

# “Excessive Drinking—An Inescapable Part of University Life?” A Focus Group Study of Australian Undergraduates

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## Abstract

The university environment reinforces positive alcohol-related expectations and motivations for drinking among undergraduate students. High levels of hazardous consumption in this population lead to significant negative alcohol-related consequences, for individuals and those around them. This study sought to explore the contexts in which those who engage in hazardous drinking consume alcohol, their perceptions of safety and harm, and receptivity to health messages. Undergraduate university students (n = 69; aged 17 - 24 of both genders [57% female]) were purposively recruited into one of seven focus groups after screening with the Alcohol Use Disorders Identification Test (AUDIT) to select for hazardous drinking (score, >8) or moderate drinking. A focus group interview schedule was developed, which was informed by theory and tested for validity by a panel of experts. Qualitative analysis of the data revealed four thematic clusters: positive expectations; inescapable culture; defining situations; and permissible drunkenness. Drinking was associated with various personal and social advantages that reinforced participants' intentions and/or willingness to drink. Alcohol played a meaningful role in the way in which participants identified with youth and university culture. Economical drinking was prominent, with students constantly negotiating pathways to intoxication within the confines of their budgets. Heavy drinking was viewed as permissible when in the home environment and/or in the company of trusted friends. Most students were unreceptive to health messages, and advice on restricting alcohol consumption seemed to have limited impact on drinking behaviour. Our findings clarify why some university students maintain or increase drinking behaviour despite known negative out-

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comes and offer useful insights to inform further research and the development of alcohol interventions specifically targeted at students.

## Keywords

Alcohol, Student, Undergraduate, Qualitative, Drinking, Binge

## 1. Introduction

Internationally, university students drink more than their non-student peers [1]-[4]. A high prevalence of “hazardous drinking” has also been reported in this population [5]-[7]. Hazardous alcohol use has been defined as a “repeated pattern of drinking that confers the risk of harmful consequences” [8] and is on a spectrum of alcohol consumption ranging from abstinence to dependence [9]. In Australia, hazardous drinking has been associated with drinking binges, which are defined as drinking more than four standard drinks (40 grams of ethanol) on a single occasion [10] (formerly six standard drinks for men, before 2011 [11]). In one study, almost half (48%) of students at an Australian university reported binge drinking in the previous month [7]. Similarly, in the United States, 45% of college students reported binge drinking (more than five standard drinks per occasion) in the previous month [12]. Comparable drinking patterns have also been found in Europe and South America [6].

The university environment contributes to high levels of alcohol consumption [3] [4] [13] in various ways. These include immersion in a social environment with a high proportion of young people [14], many of whom have only recently been able to purchase alcohol legally, and a shift from family to peer influence [15]. The tendency of university students to drink increases as a result of the following factors: living on campus; the development of new peer networks; pre-existing positive expectations associated with alcohol use; the accessibility and affordability of alcohol on campus; and the prevalence of events that primarily focus on drinking alcohol [4] [14]-[20]. In addition, the frequent drinking and social contact that occur at university [21] lead to real or perceived pressure from peers to engage in hazardous drinking. This pressure manifests in three forms: overt encouragement of alcohol consumption (ranging from being offered drinks to being ridiculed for not drinking); modelling of drinking behavior; and perceived norms (the acceptability and normalization of heavy drinking) [15]. Peer pressure is a stronger influence on drinking for men than women [15] [22]. Students appear to binge drink as a means of gaining social approval and acceptance rather than because of direct peer pressure [22] [23].

Positive alcohol-related expectations and motivations for drinking that strongly influence most young adults may be extenuated in the university environment. Important factors that determine drinking motivations and behavior in this population are social facilitation and camaraderie, coping and stress reduction, positive mood alterations and improved sexual performance, [16] [24] [25]. The literature on expectancy-based motivations for drinking suggests that proximal (immediate) positive expectations exert a stronger influence on behavior than distal (delayed or long term) or negative consequences [26] [27].

