Exploring Differences in Demographic Variables and Alcohol Consumption amongst University Student-Athletes

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Abstract

University student-athletes have a high propensity to engage in risky behaviours, which result in negative health-related outcomes. Among the risky behaviours is alcohol consumption. This study was conducted to explore differences in gender, age and type of sport and alcohol consumption among university student-athletes. A quantitative research approach was used for the study. Coaches who were closely associated with student-athletes at three different universities administered a questionnaire to 400 athletes. Descriptive statistics using frequencies and percentages were used to report the demographic data. ANOVA were used to determine the differences between alcohol consumption, gender and type of sport. A negative statistically significant relationship between gender and years of study (-0.02) was found. A practically significant medium effect (0.44) was found between gender and type of sport. A practically significant relationship with a medium effect (0.31) was found between quantity consumed and frequency of consumption. The practice therefore, should be monitored closely, as it may have serious consequences on their athletic and academic careers.

Keywords: student-athletes, alcohol consumption, demographical variables, university, health, substance use.

1. Introduction

University student-athletes have a high propensity to engage in risky behaviours, which result in negative health-related outcomes (Ford, 2007). Among the risky behaviours practised by university student-athletes are substance use, unhealthy eating habits and unprotected sexual activity (Surujlal, Nolan & Ubane, 2012). With regard to substance use, university student-athletes are likely to use substances, which are convenient and easily available to them. Among these are drugs, alcohol and tobacco. The current study focuses on alcohol consumption by university student-athletes.

It is surprising that while success in sport is highly dependent on student-athletes being able to maintain a high level of physical and mental health, university student-athletes continue to consume high quantities of alcohol (The Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention, 2008). Even more surprising is that university student-athletes have significantly higher rates of heavy drinking than non-athletes (Brenner & Swanik, 2007). This is a growing concern for athletes as such behaviour impacts negatively on their athletic performance, academic success and social life (Hingson, Heeren, Winter & Wechsler, 2005). The discrepancy between health-promoting and health-compromising behaviours of university student-athletes warrants attention due to the fact that university student-athletes are not only 'ambassadors' of their sports but also 'ambassadors' of the university. To an extent, the image of the university is portrayed through the behaviour of their student-athletes.

Studies (The Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention, 2008) have found that alcohol is the most used substance at college and university campuses with prevalence rates of 80–85 per cent. In particular, university student-athletes consume more alcohol, engage in more frequent heavy episodic drinking, and experience more negative alcohol-related consequences as compared with non-athletes (Brenner & Swanik, 2007; Doumas, Turrisi & Wright, 2006; Hingson et al., 2005, Nelson & Wechsler, 2001).

University student-athletes are a unique group of the student population whose university experience is different

from those of non-athletes (Hyatt, 2003). They are usually provided with support services beyond those that are offered to the general student population (Nelson & Wechsler, 2001). They, in turn, are required to contribute in terms of their performance on the sport field. In addition to their sport participation, university student-athletes are also expected to fulfil their academic obligations in terms of participating in lessons, completing assignments and writing examinations. Because most student-athletes are accepted at university based on their athletic performance, their athletic participation and success overshadows their academic performance (Equihua, Jenness & Stuekemann, 2012). They experience several stressors which include demanding schedules (Holden, 2014), stereotyping by the media, faculty and students (Lorenzen & Lucas, 2003), time constraints (Singh & Surujlal, 2006), physical and psychological stress and fatigue (Van Zyl, Surujlal & Singh, 2009), and commitment to attend sport events (Olivares, 2005). In most instances, the public is oblivious to the hard work, early regimented workouts and the academic workloads that student-athletes experience – instead they see only the glamour associated with athletic success (Equihua et al., 2012).

Student-athletes are often required to satisfy their coaches and fans through their sporting performance, their lecturers in terms of their academic performance and their parents in terms of both academic and sporting performance. In addition, they also have to satisfy the demands from sponsors and bursars. The pressure to deliver on the demands of the university, coaches, fans and family may influence student-athletes to turn to alcohol as a reprieve (Surujlal et al., 2012).

