Alcohol-related aggression and antisocial behaviour in sportspeople/athletes

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Abstract

Objectives: There is no empirical research on alcohol-related aggression and antisocial behaviour in non-US collegiate athletes. The present study addressed this gap by examining these behaviours in Australian university sportspeople.

Design: Cross-sectional.

Methods: University sportspeople and non-sportspeople completed questionnaires on alcohol consumption, aggressive and antisocial behaviours (e.g., abused, hit or assaulted someone, made unwanted sexual advance, damaged property) when intoxicated. Participants also reported whether they had been the victim of similar aggressive or antisocial behaviours. Demographic data and known confounders were collected.

Results: Hierarchical logistic regression models accounting for confounders and alcohol consumption scores found that university sportspeople were significantly more likely than non-sportspeople to have displayed aggressive behaviour (i.e., insulted or assaulted someone; OR 1.65, 95% CI: 1.19, 2.28, p = .003), and damaged property (OR 1.98, 95% CI: 1.38, 2.84, p < .0005) in the past year when intoxicated. Sportspeople were no more likely to have received aggression, had property damaged due to others intoxication (OR 1.21, 95% CI: .90, 1.62, p = .20; and OR 1.10, 95% CI: .79, 1.53, p = .57, respectively), or to have made unwanted sexual advances (OR 1.10, 95% CI: .65, 1.83, p = .74). Sportspeople were less likely to have reported being sexually assaulted when intoxicated (OR .44, 95% CI: .23, .83, p < .01).

Conclusions: Consistent with work from the US alcohol-related aggressive and antisocial behaviours were greater in male Australian university sportspeople/athletes than in their female and non-sporting counterparts. There is a need for research explicating the interaction between alcohol, contextual and cultural aspects of sport, and sport participants.

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1. Introduction

Excessive alcohol consumption and heavy episodic drinking (binge drinking) is associated with a host of negative consequences for the individual and increased social and financial burdens for society. Heavy episodic drinking is increasing among young people, and university/college students, but is especially problematic in sportspeople (athletes) where rates of heavy episodic drinking and harm are consistently higher than non-sporting peers and the general population. Because alcohol is ranked above all other illicit drugs in terms of social, health, and financial costs, studies on drinking and harms in young populations such as university students and sportspeople are of importance.

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Although there are a handful of studies in Europe and Australia and New Zealand, the bulk of research on hazardous drinking in sportspeople has been in US college athletes. US research shows that hazardous drinking in college athletes and goes hand in hand with harmful behaviours such as, driving while intoxicated and antisocial/violent behaviour. Greater rates of injury and negative performance outcomes are also reported in university athletes who drink. A consistent finding is that higher rates of alcohol-related aggression and antisocial behaviour (e.g., fighting, unwanted sexual advances, vandalism) are reported in college athletes who drink, compared to non-drinking athletes, and non-athletes. Surprisingly, there is no research on alcohol-related aggression or antisocial behaviour in university sporting populations outside the US, and only one study in non-university sportspeople.

While contentious, scholars have suggested that the masculine/macho norms and confrontational nature of some sports attracts and/or socialises aggression in those who participate. A recent review of aggression in sport highlighted the high prevalence of on-field violence, but found that the evidence for off-field violence and antisocial behaviour was sparse and mixed, with little research examining alcohol-related aggression and sexual violence. In one multi-university US study, athletes were found to be involved in 19% of all reported sexual assaults on campuses, yet athletes made up only 3% of university populations. In another study, US college athletes 14.0% of male team leaders and 11.1% of team members reported taking advantage of someone sexually as a result of substance use, compared to 7.7% of males who did not participate in athletics.

The absence of research on alcohol-related aggression and antisocial behaviour in non-US sportspeople is problematic. Contextually, the US has a higher legal drinking age (21+ years), different structure to collegiate sport programs, a controlled athlete scholarship program, and a strong influence of fraternities/sororities. These factors mean that the patterns of drinking and associated harms (e.g., aggressive/antisocial behaviour) may differ considerably to other nations. University sportspeople in other countries (e.g., Australia, New Zealand, Germany, and to some extent the UK), typically participate in non-university sport competitions and leagues, playing alongside the general population. Thus, US research may not generalize to non-US sporting populations. The over-reliance on US samples, and potential lack of generalizability, has been criticized by behavioural researchers. Indeed, 68% of all published human behavioural research involves US undergraduate students, yet the US makes up only 6% of the world's population.

