

## **SELF-EFFICACY AS A PREDICTOR OF ALCOHOL USE AMONG STUDENTS AT A UNIVERSITY IN BOTSWANA**

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### **ABSTRACT**

Worldwide, harmful alcohol use by college or university students is a public health concern. Many students in colleges and universities indulge in excessive alcohol use, which, in turn, adversely impacts on their health and diminishes opportunities to realise their full potentials. This study assessed the influence of self-efficacy on alcohol use among students at a university in Botswana. The study utilised data from a cross-sectional survey of 266 young adults (age=20.40; SD=20.10; 18-25) enrolled at a university in Botswana. Descriptive statistics, t-tests and regression analyses were performed to assess socio-demographic characteristics, sub-population differences, and the extent to which self-efficacy predicted alcohol use. Forty-six per cent of respondents (n=124) use alcohol, 40 per cent (n=49) of whom were hazardous users. Female students were younger, used less alcohol, and were more self-efficacious than their male peers. The female gender [ $\beta = 0.15$ , 95% (CI: 0.01, 0.28)] and the social [ $\beta = -0.24$ , 95% (CI: -0.45, -0.09)] and substance use [ $\beta = -0.35$ , 95% (CI: -0.45, -0.09)] domains of self-efficacy significantly and uniquely predicted alcohol use. University management and healthcare providers should target self-efficacy as a potential strategy to reduce alcohol abuse and enhance self-care among young adults. Self-efficacy as a strategy empowers young adults to manage their alcohol use better than an authoritarian model of managing alcohol abuse by employed by university authorities. The empowerment model shifts power to the young adults, thus enabling them to think critically, take control of their lives, creates awareness and allows them to make their own decisions based on health literacy and self-care behaviours.

**Keywords:** self-efficacy, alcohol use, students, Botswana

## INTRODUCTION

Worldwide, alcohol abuse among university or college students is a public health concern (Karam, Kypri, & Salamoun, 2007). Many students in colleges and universities indulge in excessive alcohol use, which, in turn, adversely impacts on their lives. The adverse effects of excessive alcohol use on students' lives include poor academic performance or drop out (O'Malley, & Johnston, 2002), poor social and emotional functioning (Villarosa-Hurlocker, Madson, Mohn, Zeigler-Hill, & Nicholson, 2018), risky sexual behaviours and violence (Gilmore, Lewis, George, 2015; Tsai, Leiter, Heisler, et al., 2011), unintentional injuries or even deaths (Woolsey, Williams Jr, Housman, Barry, Jacobson, & Evans Jr, 2015), and a plethora of physical and mental health problems (Global Status Report on Alcohol and Health, 2018).

Previous studies have demonstrated that individuals with certain socio-demographic, personality and behavioural characteristics are particularly vulnerable to alcohol abuse. For example, it is generally recognised that boys are more likely to indulge in excessive alcohol use than their female counterparts (Erol, & Karpyak, 2015; Pedrelli, Borsari, Lipson, Heinze, & Eisenberg, 2016). Similarly, individuals with certain temperamental dispositions such as novelty seeking are more likely to abuse alcohol than harm avoiders (Ludick & Amone-P'Olak, 2016). Besides, people who suffer from social anxiety (Villarosa-Hurlocker, Madson, Mohn, Zeigler-Hill, & Nicholson, 2018), have low self-esteem with poor self-control (Morutwa & Plattner, 2014; Gareikitse & Plattner, 2016), poor social skills (Kully-Martens, Denys, Treit, Tamana, & Rasmussen,

2012), and a high density of stressful life events (Moitlakgola & Amone-P'Olak, 2015), are more prone to abuse alcohol than those who are not. While it is difficult to modify emotional and personality characteristics, behavioural factors such as self-control, social skills, and self-efficacy are modifiable characteristics that can form the basis for interventions to reduce alcohol abuse. Identifying the modifiable factors that predict alcohol abuse are helpful in health literacy and behavioural interventions.

According to the Social Learning Theory (SLT), self-efficacy is critical to the sustenance of behaviour (Bandura, 1977, 1982). The present study will be anchored on the concept of self-efficacy, which is defined as an individual's belief in their capacity to successfully or unsuccessfully regulate their behaviour (Bandura, 1982, 2006). Despite the possibility that self-efficacy might be related to alcohol use, little research has been conducted on self-efficacy and alcohol use, especially among young adults pursuing a university education in low- and middle-income countries such as Botswana. Previous studies showed that behavioural or self-regulatory strategies such as self-efficacy could be useful in encouraging responsible drinking or, altogether, reducing alcohol use (Barnett et al. 2007; Larimer et al. 2007; Murphy et al. 2012).

Self-efficacy is the foundation of human motivation, actions, and behavioural and psychological well-being (Bandura, 1997, 2006). Central to the theory of self-efficacy is the notion that individuals with high self-efficacy believe in their ability to initiate, pursue, persist and accomplish a set of activities to achieve a behavioural goal (Lee, Arthur, & Avis, 2008). On the contrary, those with low self-efficacy put

in less effort and make few attempts to achieve a target behaviour (Bandura & Cervone, 1983). In postulating the concept of self-efficacy, Bandura (2006) recognised human agency and higher-order cognition as pivotal mechanisms of behavioural course. For example, the determination and efforts to use or not to use alcohol, may depend on an individual's choice and cognition, which are critical to self-efficacy.