The stresses of a sporting career, however, may not be the only reason why student-athletes consume alcohol. Nelson and Wechsler (2001) suggest that sport clubs are, by nature, highly social organisations. The authors opine that as a result of this, athletes may be more likely to possess social characteristics, which predict alcohol consumption. In similar vein, Perkins (2002) suggests that peers, group norms and isolation from the general student body are likely to influence student-athletes to consume alcohol if that was the group norm. Another possible reason for alcohol consumption may arise from student-athletes transitioning from high school to university, which is accompanied by a new-found freedom from their homes and parental control (Watson, 2002). This freedom, accompanied by the elevated status they have at the university because of their sport achievements, peer pressure, balancing their sporting academic and social lives, and the desire to explore may result in them experimenting with substances such as drugs and alcohol. Challenges such as athletic failure (Cavenar & Werman, 1981), physical injury (McDonald & Hardy, 1990), and the termination of their athletic careers (Parham, 1993) may also result in them turning to alcohol for reprieve.

While much research has been conducted on university and college students in general, studies investigating alcohol consumption among university student-athletes in the South African context is sparse. Therefore, the purpose of this study is to explore the differences between gender, age and types of sport and alcohol consumption among university student-athletes.

2. Methodology

2.1 Research approach

A comprehensive literature review of alcohol consumption by university student was undertaken to provide the theoretical basis for defining the problem and research design, developing the empirical study and to contribute to a discussion of the findings. A descriptive survey design was used. This approach was adopted as this study seeks to quantify data and typically apply some form of statistical analysis. It makes it possible for conducting various statistical techniques (Creswell, 2014), allows for the collection of data from a large number of representative cases in a structured manner (Malhotra, 2007) and eliminating possible subjectivity of judgment.

2.2 Sample

Based on the convenient accessibility and proximity of student-athletes to the researchers a convenience sampling technique was used to recruit the study sample. In the context of this study, student-athletes are regarded as individuals who are skilled performers who participated competitively in inter-university sport under the auspices of the University Sport South Africa (USSA). Four hundred students at three university campuses were approached and requested to complete a questionnaire. Of these students 202 (51%) returned completed questionnaires. For the sake of anonymity, universities are listed as A, B and C.

2.3 Instrument and procedures

A four-section questionnaire was developed for the study. Section A sought demographic information of the respondents. In Section B, the drinking patterns of student-athletes were examined. Questions on both the quantity consumed per glass and frequency of consumption during a month provided data on the student athletes drinking patterns. Section C investigated the consequences of alcohol abuse, and Section D explored respondents' knowledge about alcohol. The overall internal consistency for Sections B and C was α =0.741, indicating that these sections satisfied the suggested benchmark of 0.7 (Nunnally & Bernstein, 1994).

Coaches who were closely associated with student-athletes at the different universities were requested to administer the questionnaires to student-athletes during training sessions. The purpose of the study was explained to the participants both verbally as well as through a letter attached to the questionnaire. They were also informed that their participation was voluntary, their responses would be confidential and they would remain anonymous at all times.

2.4 Data analyses

Descriptive statistics using frequencies and percentages were used to report on the demographic data. Pearson correlation, which determines the extent to which values of variables are proportional in relationship to each other (Bernstein et al., 2007) was used to explore the relationship between demographic variables, frequency of alcohol consumption and quantity consumed. Furthermore, analysis of variance (ANOVA) were used to determine the differences between alcohol consumption by athletes and various biographical characteristics such as gender, age, years of study, type of sport and university.

3. Results

3.1 Demographics

Table 1 provides the demographic profile of the study sample. According to the table the majority of the participants (n=136, 67.3%) were aged 16-21 years. More males (n=114; 56.4%) than females (n=88; 43.6%) participated in the study. The demographic information suggests that soccer attracted the highest participants (n=66; 32.7%) followed by cricket (n=36; 17.8%), softball (n=35; 17.3%) and tennis (n=20; 9.9%). The results showed that more of the participants (n=95; 47%) were in their first year of study followed by those in the second year (n=71; 35.1%).

ltem	Category	Frequency	Percentage
Age	16-21 years	136	67.3
-	22-27 years	56	27.7
	28 years and older	8	4.0
Gender	Male	114	56.4
	Female	88	43.6
Classification of sport	Soccer	66	32.7
	Rugby	16	7.9
	Cricket	36	17.8
	Hockey	11	5.4
	Tennis	20	9.9
	Boxing	3	1.5
	Gymnastics	2	1.0
	Ice hockey	6	3.0
	Squash	4	2.0
	Softball	35	17.3
	Athletics	3	1.5
University	А	93	46.0
-	В	40	19.8
	С	69	34.2
Year of study	1 st year	95	47.0
-	2 nd year	71	35.1
	3 rd year	13	6.4
	Post graduate	7	3.5
	Other	16	0.08

Table 1: Demographic profile of study sample

3.2 Relationship between demographic variables and alcohol consumption

The following guidelines, as suggested by Cohen (1988) were used to measure the strength of the relationship between the demographic variables and alcohol consumption.