Although not in university sportspeople, an Australian study found that alcohol-related aggression/antisocial behaviour were common in professional Australian Football League players, with involvement in fights and/or arguments reported by 26% of players. Given the paucity of research on alcohol-related aggression and antisocial behaviour in non-US sportspeople, it seems important to address this gap in the literature. The aim of the present study was to examine the extent of alcohol-related aggression and antisocial behaviours (e.g., personal aggression, vandalism, sexual assaults) in a large sample of Australian university sportspeople and non-sportspeople.

2. Methods

University students (N=1028) over 18 years, with mean age 20.7 (SD=3.5 years) were recruited (response rate ≈ 80%, 1300 approached) from two large multicampus Australian universities in New South Wales. The sample was comprised of 596 (58%) females, with 652 (63.4%) in-season university sportspeople (athletes). Thirty-nine percent of the sportspeople reported playing individual sports (e.g., running, squash), with the remaining 61% playing team sports (e.g., rugby, cricket, football).

A questionnaire containing demographic questions (i.e., age, gender, sporting participation, and current university status), the World Health Organisation’s Alcohol Use Disorders Identification Test (AUDIT), and measures assessing alcohol-related aggression and antisocial behaviours, was administered to participants.

The AUDIT is a 10-item questionnaire that was developed to identify persons whose alcohol consumption has become hazardous or harmful (WHO). The AUDIT has 3 subscales assessing: alcohol consumption (AUDIT-C; three items assessing frequency and quantity of alcohol consumption), symptoms of alcohol dependence (AUDIT-D; 3 items), and hazardous consequences of drinking (AUDIT-H; four items that assess the frequency of negative events). The validity and reliability of the AUDIT at specific cut-off scores has been established with a score of 8+ considered hazardous drinking.

Aggressive and antisocial behaviours carried out by the participants when intoxicated in the past 12 months, and participants reports of being the victim of aggressive and/or antisocial behaviours due to someone else’s intoxication, were assessed using questions taken from established measures of alcohol-related second-hand effects used in US national university alcohol surveys. Participants were asked whether they had in the past 12 months, ‘abused, insulted, or humiliated someone’, ‘hit, pushed or assaulted someone’, ‘damaged others property’, or ‘made an unwanted sexual advance’ while intoxicated. Similarly, participants were asked if they had been the victim of any of the harms described above in the past 12 months as a result of another persons intoxication. We also asked participants, ‘have you been the victim of a sexual assault’ due to someone else’s intoxication in the past 12 months.

To reduce the chance of family-wise error in analyses, and because the questions assessing abused/insult/humiliation, and pushed/hit/assaulted, represent aggressive behaviour, we collapsed the items and created two categoricals variables ‘displayed aggression’ and ‘received aggression’.
Participants who reported humiliating and/or assaulting someone while intoxicated were coded as a ‘yes’ for having ‘displayed aggression’. Similarly, those reporting being abused/humiliated/assaulted by others were coded as a ‘yes’ for having ‘received aggression’.

Because of problems in gaining approval from sports administrators to conduct research on alcohol and alcohol-related aggression via their organisations, we were unable to gain lists of sporting participants to survey in order to achieve a theoretically representative sample. Instead, for sampling we identified sporting venues/grounds where the sports were played or practiced, and when young sports participants would be present. Participants were approached at community and campus sports grounds (e.g., hockey, football), and non-sporting (e.g., campus food and study spaces) venues. Upon arrival at data collection venues, researchers approached the nearest sportsperson(s) and invited him/her to participate in the study. Following acceptance or rejection of the invitation the data collector again approached the nearest sportsperson(s) for participation, and so on. The questionnaire took approximately 10 min to complete. The Wollongong University human ethics committees reviewed the nearest sportsperson(s) for participation, and so on. The Wollongong University human ethics committees reviewed and granted approval for the study.