Negative alcohol-related consequences that have been documented in student populations include harm to the students themselves (e.g. academic impairment, blackouts, personal injury, suicide, unintended sexual activity and sexual coercion), harm to other people (e.g. interpersonal and sexual violence) and harm to the tertiary institution (e.g. property damage and student attrition) [28]-[35]. Men are more likely to experience “public domain” consequences, such as aggression, property destruction and arrests [28] [36]. Women are more likely to experience damage to themselves and are less likely to report adverse events [28]. University students have also been found to use a range of protective behaviors to reduce alcohol-related harms, with varying degrees of success. Realistic strategies among student populations include alternating alcoholic with non-alcoholic beverages, eating before or during drinking, using a designated driver, choosing not to drink and avoiding drinking games [34] [37]. Women are more likely to adopt harm reduction strategies than men; however, in general, as alcohol consumption increases, most students are less likely to engage in protective behaviors and are therefore more vulnerable to negative consequences [38].

This paper presents the findings from qualitative research conducted to inform the development of a web-based brief alcohol intervention (described elsewhere [39] [40]) and aims to explore the contexts in which undergraduates who engage in hazardous drinking consume alcohol. The results provide insight to student drinking

behavior at Australian universities; describing the factors that influence three parameters: drinking, perceptions of safety and harm, and receptivity to health messages.

## 2. Methods

### 2.1. Recruitment

Purposive recruitment of university students who drank at hazardous levels was undertaken. Using the university enrolment database at a large Western Australian university with approximately 32,000 undergraduate and post-graduate students, a recruitment advertisement was emailed to a random sample of 7000 full-time undergraduate students aged 17 - 25 years studying on campus. Students who registered their interest ( $n = 198$ ) were asked to complete a short questionnaire by email incorporating the Alcohol Use Disorders Identification Test (AUDIT) [41], gender and faculty details (Business, Engineering/Science, Health Science, Humanities). Seven focus groups were conducted with 69 students (57% female) who were available to attend the scheduled times. Focus groups were halted when content analysis suggested no new relevant knowledge was being obtained from new participants. All participants had consumed alcohol in the previous 12 months with 78% screened as hazardous drinkers (AUDIT score  $\geq 8$ ). Hazardous drinkers formed six gender specific focus groups (3 male, 3 female). A seventh group was mixed-gender and comprised 15 moderate drinkers (AUDIT score 1 - 7). Participants from each faculty were represented with a slightly higher proportion from Engineering/Science than other faculties.

### 2.2. Data Collection

A focus group interview schedule was developed with 12 open-ended discussion questions, informed by the Social Cognitive Theory [42] and the Health Belief Model [43] and tested for face validity by a panel of experts. Focus group questions examined: drinking motives and contexts; perceptions of safe and unsafe drinking behaviors; expectations and consequences; methods for improving student participation and reducing attrition in electronic screening and brief intervention (e-SBI) program [39] [40].

The focus groups were conducted according to procedures used by the researchers in previous research [44] [45]. An experienced researcher of the same gender as the participants facilitated each focus group. A female researcher facilitated the mixed group. Participants were unknown to the researchers. The discussion was audiotaped and lasted approximately an hour. A trained observer was present at all sessions to take field notes. Audiotapes were professionally transcribed verbatim and the principal author reviewed completed transcripts to ensure consistency.

### 2.3. Ethical Considerations

Ethical approval was obtained from the Curtin University Human Research Ethics Committee. An information sheet summarizing the purpose of the focus groups was provided to each participant prior to the commencement of the focus group discussion. Each participant who provided written informed consent was then invited to participate. All participants were informed that group sessions would be audiotaped for the purpose of transcription. At the completion of the each focus group, participants received a \$20 university bookshop voucher and refreshments.

### 2.4. Analysis

Initial codes and concepts were generated through a process of line-by-line analysis, whereby words and sentences were examined with the aid of NVivo qualitative software to elicit underlying meanings and subtle nuances in the data [46] [47]. Emerging ideas were constantly compared with new data to generate concepts and identify key themes and patterns of influence and interaction. This also served to verify the analytical process by ensuring interpretations of the data remained grounded in the participants' perspectives [46]. Other methods employed to enhance confirmability [48] of the data included: discussing and debating concepts and subcategories/categories with research staff; diagramming the links between subcategories and/or categories; and using audit trails to justify the decisions made and conclusions drawn [46]. A second researcher also independently reviewed the original data and developed a series of themes for comparison with the themes developed via NVivo.

