

Social contexts of sports-practicing youths' hazardous drinking

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Summary

Sports-practicing youths are at an elevated risk for alcohol use and misuse. Although much attention has recently been given to depicting subgroups facing the greatest threats, little evidence exists on the contexts in which their drinking takes place. Using data from a cross-sectional study on youth sports participation and substance use in the French-speaking part of Switzerland, this study focused on the social contexts associated with hazardous drinking of 894 sports-practicing adolescents aged 16 to 20. Divided between those who had been drunk in the last month (hazardous drinkers, $n = 315$) and those who had not ($n = 579$), sports-practicing adolescents were compared on reported gatherings (sports-related, sports-unrelated, mixed) likely linked to their drinking behaviour. Mixed social contexts, followed by sports-unrelated ones, were reported as the most common context by both male and female youths who practiced sports. After controlling for several possible confounders, male hazardous drinkers were more than 3 times more likely to report sports-unrelated social contexts as the most common, compared to sport-related ones, while females were more than 7 times more likely to do so. Our findings seem to indicate that, rather than focusing only on sports-related factors, prevention of alcohol misuse among sports-practicing youths should also pay attention to the social contextualisation of their hazardous drinking.

Key words: alcohol; athletes; sports; adolescents; health risk behaviours; gender

Introduction

Several studies have depicted sports-practicing youths to be at an elevated risk for alcohol use [1–7]. Heavy episodic drinking and alcohol-related negative consequences are also more frequently reported for sports-practicing youths

[1, 2]. Some data even suggest that sports participation early during adolescence is associated with increased problematic alcohol use later on [3, 4], as seen with a younger age at first intoxication [8]. Overall, research depicting an association between youth sports participation and alcohol use outweighs a smaller number of studies reporting either negative links or no significant associations to exist [9]. In particular, males as well as adolescents involved in competition and those practicing team sports appear to be particularly at risk for excessive drinking [1, 2]. However, some differences seem to exist according to which sport is performed [10] or the cultural background being examined [11].

Although much attention has recently been given to the increased risk of sports-practicing youths towards alcohol, little has been paid to determine the contexts in which such drinking takes place. This is unfortunate as adolescents and young adults involved in sports may be driven by specific motives in certain circumstances to drink excessively [7, 12]. For example, college athletes are more likely than their peers to engage in drinking games probably because these activities represent unique occasions for them to get additional thrills and show competitive skills [7].

Likewise, it can also be hypothesised that drinking among teammates is a powerful way to enhance group cohesion. The effects of teammate peer-pressure and athlete normative drinking practice on alcohol consumption have been supported by several studies [2, 13, 14]. Yet, no data exists on whom sports-practicing youths drink with. This is unfortunate as research on socialisation has recently been pointed out as a way to expand and reinforce our understanding of young athletes' substance use [9]. This information is also of particular importance to adapt current prevention strategies directed at a distinctive group of youths at risk of problematic alcohol use. We have thus examined which social contexts reported by sports-practicing youths are associated with their hazardous drinking.

Material and methods

Participants

Data were drawn from a larger research project conducted over a 12 month period, which started in February 2009, on

Abbreviations

AOR: adjusted odds ratios

CI: confidence interval

SA: sports-practicing adolescents

SES: socioeconomic status

the use of psychoactive and performance-enhancing substances among both sports-practicing and non-sports-practicing youths in the French-speaking part of Switzerland. Approved by the Ethics Committee of the University of Lausanne, School of Medicine, the study looked at adolescents aged 16–20. Using a unique identifier, all participants answered an online questionnaire, pretested on a subset of youths, and taking, at most, 20 minutes to complete. As a way to enrol participants from diverse backgrounds, the recruitment mainly took place from sports clubs and associations. Participating adolescents were also asked to recruit close peers for both the study and control groups. A total of 1,303 questionnaires were completed of which 56 (4.3%) were excluded mainly because of eligibility criteria (age, linguistic regions) or because they were incorrectly completed. The final sample was further weighted, based on representative demographic statistics, to attain better regional representativeness. Five socio-demographic characteristics were used for that purpose: age, gender, academic track, as well as region (cantons) and place (rural vs. urban) of residence. After weighting, 1,247 subjects were available for statistical analyses. A total of 894 adolescents (471 males) reporting extracurricular sports participation were the focus of our analysis and are further referred to as sports-practicing adolescents (SA). Details on the complete methodology of the study are available online [15].

