and unrepresentative of young adults or students following tertiary education, thus limiting external validity of the findings to other student population. However, the findings in this study agree with results of previous studies and are indicative of the current trend of alcohol use among young adults. Consequently, more longitudinal research is required to disentangle the roles of individual, family, and environmental contexts in the trajectory of alcohol use among young adults in tertiary education.

### CONCLUSION

Stressful life events are a strong predictor for alcohol use among university students. Differences with respect to gender and place of upbringing may provide the environmental context in which stressful life events thrive to influence alcohol

use. Information on life stressors, place of upbringing, and coping mechanisms is important for designing effective interventions to reduce alcohol use among university students. Such interventions may include better coping strategies and education.

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### CONFLICT OF INTEREST

None.

### AUTHORS' CONTRIBUTIONS

KKM and KAP designed the study and KKM implemented the survey. KKM had the original idea for the manuscript, collected and prepared data for analyses, and wrote the first draft of the manuscript. KAP analysed the data and interpreted the results. Both authors critically revised the manuscript for important intellectual content and approved the final version of the manuscript.

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