Previous studies have linked self-efficacy to several negative health outcomes including alcohol (Glozah, Komesuor, Adu, & Aggrey, 2017; Oei & Jardim, 2007; Young et al., 2006). Indeed, the influence of self-efficacy on alcohol use among young adults may be mediated and moderated by social anxiety (Kushner & Sher, 1993) and alcohol expectancies (Christiansen, Smith, Roehling, & Goldman, 1989; Smith, Goldman, Greenbaum, & Christiansen, 1995). Past studies show that the common reasons university students give for drinking alcohol are to: meet new people, including members of the opposite sex, be sociable, fit in with others and reduce shyness (Goodwin, 1990; Kairouz, Glikman, Demers, & Adlaf, 2002). Young adults who regularly use alcohol to reduce social anxiety may be at risk for developing abuse or dependency problems (Abrams et al., 2001, 2002; Gilles, Turk & Fresco, 2006). Besides social anxiety, another potentially influential factor that may moderate self-efficacy among students is alcohol expectancies (Gilles, Turk & Fresco, 2006). Alcohol expectancies are views that individuals hold about alcohol as social facilitation where alcohol is believed to produce positive social effects. In a study with college students, Burke and Stephens (1997) found that those who were socially anxious held expectancies that alcohol

would reduce their levels of social anxiety. Students who indulge in alcohol abuse often demonstrate higher levels of social anxiety and expect that alcohol would reduce their levels of social anxiety. Altogether, more self-efficacious individuals are known to be low on both social anxiety and alcohol expectancy, thus, social anxiety and alcohol expectancy may be key drivers of self-efficacy in young adults.

With a population of about 2.3 million, Botswana is a vast country with one of the strongest economies in Africa (World Economic Outlook Database, 2018). Currently, Botswana is an upper-middle-income country with a Gross Domestic Product (GDP) of US \$ 7,877.00 (World Economic Outlook Database, 2018). Contrary to the spectacular economic performance owing to the abundance of diamond resources, Botswana is currently facing substantial health challenges of HIV/AIDS and alcohol and drug abuse. The prevalence of HIV/AIDS is very high among the adult population (15-49 years) estimated at 21.9% (Global AIDS Monitoring, 2017). Besides the HIV/AIDS pandemic, the per capita consumption of pure alcohol in adults (15+ years) is 8.4 litres, higher than the WHO Africa regional average of 6.3 litres (Global Status Report on Alcohol and Health, 2018). Harmful use of alcohol (Alcohol Use Disorders - AUD) is reported to be 7.1%, almost double the WHO Africa regional average of 3.7% (Global Status Report on Alcohol and Health, 2018). Heavy episodic drinking (i.e., consuming 60 grams or more of pure alcohol in one sitting in the past 30 days: Global Status Report on Alcohol, 2018) is estimated at 19% in the general population and 59.4% among users aged 15 years or older (Global Status Report on Alcohol and Health, 2018). Besides the health risks,

hazardous alcohol use accounts for 55% of liver cirrhosis and 35% of road traffic accidents (Global Status Report on Alcohol and Health, 2018).

Among young people at universities, the social environment at campuses such as house or weekend parties and proms (dances), peer influences, and the developmental stage where students are seeking friends or partners of the opposite sex, all serve as catalysts to promote excessive alcohol use on many college and university campuses. Consequently, at one of the public universities in Botswana, the governing council of the university decided to close the student bar on campus to reduce alcohol abuse among students in 2012.

The aims of this study were four-fold: first, to assess alcohol use among students, second, to measure self-efficacy among students, third, to determine if the degree of self-efficacy depended on whether one uses alcohol or not, and finally, to assess whether socio-demographic characteristics (e.g., age, gender, and parental alcohol use) and different domains of self-efficacy (academic self-efficacy, social self-efficacy and substance use self-efficacy) would univariably and independently predict alcohol use among the students pursuing a university education. Based on the literature, it is hypothesised that those with low self-efficacy will use more alcohol compared to those with high self-efficacy.

## METHOD

### Design and sample

The current study utilised a cross-sectional survey design. A quota sampling strategy was used to recruit students

enrolled in various study programmes at a university in Botswana. The use of quota sampling was meant to ensure that the sample was representative of the students from different faculties of the university. Altogether, data were collected from 287 students. Data from 21 students were excluded due to incomplete or invalid responses. In the end, data from 266 students (56% female,  $n=148$ ) with a mean age of 20.40 ( $SD= 1.99$ , range=18-25) were used in the analyses.

### Procedures

Data were collected using a questionnaire with items on socio-demographic characteristics, alcohol use, and self-efficacy. Questionnaires were distributed to students in various lecture rooms with permission from lecturers after the purpose of the study was explained to the students. Besides describing the purpose of the study, participants were guaranteed anonymity and confidentiality and were informed of their right to voluntary participation and to withdraw from the study at any time. After the students signed consent forms, they were further asked not to put any identifying information on their questionnaires in order to remain anonymous. The questionnaire took about 10 minutes to complete. Research assistants were present to answer any question that the students might have. Immediately after collecting the questionnaires, the respondents were debriefed, and contact information on where they could get psychological support was provided. The Psychology Clinic and the Student Counselling Centre provide free psychological support to students on campus. Permission to conduct the research was granted by the Institutional Review Board (IRB) of the University of Botswana.

## Measures

Three different types of measures were used in the study: first, a self-made socio-demographic characteristics measure (e.g., gender, age, place of upbringing, parental educational attainment, parental alcohol use, etc.), second, the Alcohol Use Disorder Identification Test (AUDIT) (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) was used to assess alcohol use, and the University Academic Self-Regulated Learning Questionnaire (Torre, 2006) was used to measure self-efficacy.