Measures

According to whether or not participants reported having been drunk in the previous month (never, 1–2 times, 3–9 times, 10 times or more), SA were divided into hazardous drinkers (those who were drunk at least once, $n = 315$) and controls (those who were not drunk in the past 30 days, $n = 579$). As drinking among adolescents is closely linked to peer-related activities [5], and young athletes seem more likely to drink for social reasons than non-athletes [6], we asked participants “with whom they usually go out” to define their social contextualisation associated with hazardous drinking. Possible answers were: I usually go out with my teammates (further referred as sports-related contexts); I usually go out with peers other than my teammates (sports-unrelated ones); I go out with both of them (mixed ones).

In addition, to inquire about their extracurricular sports participation, adolescents were asked to specify the sport they were most involved in (further grouped into individual or team sports) and to report at which level they were

involved in (competition vs. leisure). Academic and socioeconomic status (SES) were also examined. When asked about their primary occupation (student, apprentice, working, pre-apprenticeship, other) youth’s answers were dichotomised into students and other. SES was assessed using the *Family Affluence Scale*, a reliable and widely validated scale [16]. Due to very few adolescents reporting low SES, medium and low were merged into one category (high vs. other).

Data analysis

Using Stata 10.1 (StataCorp, College Station, Texas, USA), statistical analyses were performed separately by gender as female and male young athletes seem to have different alcohol-related behaviours [1]. Bivariate analysis consisted of point prevalence with a 95% confidence interval (CI). Multivariate logistic regressions of hazardous drinking behaviours were then performed, based on depicted social contexts, using sports-related contexts as a reference, and controlling for both sports type and level, as well as for age, SES and academic status. Results are given as adjusted odds ratios (AOR [95% CI]), using controls as the reference category.

Results

One third (35.3% [30.4–40.5]) of all SA reported having been drunk in the last month, and more specifically that was 41.2% [33.8–49.1] of males and 28.7% [23.1–35.2] of females. In the bivariate analysis (table 1), the majority of male SA were involved in competitive sport and practiced team sports. Among male SA, hazardous drinkers practiced team sports more frequently than controls. In contrast, the vast majority of female SA practiced individual sports and nearly half of them were involved in competitions. Among female SA, hazardous drinkers were less frequently involved in competitive sport.

Important differences were seen in the frequency at which usual social contexts were reported. The majority of male and female SA reported mixed contexts as the most frequent, just followed by sport-unrelated ones (table 1). Sports-related contexts were in fact the least reported social context, and this was seen especially among hazardous drinkers with only 9.5% of males and 3.7% of females reporting so.

In the multivariate analysis (table 2), adjusting for several possible confounders, male hazardous drinkers were three

Table 1: Bivariate analysis of characteristics and social contexts according to hazardous drinking by gender.

	Males		Females	
	Hazardous drinkers (n = 194) % [95%CI]	Controls (n = 277) % [95%CI]	Hazardous drinkers (n = 121) % [95%CI]	Controls (n = 302) % [95%CI]
Mean age (in years)	18.1 [17.8–18.5]	17.6 [17.4–17.8]	18.0 [17.7–18.4]	17.7 [17.5–17.9]
SES – high	57.1 [43.0–70.1]	67.4 [58.0–75.6]	55.9 [42.4–68.5]	65.3 [57.5–72.3]
Academic status – student	35.8 [26.4–46.5]	48.0 [39.5–56.6]	49.3 [36.8–61.8]	59.5 [51.4–67.2]
Sports type – team	66.5 [53.6–77.3]	50.5 [41.7–59.3]	28.8 [19.7–40.1]	31.6 [25.2–38.8]
Sports level – competition	71.2 [58.2–81.4]	77.7 [70.2–83.7]	42.9 [31.5–55.1]	59.1 [51.7–66.1]
Social contexts				
– sports-related	9.5 [5.2–16.5]	19.1 [11.7–29.6]	3.7 [1.3–10.2]	15.8 [10.5–23.2]
– mixed	53.8 [40.4–66.8]	55.9 [46.8–64.7]	57.3 [44.7–68.9]	62.8 [55.2–69.7]
– sports-unrelated	36.7 [23.7–52.0]	24.9 [18.4–32.9]	39.1 [27.9–51.6]	21.4 [16.2–27.7]

