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**Contextualizing Students' Alcohol Use Perceptions and Practices within French Culture:
An Analysis of Gender and Drinking among Sport Science College Students**



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Abstract

Although research has examined alcohol consumption and sport in a variety of contexts, there is a paucity of research on gender and gender dynamics among French college students. The present study addresses this gap in the literature by examining alcohol use practices by men and women among a non-probability sample of French sport science students from five different universities in Northern France. We utilized both survey data ($N = 534$) and in-depth qualitative interviews ($n = 16$) to provide empirical and theoretical insight into a relatively ubiquitous health concern: the culture of intoxication. Qualitative data were based on students' perceptions of their own alcohol use; analysis were framed by theoretical conceptions of gender. Survey results indicate gender differences in alcohol consumption wherein men reported a substantially higher frequency and quantity of alcohol use compared to their female peers. Qualitative findings confirm that male privilege and women's concern for safety, masculine embodiment via alcohol use, gendering of alcohol type, and gender conformity pressures shape gender disparities in alcohol use behavior. Our findings also suggest that health education policy and educational programs focused on alcohol-related health risks need to be designed to take into account gender category and gender orientation.

Keywords: Gender Orientation, Gender, Masculinity, Alcohol Use, Culture of Intoxication, Health, Risk, College Students, International, France

A recent World Health Organization (2014) report highlights that the harmful use of alcohol is a component cause of more than 200 disease and injury conditions, including alcohol dependence, liver cirrhosis, cancers, injuries, interpersonal violence, and death. It is important to address harmful alcohol use given its substantial economic, societal, and human cost. Of growing concern in the United States, Australia, New Zealand, and Europe is a “culture of intoxication”—especially among youth—involving heavy episodic drinking, also known as “binge drinking” (Green, Nelson, & Hartmann, 2014). This normative culture of intoxication involves the expectation that one will drink heavily and quickly in order to become very drunk in a short period of time (Measham & Brain, 2005). Heavy and frequent drinking has been a continued public health concern for decades in the United States, with increased risk noted among men particularly those in male-dominated activities (i.e., athletics; team sport involvement; fraternity membership; Wechsler et al., 1998; Zhou, O’Brien, & Heim, 2014). For this reason, we target sports science students in the present study. Specifically, we focus on college students who are pursuing sport-related careers (i.e., “sport-science” majors). Of note, our participants were either involved in informal or formal team sports or not involved in team sports at all.

France in recent times has begun to witness, describe, and react to “le binge drinking” (Petit, Karila, Benyamina, Reynaud, & Aubin, 2009) or “beuverie express” (literally “fast drinking”) where alcohol is consumed in large quantities in a very short period of time, often by young people. As Szmigin and colleagues (2008) highlight, however, discourses of moral panic regarding young people’s drinking have pervaded popular media, public policy, and some academic research in recent years, often seeking to differentiate the excesses of “binge drinking”

from “normal” patterns of alcohol consumption. To better describe young people’s ways of managing and controlling alcohol consumption that might be viewed by some as excessive, Szmigin et al. (2008) argue for a more nuanced analysis and understanding of such drinking patterns and for a conceptualization of *calculated hedonism* [*l’hédonisme calculé*: how people actively manage alcohol consumption taking a calculated approach (rather than the notion of young people being out of control/losing control). This conceptualization emphasizes the active agency of people to calculate risk and to balance pleasure and danger.]. Whereas the relationship between collegiate athletic participation and alcohol use is well-documented in the literature (Collins & Vamplew, 2002; Green et al., 2014; Palmer, 2011, 2014; Stainback, 1997; Waddington, 2000), relatively little research has been conducted that is specific to a culture of intoxication in the French university/college context.

The present paper responds to recent calls to widen the lens in studying the alcohol-sport linkage to include, for example, sportswomen and drinking/non-drinking as well as non-drinkers in drinking environments (Palmer, 2014). Here we report on findings from a mixed-methods project (involving both survey results and qualitative interviews) investigating drinking behaviors among male and female sports science students in five northern French universities. As has been noted, studies on alcohol consumption among women are still few and far between (Fuchs & Le Hénaff, 2014), and this lacuna is even more pronounced in relation to female college students. The nexus of sport, gender, and alcohol constitutes the primary focus of our article. We incorporate self-reported drinking behaviors and the perspectives of both female and male sports science students to document gendered patterns of drinking among French students and further examine gender distinctions, as called for by Connell (2012). We also selected sports-science students specifically to enable direct comparisons to be made with analogous

research undertaken on this particular group, for example in the United Kingdom (Allen-Collinson & Brown, 2012; Sparkes, Partington, & Brown, 2007) and in the United States (Peralta, 2007; Wahesh, Milroy, Lewis, Orsini, & Wyrick, 2013). Here we attempt to understand gender differences (via self-reported gender in quantitative measures) and the construction of gender (e.g., “doing” or expressing gender behaviorally; West and Zimmerman, 1987) through our analysis of qualitative interviews whereby we focus on gender belief systems among sport science students.

Young adults and college students are at risk for a range of preventable health and social problems. Alcohol-related health problems, including morbidity and mortality, have been documented in youth populations, especially in university/college populations. Many factors have been found to mediate the association between alcohol use and related problems, including context of use (Courtenay, 2000; Fuchs & Le Hénaff, 2014), social determinants (Turrisi, Mastroleo, Mallett, Larimer, & Kilmer, 2007), significant others/sexual partners (Grossbard et al., 2007a), transition into adulthood (Allen-Collinson & Brown, 2012; Christie-Mizell & Peralta, 2009), socio-economic status (Bélanger, Ohl, Berchtold, Akre, & Suris, 2012), race/ethnicity (Neff, Prihoda, & Hoppe, 1991; Peralta & Steele, 2009), and gender identity norms (Iwamoto, Corbin, Lejuez, & MacPherson, 2014; Mahalik, Burns, & Syzdek, 2007; Moradi & Parent, 2013; Peralta, 2007). Also important is the nature of cultural activities associated with excessive alcohol use—for example, the formal and informal practices of sport as a highly gendered (and at times, gender-segregated) institution (Choquet & Com-Ruelle, 2009; Turrisi, Mallett, Mastroleo, & Larimer, 2006).

Calls have been made to address the distinctive campus subculture of students in sport studies/sport science (Allen-Collinson & Brown, 2012; Sparkes et al., 2007). Here, we (a)

examine (via survey data) French sports students' alcohol use by gender (in terms of students' identification of their gender category) and (b) explore their perceptions of the relationships among sport, gender expression (in the sense of the social construction of gender; Connell, 2012; West and Zimmerman, 1987), and alcohol use via our qualitative data. First, we consider the literature in this domain.

Sport, Masculinity, and Alcohol Use

The prevalence of alcohol consumption among university students in the United States and United Kingdom has been well-researched, particularly in relation to so-called "jock cultures" (Allen-Collinson & Brown, 2012; Skelton, 1993; Sparkes et al., 2007). Macdonald and Kirk (1999, p. 132) define *male jock culture* as the "celebration of mesomorphy, anti-intellectualism, sexism, homophobia, competitiveness and binge drinking." In a similar vein, Skelton (1993, p. 296) identifies elements such as: "Getting drunk, fooling around, showing your naked body in public, displaying toughness, heterosexual conquest, respecting hierarchy and ridiculing weakness." Although most of the literature focuses upon male jock cultures, female jock cultures, such as in women's ice hockey (Theberge, 1997), rugby (Chase, 2006; Ezzell, 2009) and soccer (George, 2005), exhibit very similar components, albeit the heterosexism prevalent in men's jock cultures does not appear to be so endemic among sportswomen (Harris, 2005). Excessive alcohol consumption, however, certainly appears to be a key component in many jock cultures among both men and women (Sparkes et al., 2007).