**Socio-demographic characteristics:** Participants reported on their gender, age, year of study, place of upbringing, maternal and paternal educational attainment, mother's or female guardian's alcohol use, and father's or male guardian's alcohol use.

**Self-efficacy:** The University Academic Self-Regulated Learning Questionnaire is a 20-item self-report measure of Self-efficacy for university students. The questionnaire, adapted by Torre in 2006, measures perceived self-efficacy on three subscales: academic self-efficacy, social self-efficacy and substance use self-efficacy. The scales reliability, in general, has been within a Cronbach's Alpha score of between  $\alpha=0.76$  and  $\alpha=0.90$ . Total scores on the University Academic Self-Regulated Learning Questionnaire ranges from 20-80 with a higher score indicating higher levels of self-efficacy. Items are scored on a scale of (1) =not at all true, (2) =hardly true, (3) =moderately true, and (4) =exactly true of me. Examples of items on this scale include questions such as "I can stand up for myself when I feel I am being

treated unfairly". The Cronbach alpha reliability of the total self-efficacy scale in this study was  $\alpha =.87$ . For the subscales, it was  $\alpha =.82$  for academic self-efficacy,  $\alpha =.79$  for social self-efficacy, and  $\alpha =.78$  for substance use self-efficacy.

**Alcohol use:** The Alcohol Use Disorder Identification (AUDIT) Scale is a 10-item self-report measure developed for use in primary health care to screen for hazardous alcohol use in the adult population (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). The AUDIT assesses three basic types of alcohol use: 1) amount and frequency of alcohol use (items 1-3), 2) alcohol dependence symptoms (items 4-6) and problems related to alcohol consumption (items 7-10). The items on the AUDIT scale are scored from 0 to 4, with the total scores ranging from 0 to 40. Scores of 8 and above are indicative of hazardous, harmful or likely alcohol dependence (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). The internal consistency of the AUDIT scale for this study was acceptable ( $\alpha=.87$ ).

## Data Analysis

Descriptive statistics (frequency, mean, and standard deviation) were used to compute socio-demographic characteristics, assess levels of alcohol use and measure self-efficacy. A t-test was used to assess whether participants' scores on different domains of self-efficacy differed with or without alcohol use. Univariable regression models were fitted to determine the extent to which different socio-demographic characteristics and areas of self-efficacy predicted alcohol use. Finally, a multivariable regression model was fitted to assess the independent effects of

socio-demographic characteristics and the three domains of self-efficacy (i.e., academic, social and substance use self-efficacy). Only variables that significantly predicted alcohol use in the univariable regression model were simultaneously included in the multivariable regression model. The total score on self-efficacy was omitted from the multivariable regression model. All statistical analyses were computed using the IBM SPSS software version 25.0 (IBM Corp Released 2017). A *p*-value of less than 0.05 was considered statistically significant.

### RESULTS

The socio-demographic characteristics of the study participants were computed and presented in Table 1. The average age of the respondents was 20.40 (SD= 2.10, minimum=18 and maximum=25). Overall, male respondents were significantly older than their female peers (Table 1). About 46 per cent (n=124) of the respondents

reported that they use alcohol, the majority of whom were males (n=76, 61%). Out of those who reported using alcohol, 40 per cent (n=49) indulge in hazardous alcohol use; again, the majority were males (see Table 1). There were significant gender differences in self-efficacy scores on all domains except the social subscale. Generally, female respondents scored higher on all self-efficacy domains.

Table 2 presents the results of bivariate correlations between variables in the study. Generally, alcohol use significantly correlated with gender and all the domains of self-efficacy (see Table 2). Besides, all the subscales of self-efficacy markedly correlated among themselves.

Non-alcohol users scored higher than users on all domains of self-efficacy. Notably, statistically significant differences were observed for total scores on self-efficacy and academic and substance use domains but not on the social domain of self-efficacy (see Table 3).

Alcohol use was regressed on each of the socio-demographic factors (e.g., age,

**Table 1.** Socio-demographic characteristics of the participants in the study

Variables	Total (N=266, 100%) (M, SD, n, %)	Male (n=114, 43%) (M, SD, n, %)	Female (n=152, 57%) (M, SD, n, %)	t-test
Age (M, SD)	20.40 (2.10)	20.760 (2.19)	20.10 (1.79)	<i>t</i> (264) = 2.61, <i>p</i> < 0.05
Alcohol use				<i>t</i> (264) = 3.33, <i>p</i> < 0.01
Yes (n, %)	124 (46%)	76 (61%)	48 (39%)	
No (n, %)	142 (54%)	47 (33%)	95 (67%)	
Total score on AUDIT (M, SD)	3.87 (5.95)	4.70 (6.15)	3.08 (5.53)	<i>t</i> (264) = 2.23, <i>p</i> < 0.05
Hazardous use (AUDIT score ≥ 8)	49 (40%)	28 (57%)	21 (43%)	
Non-hazardous use (AUDIT score < 8)	73 (60%)	42 (58%)	31 (42%)	
Self-efficacy (total score) (M, SD)	3.10 (0.54)	3.02 (0.49)	3.21 (0.52)	<i>t</i> (264) = -3.02, <i>p</i> < 0.05
Self-efficacy (social subscale) (M, SD)	2.95 (0.61)	3.63 (0.69)	3.75 (0.71)	<i>t</i> (264) = -1.37, ns
Self-efficacy (academic subscale) (M, SD)	3.67 (0.74)	2.82 (0.61)	3.06 (0.59)	<i>t</i> (264) = -3.25, <i>p</i> < 0.01
Self-efficacy (substance use subscale) (M, SD)	3.54 (0.74)	3.40 (0.78)	3.66 (0.68)	<i>t</i> (264) = -2.93, <i>p</i> < 0.01