### 3. Findings

Our analysis assessed participants' past experiences with drinking alcohol and future intentions and revealed four thematic clusters that offer insight into the personal, social and contextual factors that influence hazardous drinking patterns. Each of the four major themes—positive expectations, inescapable culture, defining situations and permissible drunkenness—represents perspectives shared by students across the sample. The underlying meanings are highlighted by the use of verbatim quotes from individuals.

#### 3.1. Positive Expectations

Participants discussed many expected positive outcomes of drinking and placed less emphasis on negative outcomes. Drinking was associated with various personal and social advantages that reinforced participants' intentions and/or willingness to drink. Descriptions of alcohol and the anticipated outcomes of drinking were largely positive and included sentiments such as “fun”, “takes the edge off”, “better vibes”, “relaxed” and “gives you confidence”. Other positive associations with drinking included expectations of excitement, spontaneous activities and even morning after “UDIs” (unidentified drinking injuries). In several cases, alcohol was also perceived as a valid excuse for doing “stupid things”:

*The expectation is that if you are drinking and others are drinking, things are going to happen during the night.* (Female)

*Half the fun is having these adventures when you are drunk—stealing street signs.* (Male)

Alcohol was also considered an important vehicle for socialising and featured strongly in participants' social experiences. Most comments related to having fun, being social and engaging with people. Drinking was described as a “social lubricant” and something that “breaks down barriers” and “makes people more sociable”, allowing participants to bond with friends, form new friendships and enhance their interaction and communication within and outside close friendships. Consistent with these descriptions, negative connotations were associated with being the only sober one in a group, as represented through statements such as “boring”, “not fun” and something that leads to being “left out”.

*It isn't fun being the only sober one. If you sit there and you are not drinking, you are not having a good time because everyone else is getting tanked.* (Male)

#### 3.2. Inescapable Culture

Many of the meanings and expectations that participants associated with alcohol were transmitted through norms and ideals that celebrate engagement in the drinking culture. Alcohol played a meaningful role in the way in which participants identified with and found “belonging” to both the youth and university cultures. The prominent drinking culture as represented by participants was characterised by the consumption of large volumes of alcohol, socialization of others into this behavior and attempts by some women to challenge the masculine hegemony associated with high levels of alcohol consumption.

Drinking played an important role in participants' understanding and experiences of the “uni lifestyle”. Alcohol was readily available on campus, and the drinking culture was regarded as “a thing you identify with straight away”. Drinking was often discussed in the context of transition, whether from high school to university, adolescence to young adulthood, or minor to legal status. For first-year students in particular, “turning 18” and being “allowed to go to pubs and clubs” were common associations with an increase in alcohol consumption (“I'm first year, and as soon as you get here you go to the Tav [tavern] and join a drinking club”). However, although excessive drinking was considered a normal part of early university life, several third-year students noted a more controlled pattern of drinking in response to increased study commitments:

*I'm [in] third year now. When I first started I thought, “there's a Tav on site”, so every break we would go and have a drink. But after a while, you just can't fit it in.* (Male)

The tavern was a strong focal point for socializing on campus because alcohol was cheap and accessible. Living on campus was acknowledged to have a considerable influence on drinking, given the accessibility of cheap drinks and the ability to “always find someone to drink with”. University clubs and associations were also thought to actively promote and encourage heavy drinking through “student nights” held off campus:

*If you don't drink, you are left out. I live on campus, so there are always lots of friends to go to the Tav with and we can walk home. A lot of friends go to the Tav after class; that is just the drinking culture. (Female)*

*I myself am not a huge Tav person, but I am a big drinker and I go to all the student nights the bars and clubs have. It is huge. I always go to them. It is just assumed that student drinking is a big thing. (Female)*

Shared desires to “fit in” with the dominant drinking culture observed both on campus and off campus were often used to justify current drinking patterns. The social context of participants’ drinking experiences was indicated by motives such as keeping up with peers (“it’s like a competition”). Pre-drinking intentions to get drunk were perceived as common (“most people I know drink to get smashed”). However, the label of “binge drinking” was not readily endorsed:

*We probably don't call it binge drinking because it is such a huge part of our culture. Binge drinking has a lot of negative connotations, whereas most people I know will drink to get pissed and drink a lot. (Male)*

In contrast to accounts of intentional drunkenness, other students recalled past experiences of heavy drinking through stories of social spontaneity and drinking excess resulting from “getting caught up in the whole moment”:

*Often if you try to have a quieter night, people get stuck into you. You sit down and pick up the pace and catch up with everyone. Everyone is having a drink. It isn't a conscious thing. (Male)*

Participants who attributed occasions of heavy drinking to external influences such as “peer pressure” were more likely to describe such experiences with regret. Female participants were more likely to avoid contexts that would probably lead to unwanted drinking (“If you don't want to drink, don't go to the pub”). Others recalled feeling the need to legitimise their lack of participation in drinking by using “excuses”, such as driving or being on medication, to avoid peer pressure and social exclusion:

*There is peer pressure in a group, and so sometimes people go further than they should...it is like a competition you shouldn't get into, but you do and you regret it in the morning. (Male)*

*Say you weren't driving but you didn't want to drink, people would say, “come on I'll buy you a drink”. If you haven't got a driving reason, everything else isn't considered a legitimate reason. (Female)*

Gendered perspectives associated with the peer drinking culture were revealed through personal experiences and observations. Decisions around the type and amount of alcohol consumed were influenced by gender expectations and desire to be accepted by the opposite sex:

*If I am going out with the boys, I will drink jugs of beer. But if I am going out with the girls, I will drink cocktails. (Female)*

Some participants highlighted differences between genders in terms of excessive drinking (“I notice that girls will drink to get drunk a lot more than guys do”) and drink types (“If you are having a big night, guys are more likely to bring a carton, while girls will bring a four pack of mixed drinks”). However, there was also general agreement that consumption by women has increased to the point that “drinking is alarmingly uniform between the sexes”. Excessive drinking among male participants was often fuelled by involvement in drinking games or “competitive drinking” with their male friends. Female participants were likely to make decisions based on personal appearance, such as choosing alcoholic beverages perceived as less “fattening” and avoiding food to maintain a “flat stomach”:

*Women drink less beer because it is fattening. (Female)*

*Guys usually eat before they drink. Girls are like no, no...girls want a flat stomach to wear a nice dress. (Female)*

Females were also more likely to use their male counterparts as a measure of their own drinking competence. Several women spoke positively about their ability to “out-drink the guys” and noted that “it is liberating to feel that you measure up”. Keeping up with the men was not only perceived to be celebrated by the opposite sex (“I can keep up and I have become legendary around work”) but also embraced with a sense of achievement:

*For some reason, if girls can drink as much as guys, this gives a sense of pride, accomplishment and*

achievement. *I only know this because I feel that way.* (Female)

### 3.3. Defining Situations

In addition to the influence of specific locations such as the university tavern, participants described a range of situational factors associated with drinking practices. Many students drank at home before going to pubs or clubs because it was seen as a cheaper, safer and more comfortable environment in which to get drunk (*“it is a money thing and also you can pass out at home”*). “Economy drinking” was particularly prominent, with students constantly negotiating pathways to intoxication within the confines of their budgets:

*I don't have a lot of money for lots of drinks, so I try to get as drunk as I can before I go out, and then buy a couple when I'm out, then switch to water.* (Male)

*I can't enjoy nightclubs unless I am really trashed, but it does get expensive. I will drink beer then spirits to see how drunk I can get for the least amount of money.* (Female)

Heavy drinking was often justified with timing-based explanations such as special events, seasonal patterns and lack of “day after” obligations. It was considered normal to drink to excess on special occasions such as New Year's Day and Australia Day, as well as on occasions involving friends. Drinking was more common early in the semester, during study breaks and particularly after exams. Heavier drinking was also more likely if participants reported no commitments such as work on the following day:

*There are a few days in the year where it is acceptable to get really drunk, and on those sorts of days you don't think about controlling it. Like on Australia Day, you have a drink as soon as you get out of bed.* (Female)

*Depends if you have anything else on the next day. If you don't have anything on Thursday, you get drunk on Wednesday.* (Female)