Table	2:	Strenath	of relationship	between	variables
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	Size of r	Interpretation
	± (0.5 to 1.0)	Large
	± (0.3 to 0.49)	Medium
	± (0.1 to 0.29)	Small

Source: Cohen (1988)

Table 3 reflects the strength of the correlations between the demographic variables, average frequency of alcohol consumption during one occasion during the past month and quantity consumed per glass. Pearson correlation was performed and none of the demographical control variables was correlated with average frequency of consumption during the month and quantity consumed per glass. The results indicate that a practically significant relationship with a medium effect was found between quantity consumed and frequency of consumption.

Table 3: Correlation analysis

Var	iables	1	2	3	4	5		6	
1.	Gender	1	-	-	-	-		-	
2.	Age	-0.30**	1	-	-	-		-	
3.	Years of study	-0.02	0.13	1	-	-		-	
4.	Type of Sport	0.44**	-0.06	-0.11	1	-		-	
5.	University	-0.05	-0.00	-0.09	0.02	1		-	
6.	Frequency of consumption during month	0.01	-0.01	0.11	0.02	-0.02		1	
7.	Quantity consumed per glass	0.03	0.12	0.10	0.01	-0.03	0		.31**

* Statistically significant $p \le 0.01$

3.3 Alcohol consumption according to gender

In Table 4 frequencies of type of alcohol consumed and Table 5 quantity consumed per glass by gender are presented. It is clear from Table 4 that male athletes wine consumption was 40.4 per cent per year, but beer consumption was 23.7 per cent per year. Female athletes' consumption of wine was eight per cent per day but 31.8 per cent at least once a month but less than once a week

Table 4: Frequencies of type of alcohol consumed and quantity consumed per glass by gender

		Male	Fem	ale
	Ν	Percentage	Ν	Percentage
Wine				
Every day	10	8.8	7	8.0
At least once a week but not every day	7	6.1	10.2	28
At least once a month but less than once a week	24	21.1	28	31.8
More than once a year but less than once a month	27	23.7	24	27.3
Once a year	46	40.4	20	22.7
Beer				
Every day	14	12.3	2	2.3
At least once a week but not every day	23	20.2	16	18.2
At least once a month but less than once a week	31	27.2	31	35.2
More than once a year but less than once a month	19	16.7	21	23.9
Once a year	27	23.7	18	20.4
Spirits				
Every day	7	6.1	5	5.7
At least once a month but less than once a week	22	19.3	10	11.4
At least once a week but not every day	39	34.2	36	40.9
More than once a year but less than once a month	26	22.8	19.3	20
Once a year	20	17.5	20	22.7

Table 5: Quantity consumed per glass by gender

	Male			Female
	Ν	Percentage	N	Percentage
Wine				
Less than 1 glass	46	40.4	21	23.9
1 to 2 glasses	22	19.3	16	18.2
3 to 4 glasses	23	20.2	34	38.6
5 to 6 glasses	10	8.8	8	9.1
6 and more glasses	13	11.4	9	10.2
Beer				
Less than 1 glass	33	28.9	17	19.3
1 to 2 glasses	16	14.0	10	11.4
3 to 4 glasses	15	13.2	25	28.4
5 to 6 glasses	12	10.5	23	26.1
6 and more glasses	38	33.3	13	14.8
Spirits				
Less than 1 glass	27	23.7	30	34.1
1 to 2 glasses	19	16.7	16	18.2
3 to 4 glasses	26	22.8	17	19.3
5 to 6 glasses	10	8.8	15	17.0
6 and more glasses	32	28.1	10	11.4

The quantities per glass consumed are illustrated in Table 5. Male student athletes consumed less than one glass of wine per month, but 33.3 per cent consumed more than six glasses of beer per month. Most female athletes consumed more than three to four glasses of wine per month.

3.4 Difference between alcohol consumptions, gender, age and type of sport

ANOVA analysis indicates that there are no significant differences between gender and alcohol consumption, but as seen in Table 5 differences exist between scores of alcohol consumption (frequency of drinking beer, wine and spirits and the average number of these drinks consumed on any one occasion during the past month) by athletes and age.