Key: N=total sample, n=subpopulation, M=mean, SD=Standard Deviation, %=per cent, AUDIT=Alcohol Use Disorder Identification Test

**Table 2.** Bivariate correlation among variables in the study

S/No	Variables	1	2	3	4	5	6	7	8	9	10
1	Age	-	-0.16**	-0.19**	0.19**	-0.13	0.06	-0.14*	-0.10	-0.10	-0.17**
2	Sex		-	0.20**	-0.14*	0.14*	0.06	0.19**	0.09	0.20**	0.18**
3	Alcohol use			-	-0.64**	0.12	0.09	0.24**	0.09	0.20**	0.37**
4	Total score on AUDIT				-	0.01	-0.03	-0.25**	-0.13*	-0.19**	-0.41**
5	Maternal alcohol use					-	0.39**	0.20**	0.13*	0.18**	0.15*
6	Paternal alcohol use						-	0.16*	0.07	0.20**	0.05
7	Self-efficacy (total score)							-	0.82**	0.84**	0.64**
8	Self-efficacy (social subscale)								-	0.47**	0.40**
9	Self-efficacy (academic subscale)									-	0.42**
10	Self-efficacy (substance use subscale)										-

Key \*  $p < 0.05$ , \*\*  $p < 0.01$ , AUDIT = Alcohol Use Disorder Identification Test

gender) and the subscales of the self-efficacy questionnaire each at a time in univariable regression analyses. In the end, gender, age, and all the domains of self-efficacy significantly predicted alcohol use (Table 4). The proportion of explained variance for the univariable regression models including ranged from  $R^2 = 0.13$  ( $F_{(1,244)} = 23.69$ ,  $p < .01$  for social domain of self-efficacy to  $R^2 = 0.41$  ( $F_{(1,244)} = 123.87$ ,  $p < .001$  for the substance use domain of self-efficacy. When all the socio-demographic characteristics and the subscales of self-efficacy were included in a multivariable regression model simultaneously, only gender and the social and substance use domains of self-efficacy independently and significantly predicted alcohol use (Table 4). The proportion of explained variance for the multivariable

regression model including gender and the three domains of self-efficacy was  $R^2 = 0.31$  ( $F_{(5,242)} = 81.32$ ,  $p < .001$ , helping to explain 31% of the variance in alcohol use.

## DISCUSSION

The present study aimed to assess the vital role that behavioural characteristics such as self-efficacy play in alcohol use among young adults. All the three domains of self-efficacy (academic, social and substance use) significantly predicted alcohol use. The findings of the study supported the hypotheses that self-efficacy was indeed associated with alcohol. These results agree with previous studies that demonstrated a strong relations

**Table 3.** Differences between alcohol users and non-users on domains of self-efficacy

Variables	Users (M, SD, min-max)	Non-users (M, SD, min-max)	t-test
Self-efficacy (total score)	2.99 (0.56, 1 - 5)	3.24 (0.44, 1 - 5)	$t(265) = -3.99$ , $p < 0.05$
Self-efficacy (social subscale)	3.63 (0.77, 1 - 5)	3.75 (0.63, 1 - 5)	$t(265) = -1.41$ , <i>ns</i>
Self-efficacy (academic subscale)	2.82 (0.67, 1 - 5)	3.07 (0.53, 1 - 5)	$t(265) = -3.32$ , $p < 0.05$
Self-efficacy (substance use subscale)	3.24 (0.81, 1 - 5)	3.79 (0.55, 1 - 5)	$t(265) = -6.51$ , $p < 0.05$

Key: M=mean. SD=standard deviation, min=minimum score, max=maximum score

**Table 4.** Results of univariable and multivariable regression analyses

Variables	$\beta$	95% (CI)
† gender	0.20	(0.08, 0.32)
† Age	0.20	(0.08, 0.32)
† Self-efficacy (total score)	-0.25	(-0.39, -0.14)
† Self-efficacy (academic domain)	-0.19	(-0.31, -0.07)
† Self-efficacy (social domain)	-0.13	(-0.27, -0.01)
† Self-efficacy (substance use domain)	-0.41	(-0.52, -0.29)
†† Gender	0.15	(0.01, 0.28)
†† Self-efficacy (academic domain)	0.12	(-0.04, 0.29)
†† Self-efficacy (social domain)	-0.24	(-0.45, -0.09)
†† Self-efficacy (substance use domain)	-0.35	(-0.45, -0.09)

Key: † Univariable regression analyses, †† Multivariable regression analysis,  $\beta$ = beta, Confidence interval

between self-efficacy and alcohol use (Bandura, 1982; 2006; Barnett et al. 2007; Glozah, Komesuor, Adu, & Aggrey, 2017; Larimer et al. 2007; Murphy et al. 2012; Oei & Jardim, 2007; Young et al., 2006). For example, Glozah and colleagues (2017) showed that self-efficacy was significantly associated with abstaining from drinking alcohol in a sample of Ghanaian university students. These results are in line with the possible cognitive processes that compels self-efficacious individuals to pursue desired goals and have confidence in their capability to achieve their target goals and behaviours. Bandura and Cervone (1983) showed that individuals with low self-efficacy put in less effort and make a few attempts to achieve a target behaviour. Similarly, Bandura (2006) posulated that the human agency and higher-order cognition are critical pathways to achieving a behavioural outcome. Conceivably, young adults with higher self-efficacy, may also control the negative consequences of any negative impacts of alcohol abuse. Because more self-efficacious individuals are known to be low on factors such as social anxiety and alcohol expectancy, these factors may be

key drivers of self-efficacy in young adults that may inform interventions to reduce alcohol abuse among young adults.