### 3.4. Assessing Risk, Negotiating Harm: Permissible Drunkenness

Both male and female participants described specific circumstances in which the risks associated with excessive drinking were perceived to be low. In many cases, perceptions of “safe drinking” were not associated with the quantity of alcohol consumed but rather with the “comfort” of familiar surroundings and people. Heavy drinking was viewed as permissible when in the home environment and/or in the company of trusted friends. There appears to be a reframing of “safe drinking” in relation to the context in which it occurs:

*Safe drinking to me is going out with people you know, because I know that if I get smashed, my mates will get me home. I'd be looked after.* (Male)

The development of personal limits over time, often via trial and error, was also used to gauge safe consumption. “Keeping track” of consumption was typically only associated with expenditure and the ability to drive rather than adhering to an awareness of recommended limits. Despite this finding, many participants admitted to having driven while drunk and arriving safely without being caught tended to reinforce the behaviour. In some cases, in the absence of a sober driver, the person who was least drunk took on the driving. Difficulties in accessing taxis and public transport were considered to contribute to drink-driving.

*After you throw up a few times, you work out what you can have, and mixing drinks [you work out] as well.* (Male)

*If I am going out to town and I don't have to drive home, I don't keep track of drinks. But if I am driving, I use standard drinks as a guide.* (Male)

*I would trust myself maggot driving over some people sober driving.* (Male)

Most participants considered standard drink sizes and safe drinking guidelines to be irrelevant and unrealistic. Consequently, most students were unreceptive to health messages, and advice on restricting alcohol consumption appeared to have limited impact on drinking behaviour. In several cases, restrictions on consumption provided a “target to break”:

*You ignore health warnings because you know you are going to be having five or six pints anyway.* (Male)  
*I went to this doctor, had a chat about my drinking and stuff, and she restricted me to four standard drinks*

*a night and two alcohol-free days during the week. It was fun to break. "Gee, I had five drinks tonight".*  
(Male)

## 4. Discussion

Our study improves the current understanding of the multiple pathways that lead to hazardous alcohol consumption by university students, through investigating students' personal drinking histories and future intentions.

Most students perceived hazardous alcohol consumption as pervasive, difficult to avoid and central to many university club activities, as indicated by focus group results. Drinking was seen in a mainly positive light however and had a central role in socialization, with decisions about drinking affected by camaraderie, group identification, peer influence and gender expectations. Although some students described excessive drinking as arising spontaneously within a social context, an intention to get drunk on each drinking occasion was also common. Drinking was moderated by situational factors and contexts (e.g. the location [the campus tavern or home], the cost and the student's relationship with their drinking partners) and the associated expectations (e.g. enhanced social status, positive mood transformation, disinhibition and overall positive changes). Some students reduced the extent of their drinking of their own accord ("maturing out"), and many had strategies to reduce their consumption when they did not want to drink (e.g. providing excuses and avoiding certain situations). Perceptions of safe drinking were predominantly associated with drinking in known environments and with familiar people rather than with the quantity of alcohol consumed or avoiding negative consequences.

### 4.1 Understanding Motives and Expectations

The positive expectations associated with alcohol consumption provided powerful incentives to engage regularly in hazardous drinking. Based on participants' past experiences and openness to similar future encounters, the anticipated benefits of drinking (e.g. better functioning in social situations, peer acceptance and increased self-confidence) seemed to elicit stronger behavioral motivations than desires to avoid expected negative outcomes (e.g. hangovers, loss of consciousness and social embarrassment). Similarly, our analysis also found that positive associations with drinking often led to a dismissive discourse around both alcohol-related risks and awareness of safe drinking guidelines.

Researchers have explored expectancy-based motives by examining the meanings that young people assign to alcohol-related consequences. These studies suggest that students might not agree on what constitutes a negative consequence. For example, Mallett *et al.* [31] studied how college students perceived the spectrum of alcohol-related consequences (from positive to negative) and found that several "negative" consequences such as blackouts, hangovers and waking up in someone else's bed were perceived positively by a large proportion of the sample.

Subsequent research has indicated that the presence of positive and/or negative associations might not be the only influence on alcohol consumption: the strength of expectancy-based motives is also likely to be a factor [49]. For example, if young people are ambivalent or even weakly committed to avoiding negative consequences, they are unlikely to curb their involvement in hazardous drinking, particularly when the drinking occurs in the context of normalised and socially reinforced behavior.