In the present paper, we draw briefly upon the work of gender theorists, particularly Connell and Messerschmidt (2005) to situate our findings. In French university cultures, as well as in the United States, Germany, Spain (Zimmermann, Sieverding, & Muller, 2011), Australia, New Zealand (Willott & Lyons, 2012), and the United Kingdom (Allen-Collinson & Brown,

2012), frequent and heavy consumption of alcohol is a cultural practice integrated into many festive and ritual practices (Masse, 2002). These practices often directly or indirectly involve the construction of masculinity (Peralta, 2007; Willott and Lyons, 2012; Zimmermann et al., 2011), or more specifically, hegemonic masculinity (Connell, 1995). *Hegemonic masculinity* connotes aspiring or identifying with dominant assumptions of what it means to be a “real man,” and characteristics such as risk-taking, aggression, sexism, and heavy drinking are taken to be part of a socially constructed system of gender relations, specific to cultures and historic epochs. In addressing gender relations, Connell (1995) has argued for the existence of a gender order in which a range of different masculinities and femininities operate in a gendered hierarchy of power relations.

In this hierarchy (Connell and Messerschmidt, 2005), hegemonic masculinity is distinguished from, and placed above, other masculinities, especially subordinated masculinities (for example those often linked with ethnic and/or sexual minorities). Relatively few men are thought to actually embody the total sum of physical, social, and emotional aspects of hegemonic masculinity (e.g., being strong/muscular/tall; powerful/resourceful/dominant/independent; stoic/aggressive). Connell and Messerschmidt (2005) argue, however, that hegemonic masculinity requires *all* men to position themselves in relation to the dominant ideal. Furthermore, hegemonic masculinity ideologically legitimates the subordination of women to men.

Alcohol Use, Gender, and Social Meaning

According to U.S. campus surveys (National Institute on Alcohol Abuse and Alcoholism, 2002), there are significant gender differences in alcohol use (both frequency and quantity) wherein men are at increased risk for more frequent heavy episodic drinking and for more extreme heavy episodic drinking compared to women. Qualitative work suggests that these differences are often linked to sociocultural factors, are highly gendered, and can be symbolic components of social success on campus. For example, in British research, the embodiment of hegemonic masculinity has been shown to involve heavy and frequent alcohol consumption (Sparkes et al., 2007). Although there are inevitable differences among North American, British, and French campuses, research undertaken on French university students appears to reflect growing commonalities with U.S. and U.K. populations. French male students involved in sports, for example, have recently been found to engage in heavy episodic drinking (Martha, Grélot, & Peretti-Wattel, 2009) and to experiment with a range of related high-risk practices such as drug (mis)use and unprotected sex (Héas et al., 2009; Lorente, Peretti-Wattel, Griffet, & Grélot, 2003; Lorente, Souville, Griffet, & Grélot, 2004; Martha et al., 2009; Masse, 2002).

Gender, as framed by concepts such as hegemonic gender identities and gendered cultural norms, has been explored via alcohol use behavior (Guise & Gill, 2007; Palmer, 2014; Peralta, 2008; Willott & Lyons, 2012; Wilsnack & Wilsnack, 1997). In relation to the social construction of drinking roles, highly gendered representations of drinking have been reported (Nahoum Grappe, 1987, 1995; Palmer, 2011, 2014; Peralta, 2007; Prus, 1983), with men's drinking traditionally associated with "manliness," "virility," strength, courage, and performance. Women's drinking behavior has been traditionally associated with notions of sobriety and "purity" (Beck, Legleve, & De Peretti, 2006; Connell, 1995) and, more recently, with "empowerment" and confidence boosting (Rúðólfssdóttir & Morgan, 2009). In many

contemporary societies, such traditional gender norms are being challenged by increasing alcohol use among women and girls (Guise & Gill, 2007; Palmer, 2014; Willott & Lyons, 2012) and by regarding alcohol use as symbolic of independence, assertiveness, freedom, and self-assurance (Beck et al., 2006; Macneela & Bredin, 2011). However, a gender double standard vis-à-vis alcohol use has been highlighted (for example, see Peralta, 2010; de Visser & McDonnell, 2012) in that more critical and judgmental attitudes are evident towards women's drinking, even among those with relatively egalitarian gender attitudes. As Griffin, Szmigin, Bengry-Howell, Hackly, and Mistral (2013) argue, in contemporary times, young women face particularly difficult dilemmas produced by the juxtaposition of "hyper-sexual" femininity and the culture of intoxication; women must simultaneously be "sassy" and independent (but not feminist), able to drink and get drunk alongside and analogously with men, but most certainly not to "drink like men."

A cultural significance of alcohol is its role in social integration and social cohesion, generating a sense of shared community and assisting in peer-group integration (Borsari & Carey, 2006; Zhou et al., 2014). Drinking also has a cultural significance associated with fun, humor, and pleasure (Hackley et al., 2013, 2015). Research also highlights the role of sport as actively promoting drinking behaviors (Lorente et al., 2004; Nelson & Wechsler, 2001). Despite the general perception that athletes are more "health-conscious" than their non-athlete counterparts are, studies indicate that athletes do abuse alcohol (Leichliter, Meilman, Presley, & Cashin, 1998; Stainback, 1997), and according to O'Brien and Lyons (2000), alcohol has been associated with sports and athletic participation throughout much of human history. The position is complex, however, because research in the United States suggests that sport participants drink *less* alcohol than those not engaging in sport, but that those who play sports intensively drink

more than do those who practice sports “in moderation” (Grossbard et al., 2007b; Peretti-Watel, Beck, & Legleve, 2002). The intensity of physical activity and substance use is not constant but depends on the substance, its level of use, gender, age, sport club membership, and type of sport. A key finding is that male athlete students consume alcohol more frequently than do students who are not athletes (Leichliter et al., 1998; Choquet & Com-Ruelle, 2009).

Although Connell’s (1995) concept of hegemonic masculinity (incorporating being strong, stoic, tough) has been a useful theoretical concept to understand drinking behavior and other health risks, it is important to note that this conceptual framework has been critiqued. For example, scholars have argued that more complex and “inclusive” forms of masculinity are now permitted and encouraged within certain contexts (for examples, see Anderson, 2009; Willott & Lyons, 2012). In addition, decreasing levels of alcohol consumption among more “sober” men have been viewed as a symbol of self-control (Beck et al., 2006), including among professional men whose social class and financial status, it is argued, permit them to construct “alternative” demonstrations of masculinity (Willott and Lyons, 2012). Within sporting cultures, central elements of Connell’s concept nevertheless remain analytically useful. Of related theoretical interest is the concept of “precarious manhood” which suggests manhood is a tenuous state that must be earned and maintained by public performance (Vandello & Bosson, 2013). Not least, it highlights the social construction processes of masculinity in daily life (Peralta, 2007) and can usefully be applied when addressing patterns of alcohol consumption and sport participation. In sporting contexts, the body can be seen both as an active agent and as an object of practice that is used to reproduce and reinforce gender and gender differences (McKay, Messner, & Sabo, 2000; Peralta, 2007; Dempster, 2011).

The French Context

France is historically a spirits-producing country, with alcohol use among the French population being viewed as a social ritual, generative of group cohesion and bonding (Fuchs & Le Hénaff, 2014), and not necessarily perceived as an intrinsically problematic practice. Although binge drinking was previously largely unknown, and often considered a British or English problem (Petit et al., 2009; Robert, 2014), “beuverie express,” acute alcohol intoxication, and behavioral disorders associated with alcohol all constitute an increasing public health concern (Fillaut, 2008). In France, the term “public health” refers to individual and collective health but also to the “determinants” of health. Thus, two major types of criteria are used to assert that a health problem is conceptualized as a public health problem: how widespread the problem is and the severity of the consequences of the problem (e.g., addiction, violence, and social disorder in the case of excessive alcohol consumption).