times more likely to report sports-unrelated contexts than sport-related ones (AOR = 3.35 [1.15–9.78]). In comparison, female hazardous drinkers were seven times more likely to report sports-unrelated contexts (AOR = 7.76 [2.08–28.97]) and more than three times more likely to report mixed ones (AOR = 3.81 [1.08–13.45]).

Discussion

Our results indicate that usual gatherings of adolescents who participate in sports, commonly involve both teammates and other peers. Yet, among both males and females, we found socialising contexts with peers other than teammates (sport-unrelated contexts) to be strongly associated with SA's hazardous drinking. In contrast, mixed contexts were only associated with hazardous drinking of young females practicing sports. These findings build on the few studies which stress the importance of social contextualisation in the relationship between alcohol use and sports participation [9]. They also open new perspectives in our understanding of the risky behaviours of young athletes.

Although friends of college athletes in the United States have reported to primarily include their teammates [17], gatherings and related drinking opportunities with teammates only seems to seldom take place for youths in the French-speaking part of Switzerland. Within our sample of adolescents where competitive and recreational athletes were assessed, this may be true as friends other than teammates may represent a larger part of adolescents' entourage. Opportunities to gather and drink only with teammates may therefore be scarce. On the other hand, already devoting substantial time to their sports, and consequently to friends training with them, adolescents may perhaps prefer to spend their free time with other peers as well. As they may both share strong socialising purposes, gatherings outside sporting contexts and hazardous drinking are probably strongly connected, without exclusively occurring at the same time.

One other likely explanation for the association between sport-unrelated contexts and hazardous drinking may be that such settings favour excessive alcohol use by young athletes. Sport-unrelated activities are in fact less likely to involve sports features such as age and gender segregation, or adult supervision, which can decrease the propensity for substance use [3]. Moreover, without minimising the importance of several sports-related factors in shaping young athletes' alcohol consumption [2], sports-practicing youths may prefer to drink excessively when teammates are absent, or at least not exclusively in their presence, perceiving less disapproval from other peers. In that sense, Dams-O'Connor et al. [14] described young athletes' estimation of the normative alcohol use of four reference groups (closest athlete friend, closest non-athlete friend, typical

athlete, and typical non-athlete). Although the typical athlete norm emerged as the strongest predictor of personal alcohol use, young athletes depicted their closest non-athlete friend's consumption as the highest of all. In fact, both athletes and non-athletes seem to perceive non-athletes as being more likely to engage in heavy drinking than athletes [18], which is not the case [9].

Limitations

As subjects were mainly recruited through self-selection, our sample may not be representative of all sports-practicing youths living in the French-speaking part of Switzerland. Yet, correction through weighting was performed and did not greatly alter the original sample of participants [15]. At the same time, this design enabled us to recruit adolescents practicing sports competitively or as a leisure activity, as well as those being involved in both individual and team sports, which has been infrequently done in the past [9]. In addition, social contexts were assessed using a single query (with whom participants usually went out with) introduced in the questionnaire to describe contextualisation of substance use. Future studies would therefore benefit from inquiring about drinking opportunities using multiple questions directly designed to investigate their social contexts.

Conclusions

The present study emphasises that drinking contexts are important factors to be taken into account when trying to understand alcohol use among adolescents. This seems especially important among the at-risk group of sports-practicing youths as their hazardous drinking was mainly associated with socialising contexts including peers other than teammates in our study. Even though limited evidence exists on their efficacy, selective interventions targeting excessive drinking of adolescents practicing sports continue to be advocated [4]. In accordance with our findings, preventive messages should be adapted to contexts and settings in which young athletes are more likely to drink the most.

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Table 2: Multivariate analysis^a of social contexts according to hazardous drinking by gender.