Table 5: ANOVA -	Differences	in alcohol	consumption,	age and	type of sport
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ltem	16-21 years	22-27 years	28 years and older	р	η²
Frequency of consumption	10.21	10.80	7.88	0.01*	0.06
Quantity consumed per glass	9.38	10.41	9.75	0.11	0.03

 η 2 > 0.25 = large effect

* Statistically significant difference: p < 0.05

From the results presented in Table 5, it is evident that differences exist between athletes below the age of 28 years and those athletes that are older than 28 years. The ANOVA findings in Table 6 reveal that p values are above 0.05 for all the different types of sport; hence, there are no significant differences between students-athletes quantity consumed per glass and type of sport.

Table 6: ANOVAS – Differences in alcohol consumption	by athletes and type of sport levels
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ltem	Soccer	Rugby	Cricket	Hockey	Tennis	Boxing	Squash	Athletics	Netball	Other	р	η2
Frequency of consumption	9.83	10.75	11.23	10.43	10.00	3.00	14.00	12.00	10.40	15.0	0.01*	0.06
Quantity consumed	9.38	9.86	9.85	9.14	12.8	8.00	12.00	8.00	9.40	15.0	0.11	0.03

 η 2 > 0.25 = large effect

* Statistically significant difference: p < 0.05

As evident in Table 6, differences were found in student-athletes frequency of consumption and substance use. A small

significant difference effect exists between soccer player and other type of sport substance misused.

4. Discussion

Some significant relationships existed between students-athletes alcohol consumption and such variables as age, year of study and type of sport. The findings of the current study with regard to the age of the student-athletes corroborate those of Nelson and Wechsler (2003) who found that alcohol consumption differs significantly by age. Other studies (Leichliter, Meilman, Presley & Cashin, 1998; Wechsler et al., 1997) also found that student-athletes consumed more alcohol and also engaged in more frequently heavy episodic drinking than non-athletes.

The higher alcohol consumption as well as frequency of consumption could be attributed to various factors. Upon entry into university life student-athletes may be more vulnerable to peer influence, which may result in them experimenting with, and consuming more alcohol more frequently (Surujlal et al., 2012). Toporek (2011) opines that student-athletes' competitive spirit could spill over into increased levels of drinking.

According to Watson (2002), coping with success and failure poses a formidable challenge to student-athletes and this may result in their poor choice of coping strategies (for example alcohol, substance use). It is also early in their university life that student-athletes have a higher misconception of alcohol consumption and engage in more sensation-seeking behaviour than non-athletes (Anon, 2008). Younger student-athletes also tend to underestimate influence of alcohol on their workouts, endurance and mental frame of mind, hence they tend to show little concern regarding the quantity of alcohol they consume (Center for Student Health Promotion & Well-being, 2014). As student-athletes gain more experience, grow older and become more mature, they are able to exercise more control over their alcohol consumption, which may enable them to cope better.

Some studies (Munro, 2000; Turner, 2008) point to the fact that alcohol and sport are united in close partnership and are best consumed simultaneously. This is evident in popular sports such as soccer and rugby where alcohol is consumed before, during and after a match. In fact, it would be unusual to view a sporting event without seeing some form of event signage or a commercial for an alcohol product (McDaniel, Kinney & Chalip, 2001).

5. Recommendations

Given the fact that the consumption of alcohol will not suddenly disappear from the lives of student-athletes, it is essential to control it. Thus, arising from the findings of the study are a few recommendations. It is recommended that student-athletes should be educated in alcohol consumption from the time they start their practice sessions. This could be done through monthly counselling sessions for all athletes, regardless of whether they consume alcohol. Regular sessions will reinforce the idea that alcohol consumption could be detrimental to their athletic careers.

Sport psychologists should engage regularly with student athletes so that early warning signs regarding alcohol consumption are detected and addressed immediately. Furthermore, there should be support services in place to help athletes cope with stress.

6. Conclusion

It cannot be disputed that student-athletes engage in undesirable behaviours such as alcohol consumption and drug abuse. While alcohol, consumed in moderation, can prove harmless and potentially beneficial, it is of concern that alcohol consumption of student-athletes have become an acceptable part of their student life. Therefore, it is important that such practice is monitored closely, as it can have serious consequences on their athletic as well as academic careers.

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