African Journal of Drug & Alcohol Studies, 13(2), 2014

SELF-CONTROL AND ALCOHOL CONSUMPTION AMONG UNIVERSITY STUDENTS IN BOTSWANA

Golekanye Morutwa and Ilse Elisabeth Plattner

Department of Psychology, University of Botswana, Gaborone

ABSTRACT

The study explored the relationship between self-control and alcohol consumption among students at the University of Botswana, and was entrenched within the social-cognitive theory of self-regulation. Data were collected from 135 undergraduate students (42.2% female, 57.8% male) with a *mean* age of 21.22 years (*SD* = 2.16). Self-control was measured by the Brief Self-control Scale. Self-reported alcohol consumption on weekdays and in specific situations was converted into alcohol units. Participants who reported not drinking alcohol at all (55.6%) scored significantly higher in self-control. For those participants who reported drinking alcohol (44.4%), total self-control scores correlated moderately and inversely with alcohol consumption per week, in situations of stress, happiness, and when with friends. Standard multiple regression analysis revealed that self-control was a stronger predictor of the amount of alcohol consumed than were age and gender. The results are discussed with regard to the role of self-regulatory behaviour in the consumption of alcohol.

Key words: Alcohol consumption, Botswana, self-control, self-regulation, undergraduate students

INTRODUCTION

Worldwide, alcohol misuse is a common problem among university students (Dumbili, 2013; Gilmore, Granato, & Lewis, 2013; Pearson, Kite, & Henson, 2013; Shumba & Ncube, 2011). For many students, drinking alcohol in general, and binge drinking in particular, are a part of their recreational activities (Pearson et al., 2013; Peltzer, Ramlagan, & Satekge, 2012; Seloilwe, 2005) based on which they may engage in risky behaviour such as drunk driving or unsafe sexual behaviour (Campbell, 2003; Pitso, 2004). Social factors such as peer pressure may cause young people to engage in excessive alcohol intake but psychological factors such

Corresponding author: I.E. Plattner, Department of Psychology, University of Botswana, Private Bag 00705, Gaborone, Botswana, Phone +267-355-4775, E-mail: plattner@mopipi.ub.bw

as a lack of self-control also contribute to alcohol abuse among young people (Friese & Hofmann, 2009).

Self-control is a personality variable and refers to a person's ability to control one's inner responses, wishes, and desires and to resist them (Tangney, Baumeister, & Boone, 2004). By nature, human beings have the capacity to self-regulate and control their own behaviour (Bandura, 1991), even in situations where automatic impulses tempt them to behave otherwise. However, not everyone is able to control their impulses and desires (Vohs & Heatherton, 2000), which can contribute to problems such as alcohol abuse (Baumeister & Heatherton, 1996).

Although the negative effects of alcohol misuse are a global concern (Gonzales-Alcaide et al., 2013; WHO 2014; Obot, 2006), psychological variables, as the underlying factors of excessive alcohol intake, have not been given the same attention everywhere. In Botswana, where the present study took place, little, if any, research has studied self-control as a predictor variable for alcohol intake. Therefore, the present study aimed at exploring the relationship between self-control and alcohol consumption among university students in Botswana. The study was entrenched within Bandura's (1991) social cognitive theory of self-regulation. According to this theory, human behaviour is largely influenced by how an individual monitors, judges, and feels about his/her behaviour. For people to effectively control themselves, they need to be aware of their actions, the situations in which they occur, and the immediate and long-term effects that their actions produce. Based on this theory, one's ability to control one's alcohol consumption is a result of how well one consistently and closely observes one's own drinking behaviour. Self-control is also influenced by self-evaluation and a person's personal standard, i.e., what a person perceives to be important and of value (Bandura, 1991).

A person's self-control can vary within situational circumstances. For example, when people are under stress they tend to be more emotional and irritable, which can lower their self-control (Baumeister & Heatherton, 1996) and lead to an increase in alcohol consumption. Muraven, Collins, and Nienhaus (2002) found that situations which require a high level of self-control may actually lead to a depletion of self-control, which then may cause a person to engage in higher alcohol consumption in situations that require drinking restraint. The problematic relationship between lack of self-control and alcohol is perpetuated by the fact that, under the influence of alcohol, people tend to judge their abilities inaccurately, which in itself impedes their self-regulating behaviour (Baumeister & Heatherton, 1996).

Various studies have established a relationship between deficits in self-control and alcohol use among young people. For example, Tangney et al. (2004), in a study with American undergraduate students, found that behaviours linked to alcohol abuse (such as binge drinking and alcohol related arrest) were relatively absent when self-control was high. Pondaná and Buriánek (2013) examined the relationship between self-control and problematic alcohol use among juveniles aged 12 to 16 years from 25 European countries. Taking cultural differences in social tolerance towards juvenile alcohol use into consideration, their study revealed that low self-control was a significant predictor of problematic drinking. Koning, Van den Eijnden, Engels, Verdurmen, and

Vollebergh (2010) carried out a study with adolescents from 19 different schools in the Netherlands and results showed that self-control was effective in delaying the onset of drinking. Pearson et al. (2013), in a study of American college students, established that self-control predicted the manner of drinking, limiting or stopping of drinking, and reduction of serious alcohol-related harm.