Alcohol use among French students has become a social phenomenon that has been addressed by the research community and the government over the past decade (Fillaut, 2008). Apartments, bars, and streets are popular places where students can be found “partying” (drinking socially), traditionally on Thursday nights and weekends (Fillaut, 2008). Research conducted in northern France and in partnership between the “Office of Student Life” (internal to universities) and their partners—such as Road Safety Agency Students, National Association for Prevention of Alcohol and Addictology, University Departments of Preventive Medicine and Health Promotion, and European School Survey Project on Alcohol—has produced empirical reports that highlight the problem of alcohol abuse by students (see the reference list for Brittany prevention programs: CIRDD, 2007; ESPAD, 2004). There is an analogous problem in other European countries including the United Kingdom, which has the highest rate of under-age drinking in Western Europe (Hibell et al., 2009). In France, where the social representation of

alcohol is generally quite positive, public health initiatives can confront significant perceptual difficulties. Faced with similar challenges, other European governments have decided to act, notably in Britain, where a culture of intoxication is particularly evident among male student drinkers, especially male sports students (Sparkes et al., 2007).

In relation to the specific French university context, an earlier French study by Héas et al. (2009) found an agonistic, or competitive, way of drinking among male sport science students that is close to the culture of alcoholic excess characteristic of sporting cultures more widely (Clastres & Dietschy, 2006; O'Brien, Ali, Cotter, O'Shea, & Stannard, 2007). This excessive drinking, which purportedly makes a "real" sportsman, was similarly noted by Dempster (2011), and it is vividly illustrated by competitive activities such as "drinking games." Addressing the social tendency for sports-affiliated students, particularly men and those engaged in team sports, to engage in above-average alcohol consumption is deemed critical for prevention and intervention purposes. For example, in September 2012, at the University of Rennes, during the "journée d'intégration" party, ten sports science students were admitted to the emergency room with alcohol poisoning (Rennes, 2016). (Note that this event is not representative of other periods of the academic year.) In order to investigate the specificities of the (northern) French student context, we undertook an exploratory study.

The Present Study

We were interested in investigating whether French sport science students reported behaviors commensurate with "doing gender" (West and Zimmerman, 1987) via alcohol use, which is found in campus drinking cultures identified in the extant literature from other countries (Allen-Collinson & Brown, 2012; Peralta, 2007; Sparkes et al., 2007). The present study contributes to the sociological literature on sport, alcohol use, and the construction of gender,

particularly narratives of masculinity (Coates, 2003). Our study is based upon both survey and interview data relating to alcohol use behavior within French university sport-science student cultures. We address two major gaps in the literature: We directly investigate college women's drinking, and we offer recent data on drinking practices among French college students in order to make much-needed comparisons with UK and U.S. data. First, we report the survey findings on gender differences (men's versus women's self-reported gender category) in drinking behavior among French sport students. Then we explore qualitatively how both men and women in this culture perceive the use (and abuse) of alcohol within the context of gender expression (West & Zimmerman, 1987).

Given the extant literature, we extend five hypotheses to be tested by our survey data: (a) College men will drink to intoxication more often compared to college women (Hypothesis 1), (b) College women will report non-consumption of alcohol in social settings more frequently compared to their male counterparts (Hypothesis 2), (c) Men will be more likely to consume spirits and beer compared to their female counterparts (Hypothesis 3), (d) Being male will increase the odds of heavy/dangerous drinking behaviors, using AUDIT-C measurement (Hypothesis 4), and (e) Great involvement in sports (including more intensive play, international competition, and involvement in team versus individual sports) will increase the odds of heavy/dangerous drinking behaviors, using AUDIT-C measurement (Hypothesis 5). The main objectives of our qualitative research were to question the individual positions of men and women and understand the French contextual situations of collective consumption and/or non-consumption within academic and/or sports associations.

Methods

Participants and Procedure

A confidential hard-copy questionnaire was circulated in 2009/2010 to a non-probability sample using a cluster sampling method of recruiting undergraduate and postgraduate sport sciences students. Five northern French universities—Rennes, Brest, and Saint Brieuc (located in Brittany, western France) and Caen and Dunkerque (in the north of France)—were chosen; students were then surveyed within each of the five clusters. Questionnaires were circulated to all students in the sports science departments of these universities. The overall quantitative sample was adjusted (in that we deliberately excluded 135 questionnaires from other sport sciences universities to meet national gender quotas and because our study focused on the north of France). Of the 837 requests circulated, 669 (79.9%) were returned. Of these returns, 534 were completed and compose our analytical sample; we only analyzed completed questionnaires.

Table 1 presents the characteristics of our analytical sample. The mean age of our sample was 21.1 years-old (range = 11–57), with a high proportion of team-sports participants and an intensity of training of three times per week. The profile of interviewees reflects the characteristics of the full-sample data in regard to gender distribution and level and intensity of practice. Our analytical sample comprises 347 (65%) men and 187 (35%) women, approximating the French national proportions of 68% male to 32% female ratios vis-à-vis students engaged in sport sciences studies (Les étudiants. Repères et références statistiques – édition 2010). Table 1 provides data on past sports activity (i.e., participation) ($n = 524$), the context of practice (of those who practice sport, 79.7% are in formal teams and 20.3% are engaged in informal sports involvement), and the intensity of participation (hours of practice per session). Of those who played in teams, 111 (23.4%) played football (soccer), 49 (10.3%) played basketball, 48 (10.1%) played handball, and 24 (5.1%) played tennis.

Our analytical sample was distributed by university as follows: 190 (35.5% of the sample) came from Brest University (105, 55% men; 85, 45% women), 160 (30%) from Caen (114, 71.3% men; 46, 28.7% women), 89 (16.7%) from Dunkerque (61, 68.5% men; 38, 31.5% women), 63 (11.8%) from Rennes (48, 76.2% men; 15, 23.8% women), and 32 (6%) from Saint Brieuc (19, 59.4% men; 13, 40.6% women). Concerning year in college, 181 (34%) students were first year students, 204 (38%) were second year students, 117 (22%) were third year students, and 32 (6%) were in a Master's program.

The qualitative sub-sample indicated their willingness to be interviewed on their completed questionnaires and were subsequently contacted ($n = 16$). Interviews were conducted in French by two French-speaking male researchers. We cannot provide statistics on the socio-economic background of students because we did not collect this information. Overall, the official reports of the Ministry of Higher Education show that graduates entering professional sport science are slightly more likely to be from lower socio-economic backgrounds. Note, for research purposes, it is unlawful to collect data on ethno-racial identity in France.

Materials and Analysis Plan

The quantitative portion of our study is based on a self-completed questionnaire that included a total of 63 items seeking information on personal and demographic data, sports participation, alcohol consumption, consumption of other substances, alcohol and health perception, and exposure to substance use preventive programming. The final item asked if students were involved in an alcohol awareness campaign during their curriculum studies and, if so, whether it had changed their behavior. Permission for data collection was provided by IRB. Participants provided informed consent when they accepted participation in the survey. Data were kept secure at the lead author's office and were anonymous.

Relationships among variables were mainly examined using chi-square tests, *t*-tests, and ANOVAs that were performed separately by gender. To control for confounding factors, we then used two logistic regression models to study the factors associated with frequent heavy drinking and heavy/dangerous drinking (as determined by the AUDIT-C measure) by gender (1 = men, 2 = women); past sports activity (1 = yes, 2 = no); individual sport/team sport (1 = individual, 2 = team); sport practice career (1 = less than 2 years, 2 = from 2 to 4 years, 3 = from 3 to 6 years, 4 = more than 6 years; $M = 3.68$, $SD = .67$); intensity of practice (1 = less than 2 hours/week, 2 = from 2 to 4 hrs/week, 3 = from 4 to 6 hrs/week, 4 = more than 6 hrs/week; $M = 2.82$, $SD = .94$), context of practice (1 = formal, 2 = informal), and age of first drink.