Also relevant is the influence of past experiences on the accuracy of perceived alcohol-related risks. Based on the premise that previous experiences direct and promote future intentions, those with first-hand experiences of negative outcomes are generally more likely to accurately perceive their future vulnerability and be motivated to avoid repeat occurrences [50]-[52]. This relationship has been attributed to the idea of cognitive "availability", which in the case of the present study suggests that those who lack personal experiences of alcohol-related harms tend to see their vulnerability as below average and may even believe that they are exempt from future risk [50] [51].

### 4.2. Culture and Context

Our study is bound in social context and therefore extends the empirical understanding of various cultural dimensions that influence students' beliefs, openness and practices associated with alcohol. Generalised statements that projected heavy drinking to "*most people I know*" and more broadly to valued reference groups (*i.e.* student and youth populations) portrayed beliefs of drinking as normative and socially acceptable, and they legitimised personal involvement in similar behavior. This finding is a concern given evidence suggesting that be-

havioral decisions are likely to be based on overestimations of peer drinking [53]-[58]. Students who overestimate the amount of alcohol consumed by their peers are more likely to consume more themselves [53] [59] and are less likely to see their drinking as problematic, instead viewing it as normal and acceptable behavior [60]. Students who engage in hazardous drinking may also choose friends and environments that have pro-drinking norms [36], which promote this positive reinforcement.

Social norms research has been instrumental in defining the socially constructed nature of drinking and in informing broader social ecological approaches to harm reduction [61]; however, the understanding of how students negotiate these influences at a time when they are also faced with various academic, social and developmental challenges [62] [63] remains limited. What is known from the findings of this study and previous research is that alcohol is a tangible and easily obtainable commodity that aids immersion in the university culture and the student identity [64]. The early stages of a student's university career are a time when the student is at greatest risk of heavy drinking and the associated consequences [65] [66]. Both male and female students in our study recalled excessive drinking to be a normal part of early university life. In some cases, students' drinking declined as their university careers progressed and their priorities shifted. This point alone warrants the development of targeted orientation and transitional programmes to support the positive adaptation of first-year students during this potentially vulnerable period.

Another noteworthy finding from our study was the interplay between gender expectations and accounts of behavioral convergence with regards to alcohol consumption. A blurring of traditional masculine and feminine norms whereby drinking had become noticeably "*uniform*" between the sexes supports similar trends reported in the literature [67]-[70]. These trends are concerning on a number of levels. Females who consume high quantities of alcohol are at greater risk of adverse physical and social consequences due to increased toxic effects on the brain and reproductive system, increased risk of breast cancer and alcohol-related cirrhosis and increased vulnerability to physical and sexual assaults [36] [71]-[75]. These risks are further amplified in light of biological differences in metabolic processing, body weight and fat-to-water ratios that mean women can typically achieve the same level of intoxication while consuming less alcohol [36] [73]. It is also suggested that an increased acceptance of women exhibiting "male" drinking behavior may not imply gender equality in this context. Rather than offering women equality, the social dynamic between genders is likely to be maintained as heterosexual and patriarchal [69]. This is supported by the emphasis placed by female participants on appearance and body image in relation to their drinking.

Research that has explored the relationship between gender and alcohol consumption highlights social context as an important moderator of drinking and suggests differing implications between genders. Evidence shows heavy drinking males to be less vulnerable to gender-based influences given similar consumption reported in mixed gender and all-male contexts [76]. Represented in our study through accounts of "*competitive drinking*" and keeping up with friends, high alcohol consumption in all-male contexts is likely to reflect conformity motives driven by perceived masculine norms [77]. Alternatively, heavy drinking in co-ed contexts may be used as a way to facilitate socialization and "*break down barriers*" with the opposite sex [78]. Females on the other hand have been shown to report higher alcohol intake in mixed gender contexts than with female peers alone [79]. Attempts to explain this association highlight several potential influences, including drinking to match perceptions of what males want them to drink [69] [80], desires to gain sexual appeal and a special position among male drinkers [69] [80] or encouragement by males who are seeking sexual encounters [78] [81]. While our study did not explore these gender-based motives in detail, female participants did discuss altering drink preferences in the presence of male company and expressed increased feelings of acceptance when able to mirror the drinking behaviors of their male peers. This is an area requiring further exploration in light of concerning trends in female drinking, particularly in the university environment.