	Male hazardous drinkers AOR [95%CI]	Female hazardous drinkers AOR [95%CI]
Social contexts		
– sports-related	1	1
– mixed	2.43 [0.96–6.13]	3.81 [1.08–13.45]
– sports-unrelated	3.35 [1.15–9.78]	7.76 [2.08–28.97]

^a Logistic regression using controls as the reference category and adjusted for age, SES, academic status, sports type and sports level.

References

- 1 Mays D, Thompson NJ. Alcohol-related risk behaviors and sports participation among adolescents: An analysis of 2005 youth risk behavior survey data. *J Adolesc Health*. 2009;44(1):87–9.
- 2 Martens MP, Dams-O'Connor K, Beck NC. A systematic review of college student-athlete drinking: Prevalence rates, sport-related factors, and interventions. *Journal of Substance Abuse Treatment*. 2006;31(3):305–16.
- 3 Wichstrom T, Wichstrom L. Does sports participation during adolescence prevent later alcohol, tobacco and cannabis use? *Addiction*. 2009;104(1):138–49.
- 4 Mays D, DePadilla L, Thompson NJ, Kushner HI, Windle M. Sports Participation and problem alcohol use a multi-wave national sample of adolescents. *Am J Prev Med*. 2010;38(5):491–8.
- 5 Peretti-Watel P, Beck F, Legleye S. Heavy drinking and patterns of sociability at the end of adolescence: a French survey. *Int J Adolesc Med Health*. 2006;18(1):159–69.
- 6 Wilson GS, Pritchard ME, Schaffer J. Athletic status and drinking behavior in college students: the influence of gender and coping styles. *J Am Coll Health*. 2004;52(6):269–73.
- 7 Grossbard J, Geisner IM, Neighbors C, Kilmer JR, Larimer ME. Are drinking games sports? College athlete participation in drinking games and alcohol-related problems. *J Stud Alcohol Drugs*. 2007;68(1):97–105.
- 8 Adam A, Faouzi M, Gaume J, Gmel G, Daepfen JB, Bertholet N. Age of first alcohol intoxication: association with risky drinking and other substance use at the age of 20. *Swiss Med Wkly*. 2011;141:w13226.
- 9 Lisha NE, Sussman S. Relationship of high school and college sports participation with alcohol, tobacco, and illicit drug use: A review. *Addict Behav*. 2010;35(5):399–407.
- 10 Ford JA. Alcohol use among college students: A comparison of athletes and nonathletes. *Substance Use and Misuse*. 2007;42(9):1367–77.
- 11 Gmel G, Kuendig H, Daepfen JB. Sport and alcohol: An emergency department study in Switzerland. *European Journal of Sport Science*. 2009;9(1):11–22.
- 12 Peretti-Watel P. Sports and drugs: further interpretative hypotheses are necessary – commentary. *Addiction*. 2009;104(1):150–1.
- 13 O'Brien KS, Kolt GS, Webber A, Hunter JA. Alcohol consumption in sport: The influence of sporting idols, friends and normative drinking practices. *Drug and Alcohol Review*. 2010;29(6):676–83.
- 14 Dams-O'Connor K, Martin JL, Martens MP. Social norms and alcohol consumption among intercollegiate athletes: The role of athlete and nonathlete reference groups. *Addict Behav*. 2007;32(11):2657–66. (ancien15)
- 15 Bélanger RE, Ohl F, Berchtold A, Lentillon-Kaestner V, Suris JC. Substance use among sportive adolescents in the French-speaking part of Switzerland. 51 p. Lausanne: IUMSP, 2010. Available at: www.saphirdoc.ch/permalien.htm?saphirid=83335.
- 16 Boyce W, Torsheim T, Currie C, Zambon A. The family affluence scale as a measure of national wealth: Validation of an adolescent self-report measure. *Social Indicators Research*. 2006;78(3):473–87.
- 17 Thombs DL, Hamilton MJ. Effects of a social norm feedback campaign on the drinking norms and behavior of Division I student-athletes. *Journal of Drug Education*. 2002;32(3):227–44.
- 18 Yusko DA, Buckman JF, White HR, Pandina RJ. Risk for excessive alcohol use and drinking-related problems in college student athletes. *Addict Behav*. 2008;33(12):1546–56.