Alcohol use/Non-consumption. We include four sets of measures of alcohol use and non-consumption over the previous 12 months. (a) Frequency of intoxication is assessed with the question, “Over the past 12 months, how many times have you been drunk?” with the potential responses: 1 (*Never*), 2 (*Less than once per month*), 3 (*Once per month*), 4 (*Regularly*), and 5 (*Almost every day*). (b) The quantity of alcohol consumed on a typical drinking day is measured with the question “How many standard drinks do you drink during a typical day when you drink?” and is coded as 1 (*One or two*), 2 (*Three or four*), 3 (*Five or six*), 4 (*Seven to nine*), and 5 (*Ten or more*). (c) In addition, we include measures of alcohol use for specific alcoholic beverages including beer, wine, spirits, and “other” alcohol (which may include wine cooler and mixed drinks). A set of four separate questions was included that pertain to the use of specific types of alcohol: “How often do you drink (1) beer, (2) wine, (3) spirits, and (4) other alcoholic beverages?” Response options for these four questions were: 1 (*Never*), 2 (*Less than once per month*), 3 (*One to four times per month*), 4 (*Two to six times per week*), and 5 (*Almost every day*). (d) Lastly, we include a measure of non-consumption using one question: “Have you ever

spent an evening (party) without drinking?,” coded as 1 (*Never*), 2 (*Occasionally*), 3 (*Rather often*), and 4 (*Very often*), to establish rates of infrequent to no social drinking.

AUDIT-C. Our questionnaire incorporated items from AUDIT-C (Saunders, Aasland, Babor, De La Fuente, & Grand, 1993) to assess alcohol risk (heavy/dangerous drinking behavior) in respondents. The AUDIT-C is one of a number of validated questionnaires that have been translated into French. Developed and recommended by the World Health Organization (2014), this questionnaire is intended to identify participants who may be “at risk” for alcohol disorders. We used an abbreviated version of the test (AUDIT-C; Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998) to reduce response fatigue. Kriston, Hölzel, Weiser, Berner, and Härter (2008) performed a meta-analysis of 14 published studies to compare the performance of the full AUDIT and the AUDIT-C. The results indicated that both tests have similar accuracy for detecting harmful alcohol use. The shortened version includes the first three questions of the AUDIT.

The first two questions from the AUDIT-C relate to habitual consumption (frequency: “How often do you have a drink containing alcohol?” and quantity “How many standard drinks containing alcohol do you have on a typical day?”); the third question refers to the frequency of getting drunk (“How often do you have six or more drinks on one occasion?”) (defined as consuming at least six standard alcohol units on one occasion; we term this “binge drinking” hereafter). Responses to each item were scored from 0 to 4, yielding a maximum possible summed score on the AUDIT-C of 12 ($\alpha = .81$). To interpret and contextualize the scores, men and women have different thresholds of what constitutes hazardous or problematic drinking according to AUDIT-C guidelines (Bush et al., 1998). Specifically, a score of 4 or higher for men and a score of 3 or higher for women indicates that they are engaging in potentially

dangerous drinking practices or misusing alcohol (Bush et al., 1998). In general, the higher the score, the more likely it is that the respondent's drinking practices are high risk. The answers are used to calculate an index measuring the average weekly alcohol consumption of an individual and the frequency with which s/he drank six drinks or more on one occasion. The scores obtained are used to categorize the consumption of respondents, with higher scores indicating greater consumption.

The first regression model was defined by frequent and heavy drinkers as our dependent variable, with two AUDIT-C questions constructed as scales: "How often do you drink alcohol?" and "How often do you drink six or more drinks at a special occasion?" Binary and dummy variables were built with this coding: 0 (less than once a month) and 1 (more than once a month). The second regression model was defined by a binary and dummy variable: AUDIT-C risk behavior: 0 (score of 5 or lower) and 1 (score of 6 or higher). We used the same independent variables as indicated previously to which we added the age of first drink.

Interviews. In order to generate a richer understanding of alcohol use practices in a French context, face-to-face interviews were conducted with student participants recruited from the survey sample and proportionate to the questionnaire sample in terms of gender representation: 10 (63%) men and 6 (37%) women. Students volunteered to participate in interviews by responding affirmatively to a survey-embedded invitation. With this number of interviews, we found that data saturation was occurring, with the same themes emerging from interviewees' accounts as the interviews progressed (Sparkes & Smith, 2014).

All five universities were represented in the interviews, which were conducted in French and in neutral, safe locations (such as quiet areas of coffee shops on campus) to ensure that students felt at ease in familiar surroundings. Interviews lasted between 40 and 90 minutes, with

a mean duration of 55 minutes. Qualitative data were subjected to thematic analysis (Jones, Brown, & Holloway, 2013) by the same two French researchers to identify key themes and sub-themes that emerged from the interview transcripts. Each researcher met to decide upon the existence of emergent themes by discarding themes that were not mutually agreed upon and proceeded with describing themes that were mutually agreed upon and those which had sufficient evidence to support their inclusion in our results. The original French transcripts were translated into English by the research team, and pseudonyms were assigned to all participants.

Results

Descriptive Statistics

We first present survey data on our respondents' general characteristics. Table 1 provides the distribution of the sample population, including participants' gender and general sporting characteristics (past sports activity, individual versus team sport participation, sport practice career [years in sport], intensity of practice, context of practice, and competitive level). Most of the sample reported having a history of sports participation (90.8%), and most of the respondents reported engaging in formal sporting practices (79.7%). A larger percentage of men (84.4%) were involved in formal sporting contexts compared to their female counterparts (70.7%). Also, men were devoting more hours to sports practice compared to women. A minority of respondents (4.1%) was involved in international completion.

Alcohol Use and Non-Consumption Characteristics by Gender

Table 2 reports drinking behavior among French sports students. We observe that the average age of first intoxication is 13.87 ($SD = 2.71$) years-old for men and 14.53 ($SD = 2.32$) years-old for women, $t(df=612) = 6.43, p < .032, d = .46$. With regard to overall alcohol use, data

suggest that repeated intoxication is not as high as in other general surveys of young people aged 17 from the same French regions (Legleye, Spilka, Le Nézet & Laffiteau, 2009), and there seems to be less drinking compared to French youth in 2009 (Choquet & Com-Ruelle, 2009). Results do, however, show significant gender differences related to the frequency of intoxication $\chi^2(4) = 39.97, p < .001$. Women who do not consume alcohol at all (*never*) seem to be over-represented and are underrepresented among regular drinkers (*once a week*) in contrast to men. We further observe in Table 2 that men and women are significantly different in terms of their non-drinking behaviors, $\chi^2(1) = 36.38, p < .001$. The results suggest that women tend to report going without alcohol “very often” compared to their male peers. These results reveal significant gender differences in consumption and thus support Hypotheses 1 and 2, which predicted that men would be more likely to drink to intoxication compared to women and that women would be more likely to report non-consumption in social settings compared to men, respectively.

Table 2 further indicates that there are gender differences concerning the kind of alcohol consumed. Men and women differed significantly in their consumption of beer, $\chi^2 = 100.63, p < .001$, and their consumption of spirits, (e.g., whiskey, vodka), $\chi^2 = 28.03, p < .001$. Furthermore, young people drink less wine than do older adults (Lorey & Poutet, 2011), and no gender differences in the present data are apparent in wine consumption as well as other types of alcoholic beverages (see Table 2). These findings offer support for Hypothesis 3 which hypothesized that men would be more likely to consume spirits and beer compared to women.

Whereas slightly over 18% of men in Lorente et al.’s (2003) study of southern French students reported consuming beer 2–6 times per week, significantly more men in our northern French sample (30.3%) reported consuming the same amount, $\chi^2(1) = 74.76, p < .008$.

Furthermore, only 13.1% of men in our sample said they “never” drank beer compared to 27.5%

of men surveyed in the south of France (Lorente et al., 2003). The consumption of beer specifically is more pronounced among students in the north, $\chi^2(1) = 91.96, p < .006$ —especially among men, which perhaps illustrates certain regional differences in the French culture of beer drinking.

AUDIT-C Scores

In order to compare means on the AUDIT-C scale for the variables of interest, *t*-tests and one-way ANOVAs were conducted. Table 3 reveals significant gender differences for AUDIT-C scores such that men's scores were significantly higher than women's. In addition, the mean score for men is 5.41 and indicates that their consumption is in the category of participants "at risk" (mean score greater than or equal to 4), whereas women demonstrate a mean score of 3.21 which is below the "at risk" cutoff point. These findings offer support for Hypothesis 4, which proposed that men would be more likely to engage in heavy/dangerous drinking behaviors as measured by AUDIT-C, even after accounting for different thresholds of intoxication in women and in men.