One may assume that a relationship between self-control and alcohol related behaviour would also exist among young people in Botswana. To investigate the correctness of such an assumption, the present study aimed to collect and analyse data on self-control and alcohol consumption among university students in Botswana and to determine whether self-control was associated with drinking alcohol in general and with the amount of alcohol intake in particular. The study hypothesised an inverse relationship between the two variables. Considering that various studies have found that males drink substantially more alcohol than females (Larsen, Engels, Wiers, Granic, & Spijkerman, 2012; Peltzer et al., 2012; Tangney et al., 2004; Teesson et al., 2010; Weiser et al., 2006) and that some found age differences in alcohol consumption among young people (Gross, 1993; Leigh & Stacy, 2004) while others did not (Park & Levenson, 2002), the present study also aimed to control for gender and age in the relationship between self-control and alcohol consumption. It was anticipated that the study would contribute to a better understanding of alcohol related behaviour among young people and that the results would be useful for student welfare programmes offered by universities to prevent alcohol abuse among students.

METHOD

Participants and procedure

Using convenience sampling, 150 self-administered questionnaires were distributed in five undergraduate classes of five different faculties of the University of Botswana (Faculties of Social Sciences, Humanities, Education, Engineering & Technololgy, and Health Sciences). Classes were selected on the basis of class facilitators giving permission for data collection at the beginning of class. Students were informed about the purpose of the study and that participation in the study was voluntary and anonymous and that data would be treated confidentially. Students who decided to participate returned their questionnaire to the researcher, who in exchange issued to each participant written debriefing information about counselling services available at the University. The response rate was 96.7% (N = 145). Two respondents were excluded from data analysis as their age was above 40 years and therefore not representative of the average age of university students. A further eight questionnaires were excluded from data analysis as respondents either did not complete the questionnaire (N = 5) or did not clearly indicate the amount of their alcohol consumption (N = 3). The final sample constituted 135 participants.

Measures

Self-control was measured through the Brief Self-control Scale (Tangney et al., 2004) which consists of thirteen items. Four of the items are positively phrased (e.g. “I am good at resisting temptation”) and nine of the items are negatively phrased (e.g. “I have a hard time breaking bad habits”); the latter were reversely

coded. The items were presented with 5-point Likert-type response categories (ranging from "Not at all like me" to "Very much like me"). A low total score indicated a low level of self-control. While this scale has not been standardised for the study population, this study made use of it as the scale was found to be a valid and reliable instrument in studies with various target groups of various cultural backgrounds (e.g. Maloney, Grawitch, & Barber, 2012; Nebioglu, Konuk, Akbaba, & Eroglu, 2012). Tangney et al. (2004) reported a strong internal consistency reliability for the scale with a Cronbach's alphas of 0.83; in the present study, Cronbach's alpha was 0.81.

Self-reported alcohol consumption was measured through fourteen questions. One of them asked participants to indicate the type of alcohol they usually drink; multiple response categories ranged from beer, wine, spirits, and traditional alcoholic beverages to "I do not drink alcohol". The remaining questions requested participants to indicate the amount of alcohol per type of alcoholic beverage that they would ordinarily drink on each day of the week and in particular situations (i.e. during special occasions, when with friends, when stressed, when happy, when feeling down, and when feeling under pressure). The responses were then converted into alcohol units with one unit being equivalent to either a 0.25 l glass of beer or traditional alcoholic beverage, a 0.2 l glass of wine or a 0.02 l shot of hard liquor (Friese & Hofmann, 2009). Total units of alcohol consumption were calculated per weekday, per week, and per particular situation. The questionnaire also explored participants' gender, age, year of study, and Faculty enrolment.

Data analysis

Data were analysed with SPSS (version 21). Descriptive statistics were utilised to determine average levels of self-control and average amount of alcohol consumed by participants. Correlational analysis (Pearson's R) was performed to determine the relationship between self-control and amount of alcohol consumption. Chi-square test (including continuity correction for 2x2 tables) and t-test were applied to determine differences in drinking alcohol with regard to self-control, age, and gender. Standard multiple regression analysis was performed to identify whether self-control, age, and gender were predictors of the amount of alcohol consumed. Statistical significance was measured at the 5% level ($p \leq 0.05$).