Twenty-four participants (2.3%) failed to provide complete data (e.g., response set identified, substantial data missing from core scales), and abstainers did not respond to alcohol-related harms questions, thus, differing n’s represent missing data for those participants. Because the AUDIT does not ask for the specific number of units consumed, we did not have a count of units that would allow comparison with recommended drinking levels for the Australian population (e.g., NHMRC guidelines). However, as a crude guide to heavy episodic drinking, and heavy episodic drinking frequency, AUDIT question 2 (How many drinks containing alcohol do you drink on a typical day when you are drinking?) and question 3 (How often do you have 6 or more units of alcohol on one occasion?) were examined individually. Question 2 of the AUDIT has 5 possible responses: 1–2, 3–4, 5–6, 7–9, and 10 or more. As Question 3 of the AUDIT does not have an equivalent response option within Question 2 (i.e., 6 or more units of alcohol on one occasion), we erred on the conservative side by using 7 or more standard drinks within one session as a crude indicator of heavy episodic drinking. The percentage of sport and non-sport participants meeting this criterion was calculated. For establishing frequent heavy episodic drinking we calculated the percentage of individuals who had 6 or more drinks on a weekly, or more frequent, basis (Question 3). SPSS v.16 was used for analyses.

ANCOVA’s and hierarchical logistic regression models were used to assess differences alcohol-related aggressive/antisocial behaviours. All regression models accounted for age, gender, location and AUDIT-C scores in the first step. We controlled for location effects (i.e., rural vs. urban campuses) because they have been shown to influence drinking and harms via environmental factors.30 Sporting status (non-sportpeople coded as 0 vs. sportpeople coded as 1) was entered in a second step. In follow-up logistic regression analyses in sportpeople only, we added an additional variable, whether participants primarily play team or individual sports. Because the AUDIT total score encompasses measures of negative consequences and dependence (harms), we used AUDIT-C (alcohol consumption) subscale scores for alcohol use in regression models. Pearson’s χ² was used to test for simple differences in proportions.

3. Results

The proportion of alcohol abstainers (non-drinkers) was similar for sportpeople and non-sportpeople (5.2% vs. 5.9%, p > .05), respectively. Sportpeople had significantly higher AUDIT total scores than non-sportpeople after accounting for confounds, with a mean (M) AUDIT total score and standard deviation (SD) of 10.52, (SD = 6.67) for sportpeople, and 9.46 (SD = 6.40) for non-sportpeople (F(4, 1022) = 11.88, p < .001). Significant gender differences were found for mean AUDIT total score (males M = 11.60, SD = 7.23, females M = 8.98, SD = 6.05; F(4, 1022) = 39.80, p < .0001). There was also a significant gender differences for AUDIT-C subscale scores (males M = 6.43 SD = 2.91, females M = 5.33, SD = 2.80; F(4, 1022) = 37.13, p < .0001) but not for sportpeople (M = 5.87 SD = 2.88) vs. non-sportpeople (M = 5.66 SD = 2.95, F(4, 1022) = 2.62, p = .10).

Hazardous drinking (AUDIT-Total score of ≥8) was more common in sportpeople (60.2%), and males (65.2%), than non-sportpeople (55.5%, p < .05), and females (53.2%, p < .05). Male sportpeople reported the highest rates of hazardous drinking followed by male non-sportpeople, with female non-sportpeople and sportpeople and having similar rates (68.5%, 61.9%, 53.3%, and 53%, respectively). The overall sample rates of heavy episodic drinking (7+ drinks in single session) and frequent heavy episodic drinking (weekly or more frequent binge drinking) were 38.3% and 31.5% respectively. Greater rates of heavy episodic drinking were reported by sportpeople than non-sportpeople (41.4% vs. 34.8%, p < .05), and males had higher rates than females (48.8% vs. 27.5%, p < .05). Frequent heavy episodic drinking was similar for sportpeople (29.3%) and non-sportpeople (30.5%, p > .05), but males reported more frequent heavy episodic drinking than females (36.6% vs. 24.8%, p < .05).