Additionally, we found a significant difference in sports intensity (hours played per week) and AUDIT-C scores (see Table 3). A post hoc Tukey test showed that those who practiced less than two hours per week were significantly different ($p < .05$) from all other groups, and those who practiced more than two hours per week were not significantly different from each other, indicating those who practice more have significantly higher mean AUDIT-C scores. Moreover, the mean AUDIT-C score for respondents playing two hours or more per week falls above the threshold for intoxication (2-4 hours per week: $M=4.56$; 4-6 per week: $M=4.85$; More than 6 hours per week $M=4.69$).

There is also a significant difference between AUDIT-C scores and competitive level (see Table 3). A post hoc Tukey test ($p < .05$) revealed that AUDIT-C scores were higher among athletes who competed at an international level than at any other level (departmental, regional, and national), and no significant differences were found among the three lower levels of competition. We also found higher average AUDIT-C scores among athletes who played team versus individual sports. Furthermore, Table 3 documents that both athletes playing team (as opposed to individual) sports ($M = 5.12$) and athletes who compete at an international level ($M = 5.71$) recorded mean scores that fall into the category of being “at risk.” Across these analyses, we found support for Hypothesis 5, which predicted that greater involvement in sports would increase the odds of heavy/dangerous drinking behaviors as measured by AUDIT-C.

Gender and Age as Predictors of Consumption

In Table 4, gender, sports-related characteristics (past sports activity, individual/team, years of career, intensity, and context of practice) and age of first drink were entered into each of two logistic regression models to determine which predictors accounted for unique variance in each of two criterion variables, frequent heavy drinkers and AUDIT-C risk behavior. Two variables (gender and age of the first drink) emerged as significant predictors. As shown in Table 4, the predictor set had a significant effect on heavy drinking, $\chi^2(7) = 33.08, p < .001$, and AUDIT-C risk behaviors, $\chi^2(7) = 63.72, p < .001$. The Hosmer and Lemeshow inferential test was not significant for both regressions (Frequent heavy drinkers = 10.80, $p = .21$; AUDIT-C risk behavior = 15.29, $p = .28$), indicating that the data fit the model well. These variables correctly identified 76.6% of the student-athletes with elevated frequent/heavy alcohol consumption and 65.5% with AUDIT-C risk behaviors.

The predictor variable that best distinguished heavy and AUDIT-C risky behavior from non-heavy/risky student-athlete drinkers was gender status in both analyses ($p < .001$). In other words, for a one-unit increase in gender status, student athletes have 3.6 (Odds Ratio = .367) greater odds of being a heavy drinker and 2.7 (Odds Ratio = .275) times greater odds of being an AUDIT-C risky drinker. The age of the first drink was the next strongest predictor, but only for AUDIT-C risky drinking (Odds Ratio = .879, $p < .01$); for a one-unit increase in age of the first drink, student athletes have 8.7 greater odds of being an AUDIT-C risky drinker. Table 4 shows the logistic regression coefficient and odds ratio for each of the predictor variables. These additional analyses offer further support for Hypothesis 5 which associates level of sports participation with risky drinking behavior.

Qualitative Findings

In the following, we present brief interview data in order to illustrate the salient findings surrounding sportswomen's and sportsmen's accounts of their alcohol-related behavior. We report these findings under four key themes that emerged from data analysis: (a) Drinking to excess: Male privilege and women's concern for safety; (b) Alcohol use and the embodiment of hegemonic masculinity; (c) Beer is for boys: The gendering of drink; and (d) Gender, social integration, and pressure to conform. These qualitative data provide brief illustration of our participants' views. See Table 6 for a listing of pseudonyms and key drinking practices for each interviewee.

Drinking to excess: Male privilege and women's safety concerns. For the women interviewed, issues of personal safety and well-being in drinking contexts emerged as salient via the interview question: "If you personally consume (or do not consume) alcohol, explain to me the main reasons?" Some women highlighted what they perceived as an uneasy relationship

between alcohol and sport. For example, Jeanne noted: "...sport and alcohol do not necessarily go well together" when asked about her personal experience concerning the question "Have you consumed alcohol during student parties and during evenings with your team?"

Women also expressed particular concerns about maintaining self-control and feared the consequences of losing self-control due to heavy drinking when asked about parties and "embarrassing situations for you or other people?" For example, Francoise commented: "I have not forgotten the effects of alcohol—that can become dangerous when you no longer have control of yourself." Clarisse said: "I believe that we can have a good time without being totally smashed. Well, the effects of alcohol can be dangerous when you don't have control of yourself." Primarily it was the dangers of losing self-control (and even losing consciousness) and thus leaving themselves vulnerable to potential attack, unprotected sex, and even sexual assault, which were recounted by female students—fears also highlighted in other research (Ehret, Ghaidarov, & LaBrie, 2013; Griffin, Bengry-Howell, & Hackley, 2009; Maggs, Williams, & Lee, 2011).

Jeanne described her memories of a highly negative encounter with alcohol, her intense regret and subsequent change in behavior when asked "Can you describe a special memory involving alcohol?":

I was going to get served with a glass—33cl black/apple juice counter vodka (I had already consumed several alcoholic shots in the evening), and on my return, I sat with all my friends around on the floor, singing a ritual song, and one of them had just drunk his glass in one gulp. I should have done the clever thing when my turn arrived, but... I had my 33cl of mixture to drink in one go. Obviously I was not going to refuse because everyone had downed theirs before me. Barely 30

minutes later, I was so drunk I was almost in an alcohol-induced coma. This was my first experience of being drunk in college. This awful experience has taught me to say “no.”

As a consequence of this highly negative experience, Jeanne no longer engaged with the campus drinking culture at all.

In contrast, male students seemed to valorize their excessive alcohol consumption, describing a life-world that linked and indeed celebrated the heady combination of parties, festive events, and drunkenness. As Julien explained when asked about his personal consumption (“How would you describe your own consumption?”): “I drink a lot during festive occasions because it is culturally rooted in our rituals.” In response to the same question, excessive drinking was portrayed by Jean as a: “short and intense” practice, whereas Philippe noted the practice of “drinking alcohol to get high as quickly as possible.” From the quantitative data, it does appear that excessive alcohol consumption is more prevalent among men. As has been noted in the literature, the culture of intoxication is generally still considered to be “owned” by men more than by women (Fuchs & Le Hénaff, 2014) to such an extent that increases in fast, heavy drinking among women have generated something of a moral panic regarding the “laddish” behavior of heavy-drinking young women, known in the United Kingdom as “ladettes” (Griffin et al., 2009; Jackson & Tinkler, 2007).

Alcohol use and the embodiment of hegemonic masculinity. As noted in relation to our survey data, differences are especially pronounced among the “once per month” and “once per week” categories of heavy intoxication (six drinks or more in any one session). These results are perhaps reflective of the markers of embodied masculinity (Connell, 1995) associated with alcohol use, as described by Peralta (2007). In our qualitative interviews, tales of intoxication

and the display of “trophies” of empty liquor bottles were recounted by male interviewees as a source of pride. When asked about drinking games and women’s participation, Dominique highlighted the gender dimension, where men “hitting the bottle hard” were deemed socially acceptable, in stark contrast to negative constructions surrounding analogous behavior in women:

Girls can be integrated in group culture in the same way [as boys] but by hitting the drinking games less hard—the hardest are reserved for the guys in the groups I inhabited. If girls do hit the drink heavily... they are girls who have a degraded image of themselves.

Guy similarly noted the sexist, misogynist stereotyping of girls and women who drink to excess being labelled as “sluts” and “whores,” highlighting the perceived nexus of heavy drinking and promiscuous sexuality when asked about social behaviors (“In relation to the opposite gender, does alcohol change behavior?”) :

Some girls are not bothered by this role, others regret and fear a bad reputation ...

For a boy, being called “Casanova” isn’t something to be regretted, in fact, he will boast to his peers, while a girl, all too often gets called a “whore.”