### 4.3. Situation-Based Assessments

Operating within the broader drinking culture, our analyses revealed several situational factors that had a moderating effect on alcohol-related decisions and behavior. Firstly, the financial cost associated with achieving desired levels of intoxication led many participants to offset the expense of alcohol by drinking at home prior to attending venues. Pre-drinking or "pre-partying" has become a particularly common practice for college students in the US, with prevalence rates estimated between 64% and 75% of current drinkers [78] [82] [83]. Frequent involvement in pre-drinking environments, typically characterised by rapid and high consumption [82], has been



associated with significantly higher blood alcohol levels and more alcohol-related consequences compared to non-pre-drinking peers [76] [82] [84]. The impact of setting diversion represented by cultural shifts in young people being intoxicated before going out and only “topping up” at venues requires further investigation, particularly in light of current policy and practice that tend to focus on ways to reduce alcohol consumption in hotels, clubs and pubs.

Participants’ explanations of personal drinking patterns also revealed timing and event-based criteria used to determine both involvements in drinking and consumption quantities. For example, intentions to become intoxicated fluctuated according to post-drinking commitments, academic load and specific calendar events where alcohol played an inherent role. Perceptions of “*safe drinking*” were also constructed in circumstances of familiarity, whether this related to drinking with known and trusted people or in settings that created feelings of comfort and security. Establishing personal drinking limits, which in most cases was set well above recommended levels, also contributed to low perceptions of personal risk. Together with pro drinking norms and positive expectations associated with drinking, greater understanding of decisional-patterns that construct drinking as acceptable and/or safe by students may provide a useful line of inquiry to inform context and timing specific interventions.

## 5. Limitations

Recruitment was purposive and although recruitment was conducted via email to a random sample, participation remained self-selected and required the completion of a screening tool which may have biased those that responded. All but one of the focus groups involved participants that were screened as drinking at hazardous levels and therefore experiences are unlikely to be reflective of more moderate drinkers. The majority of participants were Caucasian and more diverse ethnicities may have offered different understandings of alcohol behaviors. Contextual factors such as the presence of on-campus alcohol outlets may differ between university settings and therefore transferability cannot be assured. The data are based on self-report which may be influenced by self-censorship and social desirability. However, the behavior of the participants during the group discussions suggested they were uniformly forthright and forthcoming. Additionally, the use of experienced facilitators assisted to mitigate the impact of group norms and power dynamics.

## 6. Conclusions and implications

These findings provide insight into the context in which students drinking at hazardous levels engage in this behavior and the environments that are constructed. The pervasive, normalised and celebrated nature of alcohol within the university environment provides a significant challenge to developing alternative cultures of interaction and identity for university students. Our findings improve the understanding of the mechanisms and contexts influencing hazardous drinking in university students and offer useful insight to inform further research and the development of alcohol interventions. First, greater understanding of the personal meanings assigned to different alcohol-related consequences and how these are experienced in a context of strong internal and external reinforcements may help to clarify why some students maintain or increase drinking behavior despite known aversive outcomes. As such, the lack of clarity surrounding the “negativeness” of certain consequences warrants careful consideration around the use of deterrent strategies in feedback given students may perceive some consequences as neutral or positive [31].

Second, the central nature of drinking on-campus and at many university clubs and associations may add to the normalization of excessive social drinking. It has been recommended that participation in alternative social and recreational activities are encouraged to lessen the role of alcohol in student socialization [85]-[87]. Student unions/associations could play an important role in curbing the alcohol consumption central to affiliated student groups by making alcohol less of a central part of their club and association activities. Last, feedback from participants on the irrelevance of mainstream health messages to limiting alcohol consumption suggested more in depth collaboration with young people is required in the development and implementation of interventions. Although engaging university students in program development is challenging [88], using young people’s insight to inductively derive intervention strategies and messaging may improve target group receptivity.

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## Competing Interests

The authors declare that they have no competing interests.

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