Although gender was not initially included in the objectives, it was found to be significantly related to alcohol use. For long, gender differences have been implicated in alcohol use with the male gender indulging in more alcohol use, binge drinking, and excessive use relative to females (Foster, Neighbors, & Young, 2013; Grant et al., 2004; Seo & Li, 2009; Slutske, 2005; Wells, Kelly, Golub, Grov, & Parsons, 2010). The literature not only implicates males in excessive alcohol intake but also shows that males self-identify with alcohol more than their female counterparts (Kadden & Litt, 2011). For example, for a long time, gender theorists have argued that gender roles such as masculine norms and the views that heavy drinking is synonymous with masculinity make males more susceptible to alcohol abuse (Capraro, 2000; Courtenay, 2000; Kadden & Litt, 2011; Mahalik, Good, & Englar-Carlson, 2003). Furthermore, consistent with previous findings (Ehret, Ghaidarov, & Labrie, 2013), males scored lower than females on all domains of self-efficacy



used in this study and males consumed more alcohol, indulge in excessive and hazardous alcohol use, in general. One possible explanation could be due to socialisation where females are assigned more responsibilities running domestic chores and organisation, which, in turn, may make them more self-efficacious, self-caring and responsible unlike their male peers. No wonder, females scored higher on all domains of self-efficacy than their male peers. Consequently, it is imperative to consider gender in designing interventions to reduce alcohol abuse.

Previous studies have recognised self-efficacy as a significant predictor and mediator in interventions with substance use disorders. As a mediator, numerous studies have demonstrated that self-efficacy mediated treatment outcomes in substance use disorders (Glozah, Komesuor, Adu, & Aggrey, 2017; Litt, Kadden, & Stephens, 2005). In a study with cannabis abusers, improvement of self-efficacy led to a marked decrease in use during follow-ups (Litt, Kadden, & Stephens, 2005). Therefore, the results of the current study add to the literature on the factors that may influence alcohol use, especially among young adults. This indicates that enhancing self-efficacy might be an essential step in reducing harmful alcohol use among young adults.

Moreover, it may also indicate that excessive alcohol use among students may be due to lack of strategies and skills to resist or regulate social, emotional and behavioural pressures to drink rather than the availability of opportunities for drinking. Even when an opportunity lends itself, those who are more self-efficacious are more likely to resist social pressures to drink alcohol that make less self-efficacious individuals defenceless. Social

forces are recognised as the main push-factor for college students' alcohol abuse (Litt, Lewis, Stahlbrandt, Firth, & Neighbors, 2012). Similarly, regulating negative affect (Neighbors, Larimer, Geisner, & Knee, 2004) and ability to control oneself (Morutwa & Plattner, 2014) are known to play essential roles in alcohol behaviours among young adults. Altogether, the findings in this study signify that targeting self-efficacy is a potential intervention that can empower young people to believe in themselves and to resist alcohol abuse. Therefore, it is possible that training opportunities based on enhancing self-efficacy may benefit young adults, especially those that are less self-efficacious.

The results of the current study are limited in many ways. First, using cross-sectional survey design reduced causal inferences. It is therefore impossible to determine whether self-efficacy is the cause or effect of excessive alcohol use based on the design of the present study. Future studies should consider longitudinal designs with larger sample sizes that can identify changes that might have occurred over time and to reduce causal ambiguity. Second, the data used in the present study were based on self-report. Respondents who use alcohol excessively might have underreported their use due to social desirability. Objective measures such as observing drinking in social situations are recommended. Third, although quota sampling was used to ensure representation of all students from various faculties where they are enrolled, data were gathered from only one institution, thus limiting generalizability to young adults in other settings. Also, the young adults in this study were university students. It is possible that university students have unique alcohol use culture that may be different from other out-of-school

youth or those without university education (Amone-P'Olak, Chilunga, Omech, & Opondo, 2019). Finally, this study examined only self-efficacy as a predictor of alcohol use yet factors such as drinking norms (Ham & Hope, 2005), mental health problems, family dysfunction, and violence are known to predict drinking behaviours (Kgatitswe & Amone-P'Olak, 2017; Moitlakgola & Amone-P'Olak, 2015; Phillip & Amone-P'Olak, 2018; Mongale, & Amone-P'Olak, 2019). Nevertheless, drinking norms are related to self-efficacy. Self-efficacious individuals are more likely to resist norms that predispose them to drinking alcohol.

Aside from the limitations, the results of this study have implications for practice, policy, research and theory. This study contributed to the literature by emphasising self-efficacy as a predictor of alcohol abuse among young adults in Botswana where alcohol abuse is rampant (Global Status Report on Alcohol and Health, 2018; Pitso & Obot, 2011; Republic of Botswana: Control of goods regulations, 2008; Moitlakgola & Amone-P'Olak 2015). University authorities and health workers can apply the findings of this study to manage students with alcohol abuse and dependence challenges. Self-efficacy directly influences self-care behaviours associated with alcohol use. To improve self-care behaviours, university authorities and health workers should aim to improve self-efficacy and enhance health literacy and knowledge of alcohol-disease links among university students (Amone-P'Olak, Chilunga, Omech, & Opondo, 2019) and train university students to use alcohol in moderation and responsibly. To increase the health literacy and knowledge of alcohol-disease link among students, university authorities and healthcare workers could provide

an empowerment approach of training students to be more self-efficacious rather than using draconian approaches such as banning alcohol on campus. Therefore, self-efficacy remains an important theory for explaining behavioural capability and processes in alcohol abuse among young adults.