Whereas heavy-drinking, “promiscuous” male sports students were considered to embody “Casanova”-type masculinity with certain positive connotations, women sports students were berated for engaging in analogous heavy drinking, and women often found themselves stigmatized. This differential framing of women’s and men’s drinking coheres with other research findings where unease is expressed regarding drunken young women acting in similar ways to drunken young men (Mullen, Watson, Swift, & Black, 2007).

Similarly, de Visser and McDonnell (2012) highlight the gender double standard operating in relation to more judgmental attitudes towards women’s drinking, even among those

with relatively egalitarian attitudes towards women and men. Women students in our study were well aware of the masculine connotations of alcohol (particularly beer), as Jeanne, a female volleyball player when asked “From your point of view, are women are generally integrated in these games?,” noted: “In a sports group, although always we are all aware of the risks, alcohol is seen as somewhat masculine, it is not for young women...” Not all the women students adhered to this belief, however, and some women did participate in heavy alcohol consumption in order to be socially integrated with their sporting peers; as Pascale mentioned “I have often seen women develop these games also ... to put a coin in the shooter, they are also skillful.” This comment was made in reference to a specific French drinking game.

Beer is for boys: The gendering of drink. The interviews revealed gender differences in the consumption of beer specifically, as did the survey results, with differences more pronounced in relation to regular intoxication (more than 6 drinks on one occasion at least once per week). Male students reported significant scores for consuming beer 2 to 6 times per week (see Table 2). When asked about his personal socialization through sporting club (“Do you think alcohol allowed you to integrate into your group of athletes?”), Dominique explained that “alcohol is seen as something manly, it's not for pussies and we're usually talking beer,” going on to suggest that only “real” men can drink beer “successfully,” whereas other men who cannot “hold their beer” are not truly masculine. Interestingly, higher regular consumption of beer was reported by our participants to be more frequently in the north than in south of France, as also evidenced by other studies (Lorente et al., 2003; Martha et al., 2009).

The association between men and beer drinking is perhaps not surprising. As noted by Wenner and Jackson (2009), beer, like sport, is predominantly associated with masculinity. As Messner (2002, p. 127) argues in relation to normative requirements of traditional masculinity:

“the consumption of beer confirms one’s sense of masculinity, solidifies one’s membership in a community of men.” Beer is consumed in order to unite the “lads” at the end of a collective training session at the university. For example, Guillaume, when asked about his university friends, notes that integration was achieved “by regularly sharing a beer with the guys.” In this context, “real men” prefer to consume beer rather than wine. Furthermore, sport and alcohol sponsorship are closely linked, creating positive associations between alcohol and athletic success, particularly in team sports (such as rugby and football/soccer) where drinking together with teammates has connotations of social cohesion and team solidarity.

Gender, social integration and pressure to conform. Our results also highlight gender differences in “non-drinking” behaviors among sportsmen and sportswomen, which correspond with other findings in this domain (Peralta, 2007). The survey results indicate that it is primarily women who report non-consumption of alcohol in social settings. These gender differences also emerged strongly in the qualitative data, where social marginalization processes were reported in relation to those choosing not to drink. When asked about his participation in drinking games, Pascale explained how students’ desire to feel integrated into, and socially approved by, sporting groups led to imitation behaviors and complicity (see Connell, 1995), particularly among male students: “Some may seek social recognition through a sport and do not mind increasing their alcohol consumption and frequency, in order to be well regarded within the group.”

Both sportsmen and sportswomen who chose not to drink (7%, $n = 39$, in our survey data) appeared to encounter stigmatization, making them vulnerable to peer pressure to conform. As shown by Connell’s (1995) model of complicity/resistance, and also by Wetherell and Edley’s (1999) work, some men do resist the popular templates of a “heavy drinking” version of masculinity. The pressures to drink in many sporting cultures are, however, considerable,

particularly if students want to feel socially accepted and integrated, as has been noted in other research (Allen-Collinson & Brown, 2012; Fuchs and Le Hénaff, 2014; Peralta, 2007; Sparkes et al., 2007). As Christophe in our interviews summarized when asked about his personal integration (“Can you describe your personal integration through sport classroom?”): “To join a sports group, it’s easier if you drink. The others look at us differently and we are better accepted [if we drink].”

Similarly, Helene described how she felt pressure to conform to the student drinking culture, even to the point of risking losing consciousness or falling down: “And I was often sick, yes, to the point of no longer being able to stand.” When asked to describe personal alcohol consumption, another female participant, Marian, recounted the heavy social pressure placed upon her and her teammates with regard to “partying,” including heavy alcohol intake, particularly following matches and competition—the so-called “third half-time” (Fuchs & Le Hénaff, 2014). Despite the social pressures, Marian did manage to resist, adhering to her principles:

Twice I have participated in a French handball championship and both times the primary motivation for all my teammates to reach the final four was the drinking that they had planned—from the very first game of the competition. But for me, I didn’t want to follow this model because we were in a French handball championship ... I didn’t make any effort to integrate into the team... I am proud of my line of conduct.

Many women reported feeling the pressure to drink and to “act like the guys” (quote from Clarisse) with regard to drinking more copiously than they normally would. When asked to describe their social engagement, heavy drinking as part of a team context was portrayed as a

"means of social integration" by one female student (Hélène), whereas Marian described how: "...some [female students] may seek social recognition through a sport and won't mind greatly increasing their alcohol consumption and frequency to be viewed positively by the group." These findings cohere with earlier research (Young, Morales, McCabe, Boyd, & D'Arcy, 2005), which notes an increase in frequent "binge drinking" among female undergraduate students who equate being able to "drink like a guy" (including drink large amounts of alcohol and drinking competitively) with gender equality. The social pressures to conform to norms of heavy group drinking were described by both women and men in our sample. Such peer pressure to engage in a culture of intoxication resonates strongly with the findings of other studies of students' drinking, particularly among sports students (Allen-Collinson & Brown, 2012; Martha et al., 2009; Peralta, 2007; Sparkes et al., 2007;), as well as among sportswomen and sportsmen generally (Fuchs & Le Hénaff, 2014; Lorente et al., 2004; Nelson & Wechsler, 2001).

The sport science students we studied were more likely to report having frequent episodes of alcohol intoxication compared to findings of a national French survey (Choquet & Com-Ruelle, 2009). This is highly problematic behavior when the dangers of heavy alcohol consumption are so well-known (World Health Organization, 2014), especially in a context where sportsmen and sportswomen are set up as role models (Biskup & Pfister, 1999; Gibson, 2004) especially for young people.

Discussion

The purpose of our mixed-method exploratory study was to investigate gender and gender dynamics in reported alcohol use in regard to the culture of intoxication among French college

students, via both survey and interviews among sport science students in northern French universities. We measured gender differences in alcohol use quantitatively via survey methods. We used qualitative methods to examine how male and female sports science students talked about themselves as sportsmen and sportswomen, particularly in relation to gender construction and alcohol consumption practices.

Commensurate with the findings of other campus-based studies of sports science students in the United Kingdom (Allen-Collinson & Brown, 2012; Sparkes et al., 2007), and the United States (Green et al., 2014; Peralta, 2007; Wahesh et al., 2013), we found that a culture of heavy drinking among French sports science students prevails (as reported by the students themselves) and is normalized. This is most pronounced among male students—specifically in terms of excessive beer-drinking. As hypothesized, male students reported a higher frequency of intoxication (as indicated by men’s AUDIT-C hazardous scores) and reported a lower frequency of non-consumption compared to their female counterparts. We also found men reported consuming beer and spirits more often than did women. Finally, we found that being a sport science student was associated with heavy/dangerous alcohol use as measured by the AUDIT-C.

Both our interview and survey data supported the long-standing association between heavy alcohol consumption and traditional masculinity among men (Dempster, 2011; Palmer, 2011; Peralta, 2007). Furthermore, some masculine identifications appear to be grounded in a preference for consuming beer specifically, and in a highly conspicuous manner, as well as in excessive alcohol consumption in general. In line with previous findings from the United States and United Kingdom, beer drinking in particular remains a salient symbol of many sportsmen’s identities (Peralta, 2007, Sparkes et al., 2007). We are aware that such reporting could well be due to male students wishing to promote a specific “presentation of self” (Goffman, 1990) that

conforms to traditional notions of “masculine” or “macho” sportsmen who can party hard, drink to excess, engage in all manner of drinking games (Grossbard et al., 2007a), and still turn out to do battle on the athletic field of play.