RESULTS

Among the 135 participants, 57 (42.2%) were female and 78 (57.8%) were male. The participants' ages ranged from 18 to 30 years with a *mean* age of 21.22 years (SD = 2.16). Sixty-six (48.9%) participants were second-year students, 41 (30.4%) were third-year students, and 28 (20.7%) were fourth-year students.

For the entire sample, the *mean* self-control score was 42.55 (SD = 9.63), with total scores ranging from 14 to 63 (within a possible range of 13 to 65). Female participants had significantly higher self-control scores than males ($t(133) = -3.07$, $p = 0.003$); age made no difference in participants' self-control scores ($r = 0.03$, $p = 0.734$).

More than half of the sample (N = 75; 55.6%) reported not drinking alcohol. Independent-samples t-tests revealed that participants who did not drink alcohol had significantly higher self-control scores

than participants who consumed alcohol ($t(133) = 2.98$, $p = 0.003$). The two groups did not differ significantly in terms of age ($t(125) = -0.84$, $p = 0.401$). Chi-square analysis revealed that there were also no significant gender differences between participants who drank alcohol and those who did not ($\chi^2(1) = 0.58$, $p = 0.447$).

Of those participants who drank alcohol ($N = 60$), 81.7% reported drinking alcohol on one to seven days a week and 18.3% reported that they would only drink in particular situations. The *mean* weekly alcohol consumption was 16.29 alcohol units ($SD = 18.96$) ranging from zero to 72 units with peaks on Fridays and Saturdays. Table 1 shows that 63.3% of the drinking participants reported consuming alcohol on Fridays and 71.7% reported consuming alcohol on Saturdays. Table 1 also shows that the average number of alcohol units consumed was highest on Fridays and Saturdays. Total self-control scores correlated moderately and inversely with the number of alcohol units consumed on Fridays and Saturdays but they did not correlate significantly with the alcohol units consumed on the other week days (see Table 1).

Results also revealed that total self-control scores correlated moderately and inversely with total weekly alcohol consumption units ($r = -0.38$, $p = 0.002$). Age was positively associated with weekly alcohol consumption ($r = 0.33$, $p = 0.012$), and male participants consumed significantly more alcohol per week than females ($t(52.9) = 3.33$, $p = 0.002$).

Table 2 shows that in particular situations, 88.3% of the drinking participants reported consuming alcohol during special occasions. Accordingly, *mean* alcohol consumption was highest on special occasions, followed by situations when with friends, when happy, and when stressed. Total self-control scores were moderately and inversely associated with alcohol consumption when with friends, when stressed and when happy while the amount of alcohol consumed during special occasions, when feeling down, and when under pressure was not significantly associated with self-control scores.

Table 3 shows that for alcohol consuming participants, standard multiple regression analysis revealed that self-control, gender, and age explained only 32.8% of the variance in the weekly amount of

Table 1. Weekly alcohol consumption and self-control among alcohol consuming participants ($N = 60$)

Days of the week	Number of participants consuming alcohol		Number of alcohol units consumed		Correlation with self-control
	N	%	*Mean*	*SD*	
Mondays	11	18.3	0.33	0.93	r = -0.20, p = 0.127
Tuesdays	8	13.3	0.30	1.01	r = -0.12, p = 0.345
Wednesdays	8	13.3	0.30	1.01	r = -0.24, p = 0.071
Thursdays	11	18.3	0.60	1.59	r = -0.13, p = 0.334
Fridays	38	63.3	6.32	8.18	r = -0.38, p = **0.003**
Saturdays	43	71.7	7.32	8.81	r = -0.32, p = **0.013**
Sundays	11	18.3	1.12	3.04	r = -0.20, p = 0.127

Table 2. Alcohol consumption in particular situations and self-control among alcohol consuming participants (*N* = 60)

Drinking occasions	Number of participants consuming alcohol		Number of alcohol units consumed		Correlation with self-control
	N	%	*Mean*	*SD*	
During special occasions	53	88.3	7.77	8.49	r = -0.25, p = 0.058
When with friends	41	68.3	6.98	9.41	r = -0.32, p = **0.013**
When stressed	22	36.7	3.48	6.59	r = -0.36, p = **0.005**
When happy	29	48.3	4.87	8.52	r = -0.33, p = **0.010**
When feeling down	20	33.3	2.57	6.10	r = -0.22, p = 0.096
When under pressure	15	25.0	1.60	4.39	r = -0.25, p = 0.059

alcohol consumption (R^2 = .328, adjusted R^2 = .291, $F(3,54) = 8.802$, p = .000). Self-control made the largest unique contribution (*beta* = -.31), although age (*beta* = .29) and gender (*beta* = -.28) also made statistically significant contributions to the amount of alcohol consumed per week.