In Botswana alcohol abuse is reported to be the catalyst for the spread of HIV/AIDS through risky sexual behaviours and sexual violence (Tsai, Leiter, Heisler, et al., 2011). Thus, the policy implication of the findings of this study is to enhance self-efficacy as a potential strategy of reducing alcohol abuse by young adults instead of authoritarian policies that have been adopted by the government of Botswana in the past decades. For example, upon the realisation that alcohol abuse was rampant and a public health concern, especially among young adults, the government of Botswana introduced a 70% levy on alcohol products in 2008, which was later reduced to 30% (Pitso & Obot, 2011; Republic of Botswana: Control of goods regulations, 2008). The goal of the alcohol levy was to reduce alcohol use, excessive drinking, underage drinking and intoxication, and to restrict the availability of alcohol (Pitso & Obot, 2011; Republic of Botswana: Control of goods regulations, 2008). In 2012, the governing council of the University of Botswana banned alcohol on campus to reduce alcohol abuse by the students. Instead of adopting such draconian measures, self-efficacy training can be used an empowerment model to shift power and responsibility to the young adults to think critically, take control of their lives, create awareness and allow young adults to make their own decisions through health literacy and self-care behaviours. Similarly, university

authorities and healthcare workers should create awareness among young adults about their psychological and behavioural problems, seek help when needed, and get tips on regulating their vulnerability (Van Breda 2013; 2017).

## CONCLUSIONS

University management and health-care providers should target self-efficacy as potential strategy to reduce alcohol abuse and enhance self-care among young adults. Self-efficacy as a strategy empowers young adults to manage their alcohol use better than authoritarian models of managing alcohol abuse employed by university authorities such as banning alcohol on campus. For example, individuals who are more self-efficacious are known to be low on both social anxiety and alcohol expectancy, thus, reducing social anxiety and changing the notions that alcohol expectancy produces the desired behaviours may be critical in enhancing self-efficacy. The empowerment model shifts power to the young adults, thus enabling them to think critically, take control of their lives, creates awareness and allows them to make their own decisions through health literacy and self-care behaviours. University authorities and healthcare workers should create awareness among young adults of their mental health, help-seeking, and emotional regulation around their vulnerability (Van Breda 2013; 2017).

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## CONTRIBUTORS:

MT designed the study, drafted the manuscript, conducted literature searches, provided summaries of previous research studies, and drafted the introduction, method, and discussion sections. KAP performed the statistical analyses and wrote the results section and provided feedback to the manuscript. Both authors contributed to and had approved the final manuscript.

## CONFLICT OF INTEREST

Both authors declare that they have no conflicts of interest.

## REFERENCES

- Abrams, K., Kushner, M., Medina, K. L., & Voight, A. (2001). The pharmacologic and expectancy effects of alcohol on social anxiety in individuals with social phobia. *Drug and Alcohol Dependence*, 64, 219–231.
- Abrams, K., Kushner, M. G., Medina, K. L., & Voight, A. (2002). Self-administration of alcohol before and after a public speaking challenge by individuals with social phobia. *Psychology of Addictive Behaviors*, 16, 121–128.

- Amone-P'Olak, K., Chilunga, W., Omech, B., Opondo, P.R. (2019). Knowledge of alcohol-disease links and socio-demographic factors as predictors of support for alcohol-related policies among university students in Botswana. *Drugs: Education, Prevention and Policy* (In Press: Published online on September 23, 2019), 1-8. <https://doi.org/10.1080/09687637.2019.1664994>.
- Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). The alcohol use disorders identification test. *Guidelines for use in primary care*, 2, 1-41.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1: 64-80.
- Bandura, A., & Cervone, D. (1983). Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology*, 45(5), 1017.
- Barnett, N. P., Murphy, J. G., Colby, S.M., Monti, P.M. (2007). Efficacy of counsellor vs computer-delivered intervention with mandated college students. *Addictive Behaviours*, 32, 2529-2548.
- Burke, R. S., & Stephens, R. S. (1997). Effect of anxious affect on drinking self-efficacy in college students. *Psychology of Addictive Behaviors*, 11, 65-75.
- Capraro, R. L. (2000). Why college men drink: Alcohol, adventure, and the paradox of masculinity. *Journal of American College Health*, 48(6), 307-315.
- Christiansen, B. A., Smith, G. T., Roehling, P. V., & Goldman, M. S. (1989). Using alcohol expectancies to predict adolescent drinking behavior after one year. *Journal of Consulting and Clinical Psychology*, 57, 93-99.
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science & Medicine*, 50(10), 1385-1401.
- Ehret, P. J., Ghaidarov, T. M., & LaBrie, J. W. (2013). Can you say no? Examining the relationship between drinking refusal self-efficacy and protective behavioral strategy use on alcohol outcomes. *Addictive Behaviors*, 38(4), 1898-1904.
- Erol, A., & Karpyak, V. M. (2015). Sex and gender-related differences in alcohol use and its consequences: Contemporary knowledge and future research considerations. *Drug and Alcohol Dependence*, 156, 1-13.
- Foster, D. W., Neighbors, C., & Young, C. (2013). Drink refusal self-efficacy and implicit drinking identity: An evaluation of moderators of the relationship between self-awareness and drinking behavior. *Addictive Behaviors*. <http://dx.doi.org/10.1016/j.addbeh.2013.09.024> (in press).
- Gareikitse, M., & Plattner, I. E. (2016). Self-esteem and alcohol dependence as predictors of contemplation to use drugs among university students in Botswana. *African Journal of Drug and Alcohol Studies*, 15(1), 37-47.