In contrast, the sportswomen we interviewed often used a vocabulary based on health, sexual hygiene, negative memories of being intoxicated, and loss of self-control to explain their relatively moderate alcohol consumption compared to their male counterparts. We are again mindful of self-presentational issues and its possible association with stigmatization surrounding women’s engagement with a culture of intoxication (Peralta, 2010).

Limitations and Future Research Directions

As noted from the outset, the present research represents an initial step in investigating alcohol behaviors and attitudes of French sports science students at five universities in northern France. The data presented focus upon the nexus of gender (particularly men and masculinity), sport, and alcohol. There are, inevitably, limitations with our study. Our data are based upon a non-probability sample and upon self-report. There are limitations vis-à-vis the generalization of our research to populations beyond those studied here. Furthermore, we did not have the resources to undertake more extensive interviewing, and we would have liked to generate richer, more in-depth qualitative data and analyses. With regard to the questionnaire, the items did not permit identification of the intensity or level of sports participation.

Additionally, we used self-report of participants’ gender as a simple indicator of gender category when a richer approach might focus on more specific indicators of gender identification (such as conformity to masculine and feminine norms; see Moradi and Parent, 2013, for possibilities). Also, we did not carefully measure socioeconomic status which limits our ability to understand the effects of social class on the culture of intoxication. Nevertheless, the data

from the exploratory study do provide important insights into gender and gender differences in reported alcohol use practices and hazardous drinking as measured by AUDIT-C scores within a French college student context. In sum, our results provide multi-method insight into drinking practices and the meaning of alcohol among French sports science students and provide a baseline for initial comparisons to be made cross-culturally and internationally.

Further research is needed to explore the nexus of women, femininities, sport, and alcohol, which to date remains under-researched (Fuchs & Le Hénaff, 2014; Palmer, 2014). Research on cultural contexts beyond France, the United States, New Zealand, and the United Kingdom are needed to establish the extent to which norms regarding alcohol use are gendered and the extent to which they are similar or different across cultures. In addition, research on the gendered nature of other forms of substance use and abuse is needed. Further study of “non-drinkers” is needed as are inquiries into the associations between sport students, alcohol use, and body image. With regard to the implications of drinking behaviors, recent research by Moreau & Austin (2000) indicates that the more frequently children are exposed to alcohol advertising, the more they build their own positive imagery around alcohol consumption. Our results suggest that drinking alcohol is seen as important for the expression of masculine identity among French sports science students. As research into gender and sport illustrates (Wenner & Jackson, 2009), heavy and frequent alcohol consumption are associated with substantial health problems, and thus this association sits very uneasily within a culture of physical exercise and fitness, as well as with the use of sports’ role models for the promotion of physical, athletic, and moral values. Thus alcohol advertising and its association with sport and masculinity is an important avenue for future research.

Practice Implications

Although our research was not designed directly to inform health educational policy and practice, our results are nevertheless useful in considering future research directions and the development and tailoring of educational and or prevention programs targeting the culture of intoxication. Frequent and excessive drinking can be highly damaging to health (Dunning & Waddington, 2003; Palmer, 2011; World Health Organization, 2014) and problematizes in many ways the promotion of the benefits of sport and exercise in schools and in health-based interventions. To date, it would appear that health awareness campaigns warning against the dangers of alcohol use and abuse are having little impact on the behavior of male sports science students at the northern French universities studied (Fillaut, 2008). We encourage health and mental health professionals to consider taking into account not only gender differences but also gender ideology (especially masculinity) in addressing problems associated with college students' alcohol use. Perhaps focusing on gender, and especially the notion of hegemonic masculinity, will make prevention and intervention programming more efficacious. Analogous to other research (Green et al., 2014; Mullen et al., 2007), we found that social pressure to drink is a strong driving force in excessive levels of alcohol consumption by university/college sports participants. Peer pressure should also be taken into careful consideration.

Our research also illustrates the paradoxical, contradictory nature of the sport-alcohol nexus, as identified by Palmer (2011), who also highlights the way in which sport is a context for, as well as a "solution" to, health-damaging behaviors. Sport students should perhaps be screened for hazardous alcohol use as a regular prevention and intervention protocol.

Hegemonic masculinity, and its association with hazardous risk taking, should be critically challenged by health professionals and athletic staff. The pursuit of less harmful forms of

masculinity and the promotion of a “more” healthy masculinity that deemphasizes risky health behavior should be broached in recruitment and training practices.

Conclusion

On the basis of our findings, it appears that women and men do not share the same norms and expectations with respect to alcohol consumption. For example, for men, the demonstration of hegemonic masculinity and “virility” was strongly linked with high levels of alcohol consumption. For women in our sample, alcohol consumption appeared more strongly related to conforming to immediate social norms and a desire to “fit in,” but also as a relaxant to engender greater confidence in social situations (Rúdólfsdóttir & Morgan, 2009). Such gendered attitudes and behaviour need to be examined and discussed by instructors, physicians, and clinicians. We would encourage these key social actors, together with intervention specialists, to take into account not only gender but also gendered belief systems and alcohol-related consequences when developing strategies and programs for alcohol awareness education and behavior change. Furthermore, policymakers and healthcare professionals, as well as those involved in university and college education, need to challenge the dual standard that operates in relation to women’s and men’s drinking. Embracing such a stance would help institutions avoid, albeit unwittingly, contributing to discourses that more harshly judge women’s drinking on the basis of sexist assumptions while inadvertently supporting male intoxication via the reliance on assumptions about the association between alcohol use and normative masculine male behavior. Critically understanding the pressure to conform to gendered expectations and to engage in gendered performances may be key to addressing the culture of intoxication overall.

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Table 1

Characteristics of Sport Science College Students

Indicators/Variables	Total Sample (<i>N</i> = 534) <i>M</i> (<i>SD</i>) or <i>n</i> (%)	Men (<i>n</i> = 347) <i>M</i> (<i>SD</i>) or <i>n</i> (%)	Women (<i>n</i> = 187) <i>M</i> (<i>SD</i>) or <i>n</i> (%)
Age (<i>n</i> = 534)	21.09 (2.60)	21.07 (2.87)	21.13 (2.87)
Past Sports Activity (<i>n</i> = 524)			
1. Yes	476 (90.8%)	314 (92.6%)	162 (87.6%)
2. No	48 (9.2%)	25 (7.4%)	23 (12.4%)
Individual or Team Sport (<i>n</i> =589)			
1. Individual	222 (37.7%)	64 (17.44%)	68 (30.63%)
2. Team	367 (62.3%)	303 (82.56%)	154 (69.37%)
Sport Practice Career (<i>n</i> =582)	3.25 (1.12)	3.36 (1.04)	3.07 (1.21)
1. Less than 2 years	78 (11.7%)	37 (10.11%)	41 (18.98%)
2. 2 to 4 years	73 (11.1%)	45 (12.3%)	28 (12.96%)
3. 4 to 6 years	54 (8.1%)	32 (8.74%)	22 (10.18%)
4. More than 6 years	377 (56.4%)	252 (68.86%)	125 (57.87%)
Intensity of Practice (<i>n</i> = 476)	2.82 (.94)	2.90 (.89)	2.69 (.99)
1. < 2 hours	30 (6.3%)	17 (5.4%)	13 (8%)
2. Between 2 & 4	149 (31.3%)	89 (28.3%)	60 (37%)
3. Between 4 & 6	150 (31.5%)	107 (34.1%)	43 (26.5%)
4. More than 6	147 (30.9%)	101 (32.2 %)	46 (28.4%)
Context of Practice (<i>n</i> = 478)			
1. Formal (associations)	381(79.7%)	265 (84.4%)	116 (70.7%)
2. Informal (free)	97 (20.3%)	49 (15.6%)	48 (29.3%)
Competitive Level (<i>n</i> = 464)			
1. Departmental	142 (30.6%)	99 (32.25%)	43 (27.39%)
2. Regional	204 (44%)	150 (48.86%)	54 (34.4%)
3. National	99 (21.3%)	47 (15.3%)	52 (33.12%)
4. International	19 (4.1%)	11 (3.5%)	8 (5%)

Note. The numbering of the response options indicates how each was coded.