Table 1 displays the proportions of alcohol-related harms reported by male and female university sportpeople and non-sportpeople. Proportionally, male sportpeople reported approximately 50% more incidents of aggressive behaviour (hit, pushed someone) than non-sporting males. Male sportpeople also reported damaging others property at over twice the rate of non-sporting males and unwanted sexual advances were also approximately a third greater in male sportpeople. Table 1 also shows that a greater proportion of male sportpeople reported being the victim of aggressive and antisocial behaviour. Twice the proportion of male sportpeople reported being the victim of assaults (hit/pushed).
As a proportion, female sportspeople reported fewer aggressive and antisocial behaviours overall than the non-sporting females. The proportion of male and female non-sportspeople reporting sexual assaults was twice that of sporting males and females.

Logistic regression models controlling for age, gender, location, and AUDIT-C drinking scores were conducted for the dependent variables ‘displayed aggression’ ‘damaged property’ and ‘made unwanted sexual advance’. Identical analyses were conducted for the variables where participants reported being victims of aggression/antisocial behaviour. Several of the confounders’ were significant predictors in the regression models and justified their inclusion as controlled variables in regression models predicting aggressive and antisocial behaviours. AUDIT-C score (alcohol consumption) was a significant predictor variable in all outcome variables (higher AUDIT-C score associated with greater rates of aggressive and antisocial behaviours; \( p < .001 \)) with the exception of being the victim of a sexual assault (\( p = .121 \)). Gender was a significant predictor in aggressive behaviour (\( p < .001 \)) and damaging others property (\( p < .005 \)) with males overall displaying higher rates than females, but not of other aggressive and antisocial behaviours. Age had a significant positive relationship to unwanted sexual advances. That is, the older the participant the greater the rate of making unwanted sexual advances (\( p < .05 \)). Sport type (team vs. individual) was not a significant predictor in regression models (all \( p’s > .05 \)).

Regression models found that sportspeople were significantly more likely than non-sportspeople to have displayed aggression against others (i.e., insulted/assaulted someone; \( OR \ 1.65, 95\% \ CI: \ 1.19, 2.28, \ p < .005 \)), and damaged others property while intoxicated in the past year (\( OR \ 1.98, 95\% \ CI: \ 1.38, 2.84, \ p < .0005 \)). Sportspeople were no more likely than non-sportspeople to have been the victims of aggressive behaviours (\( OR \ 1.21, 95\% \ CI: \ 0.90, 1.62, \ p = .20 \)), or to have had property damaged by intoxicated others (\( OR \ 1.10, 95\% \ CI: \ 0.79, 1.53, \ p = .57 \)). Sportspeople were also no more likely than non-sportspeople to report having made an unwanted sexual advance (\( OR \ 1.10, 95\% \ CI: \ 0.65, 1.83, \ p = .74 \)). However, sportspeople were significantly less likely to report having been the victim of a sexual assault (\( OR \ .44, 95\% \ CI: \ .23, .83, \ p < .01 \)).

Follow-up analyses controlling for age, AUDIT-C, location, and sport type (team vs. individual) were conducted to assess gender differences in sportspeople. Male sportspeople were more likely than female sportspeople to have displayed aggression (\( OR \ 1.83, 95\% \ CI: \ 1.27, 2.62, \ p < .001 \), and damaged others property (\( OR \ 3.03, 95\% \ CI: \ 2.05, 4.47, \ p < .001 \)). Male sportspeople were also more likely than female sportspeople to report having been the victim of aggression from others (i.e., been insulted/assaulted; \( OR \ 1.52, 95\% \ CI: \ 1.09, 2.14, \ p = .015 \)). There were no significant gender differences in sportspeople for having property damaged by others (\( OR \ 1.39, 95\% \ CI: \ .96, 2.01, \ p = .09 \), or being the victim of a sexual assault (\( OR \ .58, 95\% \ CI: \ .24, 1.38, \ p = .22 \)). Male non-sportspeople were less likely than female non-sportspeople to have damaged others property (\( OR \ .39, 95\% \ CI: \ .23, .69, \ p < .001 \)). No other significant gender differences were found for non-sportspeople.