- Gilles, D. M., Turk, C. L., & Fresco, D. M. (2006). Social anxiety, alcohol expectancies, and self-efficacy as predictors of heavy drinking in college students. *Addictive Behaviours, 31*(3), 388-398.
- Gilmore, A. K., Lewis, M. A., & George, W. H. (2015). A randomised controlled trial targeting alcohol use and sexual assault risk among college women at high risk for victimisation. *Behaviour Research and Therapy, 74*, 38-49.
- Global AIDS Monitoring (UNAIDS/WHO/UNICEF), Spectrum estimates (UNAIDS/WHO) and WHO HIV Country Intelligence Tool, 2017. [http://www.who.int/hiv/data/Country\\_profile\\_Botswana.pdf?ua=1](http://www.who.int/hiv/data/Country_profile_Botswana.pdf?ua=1)
- Global Status Report On Alcohol And Health Alcohol. (2018). Retrieved from [http://apps.who.int/iris/bitstream/handle/10665/112736/9789240692763\\_eng.pdf;seq](http://apps.who.int/iris/bitstream/handle/10665/112736/9789240692763_eng.pdf;seq) on September 24, 2018.
- Glozah, F. N., Komesuor, J., Adu, N. A. T., & Aggrey, F. K. (2017). The role of alcohol abstinence self-efficacy in alcohol use: a cross-sectional survey of Ghanaian undergraduate students. *African Journal of Drug and Alcohol Studies, 16*(1), 11-22.
- Goodwin, L. (1990). Social psychological bases for college alcohol consumption. *Journal of Alcohol and Drug Education, 36*, 83-95.
- Grant, B. F., Dawson, D. A., Stinson, F. S., Chou, S., Dufour, M. C., & Pickering, R. P. (2004). The 12-month prevalence and trends in DSM-IV alcohol abuse and dependence: United States, 1991-1992 and 2001-2002. *Drug and Alcohol Dependence, 74*(3), 223-234.
- Ham, L. S., & Hope, D. A. (2005). Incorporating social anxiety into a model of college student problematic drinking. *Addictive Behaviors, 30*, 127-150.
- IBM Corp. (2017). *IBM SPSS statistics for Windows* (Version 25.0). Armonk, NY: Author.
- Kadden, R.M. & Litt, M.D. (2011). The role of self-efficacy in the treatment of substance use disorders. *Addictive Behaviors, 36* (2011) 1120-1126. doi:10.1016/j.addbeh.2011.07.032
- Kairouz, S., Glikzman, L., Demers, A., & Adlaf, E. M. (2002). For all these reasons, I do. . .drink: A multilevel analysis of contextual reasons for drinking among Canadian undergraduates. *Journal of Studies on Alcohol, 63*, 600-608.
- Karam, E., Kypri, K., & Salamoun, M. (2007). Alcohol use among college students: an international perspective. *Current Opinion in Psychiatry, 20*(3), 213-221.
- Kgatitswe, B.M., & Amone-P'Olak, K. (2017). Motivation to use cannabis among young adults at a University in Botswana. *African Journal of Drug and Alcohol Studies, 16*(2), 83-94.
- Kully-Martens, K., Denys, K., Treit, S., Tamana, S., & Rasmussen, C. (2012). A review of social skills deficits in individuals with fetal alcohol spectrum disorders and prenatal alcohol exposure: profiles, mechanisms, and interventions. *Alcoholism: Clinical and Experimental Research, 36*(4), 568-576.
- Kushner, M. G., & Sher, K. J. (1993). Comorbidity of alcohol and anxiety disorders among college students: Effects of gender and family history on alcoholism. *Addictive Behaviors, 18*, 543-552.
- Larimer, M.E., Lee, C.M., Kilmer, J.R., Fabiano, P.M., Stark, C.B., Geisner, I.R., ...Neighbors, C. (2007). Personalised mailed feedback for college drinking prevention: a randomised clinical trial. *J Consult Clin Psychol. 75*: 285-293.