Table 2

Alcohol Use/Non-Consumption and Type of Alcohol Use for Men and Women

Indicators	Men Gender Comparison	
	<i>n</i> (%)	<i>n</i> (%)
Age of first drink	$t(612) = 6.43, p < .05, d = .46$	
<i>M</i> (<i>SD</i>)	13.87 (2.71)	14.53 (2.32)
Frequency of Intoxication	$\chi^2(4) = 39.97, p < .001$	
1. Never	46 (14.2%)	56 (32.2%)
2. Less than once per month	59 (18.2%)	45 (25.9%)
3. Once per month	124 (38.3%)	54 (31%)
4. Regularly	91 (28.1%)	19 (10.9%)
5. Almost Every day	4 (1.2%)	0
<i>M</i> (<i>SD</i>)	3.63 (1.50)	2.72 (1.43)
Number of Drinks on Typical Drinking Day	$\chi^2(4) = 22.39, p < .001$	
1. One or two	98 (20.2%)	76 (15.6%)
2. Three or four	64 (13.2%)	31 (6.4%)
3. Five or six	54 (11.1%)	35 (7.2%)
4. Seven to nine	51 (10.5%)	20 (4.1%)
5. 10 or more	46 (9.5%)	11 (2.3%)
<i>M</i> (<i>SD</i>)	2.63 (1.43)	2.10 (1.21)
Frequency of Non-Consumption	$\chi^2(4) = 36.38, p < .001$	
1. Never	30 (9.4%)	6 (3.4%)
2. Occasionally	159 (49.8%)	56 (32.2%)
3. Rather Often	91 (28.5%)	57 (32.8%)
4. Very often	39 (12.2%)	55 (31.6%)
<i>M</i> (<i>SD</i>)	2.44 (.84)	2.97 (.87)
Type of Alcohol Use: Beer	$\chi^2(4) = 100.63, p < .001$	
1. Never	41 (13.1%)	75 (43.1%)
2. Less than once per month	54 (17.2%)	34 (19.5%)
3. One to four times per month	117 (37.3%)	52 (29.9%)
4. Two to six times per week	95 (30.3%)	13 (7.5%)
5. Daily use	7 (2.2%)	0
<i>M</i> (<i>SD</i>)	2.90 (1.03)	1.98 (.98)
Type of Alcohol Use: Wine	$\chi^2(4) = 8.33, p = .08$	
1. Never	123 (39.5%)	83 (48.3%)
2. Less than once per month	86 (27.7%)	43 (25%)
3. One to four times per month	82 (26.4%)	41 (23.8%)
4. Two to six times per week	19 (6.1%)	5 (2.9%)
5. Daily use	1 (0.3%)	0
<i>M</i> (<i>SD</i>)	2.05 (.99)	1.92 (.91)
Type of Alcohol Use: Spirits	$\chi^2(4) = 28.03, p < .001$	
1. Never	8.2 (23%)	23 (40%)
2. Less than once per month	24.4 (77%)	32.2 (56%)
3. One to four times per month	55.7 (176%)	39.7 (69%)
4. Two to six times per week	11.7 (37%)	5.2 (9%)
5. Daily use	0	0
<i>M</i> (<i>SD</i>)	2.65 (.83)	2.28 (.85)
Other Alcohol Use	$\chi^2(4) = 7.39, p = .117$	
1. Never	69 (22%)	32 (18.5%)

2. Less than once per month	101 (32.2%)	64 (37%)
3. One to four times per month	111 (37.3%)	69 (39.9%)
4. Two to six times per week	23 (7.3%)	8 (4.6%)
5. Daily use	4 (1.3%)	0
<i>M (SD)</i>	2.35 (.96)	2.25 (.84)

Note. Sample size for each category varies due to uneven responses.

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Table 3

AUDIT-C Scores by Participants' Gender, Physical Activity, Competitive Level, Intensity, and Sport-type (N = 534)

Variables	<i>M(SD)</i>	Group Comparisons
Gender		$t(612) = 7.65, p < .001, d = .95$
Women	3.21 (2.34)	
Men	5.41 (2.58)	
Past Sport Activity		$t(566) = .176, p = .675, d = .001$
Yes	4.58 (2.71)	
No	4.38 (2.92)	
Competitive level		$F(3, 488) = 2.83, p = .038, \eta^2 = .047$
Departmental	4.7 (2.81) _a	
Regional	4.9 (2.41) _a	
National	4.4 (2.56) _a	
International	5.7 (2.56) _b	
Intensity		$F(3, 550) = 3.53, p = .015, \eta^2 = .038$
< 2 hours	2.78 (2.35) _a	
Between 2 & 4 hours	4.56 (2.55) _b	
Between 4 & 6 hours	4.85 (2.78) _b	
More than 6 hours	4.69 (2.67) _b	
Sport-type		$t(566) = 3.43, p = .041, d = .21$
Individual	4.33 (2.71)	
Team sport	5.12 (2.55)	

Note. Means with different subscripts indicate a significant difference, $p < .05$.

Table 4

Logistic Regression Models Predicting Heavy Frequent Drinking and Audit-C Risk Behavior

Control and Independent Variables	Frequent Heavy Drinkers		Audit-C Risk Behavior	
	<i>B</i>	Odds Ratio	<i>B</i>	Odds Ratio
Gender (male/female)	-1.001	.367***	-1.290	.275***
Past Sports Activity (yes/no)	0.051	1.053	-1.445	.236
Individual Sport/Team Sport	0.083	1.087	0.012	1.012
Sport Practice Career (years of career)	-0.044	.957	0.183	1.201
Increasing Intensity of practice (hrs. per week)	-0.006	.994	-0.052	.949
Context of Practice (formal or informal context)	-0.315	.730	0.178	1.195
Age of First Drink (younger to older)	-0.059	.942	-0.129	.879**
Constant	-1.186	0.305	0.117	1.124
-2 log likelihood		558.11		597.289
Cox and Snell R^2		0.062		0.125

Note. Frequent/Heavy drinking is defined by “once per week & daily use” (“≤ once a month” coded 0 and “≥ once a month” coded 1). AUDIT-C at risk defined by higher or lower score of 5 (0 coded for lower score and 1 coded for higher score).

** $p < .01$. *** $p < .001$.

Table 5
Characteristics of Interviewees

Pseudonym	Age	Gender	Region	Key drinking practices
Christophe	21	man	Brest	Normal; social consumption
Clarisse	21	woman	Dunkerque	Rare-drinker; loss of self-control; perceptions on the increase in female participation
Dominique	21	man	St Brieuc	Non-drinker for health reasons; perceptions of virility as male's drinking participants
Françoise	21	woman	Brest	Occasional; celebrations; drinking games and social incentives
Guillaume	21	man	Brest	Regular; funny and anti-shyness
Guy	25	man	Dunkerque	Normal; educator model; perceptions of girl's participation
Hélène	20	woman	Caen	Regular; perceptions of sport drinking culture; perceptions of (strong) female consumption
Jean	24	man	Rennes	Non-drinker; health perception
Jeanne	20	woman	Rennes	Occasional frequency; varies with context; perceptions of female social; integration/exclusion
Julien	25	man	Rennes	Rational; perceptions of sport drinking culture; social incentives
Marian	20	woman	Dunkerque	Rare; celebrations; perceptions of (strong)female consumption
Olivier	22	man	Caen	Occasionally regular
Philippe	25	man	Brest	Occasional and rational; social incentives; perceptions of drunken female
Pascale	22	woman	Rennes	Rare-drinker; withstands group incentives
Sébastien	20	man	St Brieuc	Occasional and rational; ethics of sport competition
Stéphane	18	man	Caen	Regular; socialization and integration reasons