In sport by gender analyses, male sportspeople reported significantly higher rates of displaying aggressive behaviour, and damaging others property than female non-sportspeople (\( OR \ 2.67, 95\% \ CI: \ 1.54, 4.61, \ p < .001 \), and \( OR \ 2.67, 95\% \ CI: \ 1.54, 4.61, \ p < .001 \), respectively). Male sportspeople had significantly lower rates of being sexually assaulted than female non-sportspeople (\( OR \ .23, 95\% \ CI: \ .08, .64, \ p < .005 \)). There were no significant differences between female sportspeople and male non-sportspeople.

4. Discussion

There is a paucity of empirical research on alcohol-related aggression and antisocial behaviour in sportspeople, and none from non-US university sporting samples. The present exploratory study examined the extent of alcohol-related aggression and anti-social behaviour in a large sample of Australian university sportspeople and non-sportspeople. The results show that...
after adjusting for potential confounder’s (i.e., gender, age, location), level of alcohol consumption, rates of alcohol-related aggression and antisocial behaviour were greater in sportspeople than non-sportspeople. Consistent with US reports, the difference between sportspeople and non-sportspeople was qualified by the significantly greater rate of aggressive and antisocial behaviours reported in male sportspeople when intoxicated.

Unlike reports from the US, male sportspeople were no more likely to report making unwanted sexual advances or to report being the victim of alcohol-related aggression or antisocial behaviour. Indeed, sportspeople reported lower rates of being the victim of sexual assaults than non-sportspeople. Somewhat surprisingly, we found that female non-sportspeople were more likely to report damaging other people’s property than their male counterparts and female sportspeople, however, these rates were still significantly lower than male sportspeople.

The rates of aggressive and antisocial behaviour are concerning for the sample as a whole, but are particularly high in male sportspeople. An Australian Bureau of Statistics report found in a general population sample of young Australian men aged 18–24 that 19% reported being physically assaulted in the past year. Here, 40% of male sportspeople reported being physically assaulted in alcohol-related incidents alone. Because male student sportspeople are consistently found to drink more hazardous, we controlled for alcohol consumption levels. And while drinking levels were a strong predictor of aggressive and antisocial behaviours, being a male sportsperson remained a significant predictor in the models, suggesting other unexamined influences such as psychosocial, personality, or cultural factors likely play a part in the increased rates of aggressive and antisocial behaviours reported here.

Direct comparisons with US studies can not be made, however, results from US studies using similar measures in university sporting populations suggest that the rates of aggressive and antisocial behaviour reported for male sportspeople here, appear similar and in one case (damaged others property) greater than those from the US. For example, here we found that approximately 41%, 47% and 12% of male sportspeople reported displaying aggression, damaging others property, and making an unwanted sexual advance, respectively. Rates for the same behaviours in a large national US study were 43%, 22%, and 12%, respectively.

A limitation of the present study is the lack of measures assessing the theoretical constructs thought to underpin aggression and antisocial behaviour in sport (e.g., risk taking behaviour, masculinity, trait aggression/hostility). An important factor not assessed here, or in other studies is the severity of the aggression. Clearly, identifying whether a greater level of physical violence and damage is meted out by male sportspeople, who may be more physically capable of causing serious harm, is important. Additionally, although the study had a high response rate, the sample may not be representative of the theoretical Australian university sporting or non-sporting population, as such, the present results may not generalize. Only extensive and expensive nationally representative surveys can address this, and none have been conducted in Australia, New Zealand, or the UK.

5. Conclusion

The present study is the first in a non-US collegiate sport sample. Rates of aggressive and antisocial behaviour were particularly high in young male university sportspeople. Research identifying the reasons for alcohol-related aggression and antisocial behaviour in male sportspeople is urgently needed as are solutions.

6. Practical implications

- The study is the first outside of the US university samples to examine alcohol related aggression.
- The study found that alcohol-related aggression and antisocial behaviour was higher in male sportspeople compared to non-sportspeople.
- Sport researchers need to establish whether it is excessive alcohol consumption, or cultural and psychosocial factors (e.g., masculinity that underpin these differences).

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