- Lee, L. L., Arthur, A., & Avis, M. (2008). Using self-efficacy theory to develop interventions that help older people overcome psychological barriers to physical activity: a discussion paper. *International Journal of Nursing Studies*, 45(11), 1690-1699.
- Litt, M. D., Kadden, R. M., & Stephens, R. S. (2005). Marijuana Treatment Project Research Group. Coping and self-efficacy in marijuana treatment: Results from the Marijuana Treatment Project. *Journal of Consulting and Clinical Psychology*, 73, 1015-1025.
- Litt, D.M., Lewis, M.A., Stahlbrandt, H., Firth, P., & Neighbors, C. (2012). Social comparison as a moderator of the association between perceived norms and alcohol use and negative consequences among college students. *Journal of Studies on Alcohol and Drugs*, 73(6), 961-967.
- Ludick, W. K., & Amone-P'Olak, K. (2016). Temperament and the risk of alcohol, tobacco, and cannabis use among university students in Botswana. *African Journal of Drug and Alcohol Studies*, 15(1), 21-35.
- Mahalik, J. R., Good, G. E., & Englar-Carlson, M. (2003). Masculinity scripts, presenting concerns, and help-seeking: Implications for practice and training. *Professional Psychology: Research and Practice*, 34(2), 123-131.
- Moitlakgola, K. K., & Amone-P'Olak, K. (2015). Stressful life events and alcohol use among university students in Botswana. *African Journal of Drug and Alcohol Studies*, 14(2), 81-93.
- Mongale, N., & Amone-P'Olak, K. (2019). Childhood family environment and depression in early adulthood in Botswana. *South African Journal of Social Work and Social Development*, 31(3); #6176; 18 pages. <https://doi.org/10.25159/2415-5829/6176>.
- Morutwa, G., & Plattner, I. E. (2014). Self-control and alcohol consumption among university students in Botswana. *African Journal of Drug and Alcohol Studies*, 13(2), 69-78.
- Murphy, J.G., Dennhardt, A.A., Skidmore, J.R., Borsari, B., Barneet, N.P., Colby, S.M., Colby, S.M., Martens, M.P. (2012). A randomised controlled trial of a behavioral economic supplement to brief motivational interventions for college drinking. *J Consult Clin Psychol*. 80:876-886.
- Neighbors, C., Larimer, M. E., Geisner, I., & Knee, C. (2004). Feeling controlled and drinking motives among college students: Contingent self-esteem as a mediator. *Self and Identity*, 3(3), 207-224.
- Oei, T. P., & Jardim, C. L. (2007). Alcohol expectancies, drinking refusal self-efficacy and drinking behaviour in Asian and Australian students. *Drug and Alcohol Dependence*, 87(2-3), 281-228.
- O'Malley, P. M., & Johnston, L. D. (2002). Epidemiology of alcohol and other drug use among American college students. *Journal of Studies on Alcohol, Supplement*, (14), 23-39.
- Pedrelli, P., Borsari, B., Lipson, S. K., Heinze, J. E., & Eisenberg, D. (2016). Gender differences in the relationships among major depressive disorder, heavy alcohol use, and mental health treatment engagement among college students. *Journal of studies on alcohol and drugs*, 77(4), 620-628.
- Phillip, O., & Amone-P'Olak, K. (2019). The influence of self-reported childhood sexual abuse on psychological

- and behavioural risks in young adults at a university in Botswana. *South African Journal of Psychology*, 49(3) 353–363. <https://doi.org/10.1177/0081246318801723>.
- Pitso, J., & Obot, I. S. (2011). Botswana alcohol policy and the presidential levy, controversy. *Addiction*, 106(5), 898-905.
- Republic of Botswana. Control of goods intoxicating liquor levy amendment regulations, 2008-S.I.No.111of 2008. Government Gazette Extraordinary, XLVI (84), Gaborone, 2008.
- Saunders, J.B., Aasland, OG, Babor, TF, de la Fuente, J.R. and Grant, M. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption. II. *Addiction*, 88, 791-804, 1993.
- Seo, D., & Li, K. (2009). Effects of college climate on students' binge drinking: Hierarchical generalised linear model. *Annals of Behavioral Medicine*, 38(3), 262–268.
- Slutske, W. S. (2005). Alcohol use disorders among US college students and their non-college-attending peers. *Archives of General Psychiatry*, 62(3), 321–327.
- Smith, G. T., Goldman, M. S., Greenbaum, P. E., & Christiansen, B. A. (1995). Expectancy for social facilitation from drinking: The divergent paths of high-expectancy and low-expectancy adolescents. *Journal of Abnormal Psychology*, 104, 32–40.
- Tsai, A. C., Leiter, K., Heisler, M., Iacopino, V., Wolfe, W., Shannon, K., ... & Weiser, S. D. (2011). Prevalence and correlates of forced sex perpetration and victimisation in Botswana and Swaziland. *American Journal of Public Health*, 101(6), 1068-1074.
- Torre, J. (2006). La autoeficacia, la autorregulación y los enfoques de aprendizaje en estudiantes universitarios. Tesis doctoral. Madrid: Universidad Pontificia Comillas.
- Van Breda, A. D. 2013. "Psychosocial Vulnerability of Social Work Students." *Social Work Practitioner-Researcher* 25 (1): 19–35.
- Van Breda, A. D. 2017. "Students are Humans too: Psychosocial Vulnerability of First-Year Students at the University of Johannesburg." *South African Journal of Higher Education* 31 (5): 246–62. <https://doi.org/10.20853/31-5-1567>.
- Villarosa-Hurlocker, M. C., Madson, M. B., Mohn, R. S., Zeigler-Hill, V., & Nicholson, B. C. (2018). Social anxiety and alcohol-related outcomes: the mediating role of drinking context and protective strategies. *Addiction Research & Theory*, 1-9.
- Wells, B. E., Kelly, B. C., Golub, S. A., Grov, C., & Parsons, J. T. (2010). Patterns of alcohol consumption and sexual behavior among young adults in nightclubs. *The American Journal of Drug and Alcohol Abuse*, 36(1), 39–45.
- Woolsey, C. L., Williams Jr, R. D., Housman, J. M., Barry, A. E., Jacobson, B. H., & Evans Jr, M. W. (2015). Combined use of alcohol and energy drinks increases participation in high-risk drinking and driving behaviors among college students. *Journal of Studies on Alcohol and Drugs*, 76(4), 615-619.
- World Economic Outlook Database April 2018. (2018). Retrieved from <http://www.imf.org/external/pubs/ft/weo/2018/01/weodata/index.aspx>.

Young, R. M., Connor, J. P., Ricciardelli, L. A., & Saunders, J. B. (2006). The role of alcohol expectancy and drinking refusal self-efficacy beliefs in University student drinking. *Alcohol and Alcoholism*, 41(1), 70-75.