DISCUSSION

The objective of the study was to explore the relationship between self-control and alcohol consumption among students at the University of Botswana. The results revealed that participants with higher self-control scores were significantly less likely to drink alcohol at all. For participants who drank alcohol, an inverse relationship between self-control and amount of alcohol consumption was found, which supported the main hypothesis of the study. The results are consistent with findings from other studies where self-control was negatively associated with alcohol intake (Pondaná & Buriánek, 2013; Friese & Hofman, 2009; Tangney et al., 2004).

The participants reported consuming much larger amounts of alcohol on Fridays and Saturdays than on any other days of the week, which may not be surprising as drinking has been identified as being part of leisure activities (Pearson et al., 2013; Seloilwe, 2005). High alcohol consumption was also reported for special occasions, followed by being with friends, being happy, and being stressed. Participants with higher self-control scores reported drinking significantly less alcohol on peak days and peak situations than participants low in self-control, except that for special

Table 3. Predictors of amount of weekly alcohol consumption based on standard multiple regression analysis

Predictors	R Square	Adjusted R Square	Beta	F	df	Sig.
Model	0.328	0.291		8.80	3, 54	**0.000**
Self-control			-0.31			
Age			0.29			
Gender			-0.28			

occasions self-control was not significantly associated with the amount of alcohol consumption. According to Bandura's (1991) theory of self-regulation, peoples' engagement in certain activities depends to some extent on one's representative group; individuals tend to compare themselves with their peers and those with whom they share a similar status. However, those who have a firm sense of identity tend to have a high level of self-directedness through which they are more determined to follow their own standards, even in situations of social comparison (Bandura, 1991), which may explain why in the present study participants with higher scores of self-control would drink less alcohol even when with friends and when socialising on weekends. The reason why self-control was not associated with alcohol consumption on special occasions could be that, worldwide, alcohol is used to celebrate special occasions such as people's achievements (Montoya, 2013; Podana & Burianek, 2013), which may contribute to a belief that it is acceptable to drink during special occasions. Consequently even the ones with higher scores in self-control may try less to control their alcohol drinking during special occasions. Such interpretation would be in accordance with the theory of self-regulation which considers that pre-existing cognitive structures and beliefs contribute to people's behaviour (Bandura, 1991).

Situations of psychosocial distress were found to be related to substance use (Page & Hall, 2009) and, apparently, it is quite common among college students to drink alcohol in order to cope (Park & Levenson, 2002). In the present study, participants high in self-control drank significantly less alcohol when stressed than participants with lower self-control scores. Considering that people's capability of self-reflection and self-reaction enables them "to exercise some control over their thoughts, feelings, motivation, and actions" (Bandura, 1991, p. 249), participants high in self-control may have found ways to cope with stressful situations without consuming large amounts of alcohol. The capability to control one's feelings may also have contributed to the finding that participants high in self-control drank less alcohol in situations of happiness than participants with lower self-control.

Gender differences in alcohol consumption have been found in many studies (Weiser et al., 2006; Tangney et al., 2004). Perhaps surprisingly, in the present study, males and females were equally likely to drink or not to drink alcohol. However, among alcohol consuming participants, males were more likely to drink larger amounts of alcohol than females, which is consistent with other studies where heavy alcohol use was more prevalent in males (Larsen et al., 2012; Tangney et al., 2004; Teesson et al., 2010). In this study, age correlated positively with alcohol consumption, which is consistent with some studies (e.g. Leigh & Stacy, 2004) but not others (e.g. Park & Levenson, 2002). Self-control turned out to be a stronger predictor for the amount of alcohol consumed than age and gender, which is in accordance with findings from studies that identified low self-control as a significant predictor of problematic drinking (Friese & Hofmann, 2009; Pearson et al., 2013; Pondaná and Buriánek, 2013; Tangney et al., 2004). However, self-control together with age and gender explained only some of the variance in alcohol consumption which suggests that other factors must have also contributed to the variance.

Limitations

The study had several limitations, one of them being that a self-report measure was used to determine alcohol consumption, which may have negatively impacted the reliability of the data. The study considered only self-control, gender, and age as predictor variables and did not control for other predictor variables. The study did also not control for intervening, mediating or moderating variables. The sample size was small and the sample was not representative of all university students in Botswana, therefore the external validity of the study may have been compromised. More research is needed to address these limitations.

CONCLUSION

The present study suggests that the level of self-control plays a role in the drinking behaviour among students at the University of Botswana. While the results cannot be generalised to all students in Botswana and elsewhere, it could be important to consider self-control when addressing students' alcohol consumption. For example, educational campaigns and student welfare programmes offered by universities to prevent alcohol abuse may want to address the psychological dimension of self-regulatory behaviour first before they target specific alcohol related behaviour. Counselling services for students could aim to equip students with the skills of reflecting on their own behaviour and evaluating their own behaviour in order to control it. Such skills of self-control would not only enable students to control their alcohol intake but would also benefit them in other aspects of their life and most likely also contribute to their academic success.

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