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“It Breaks the Ice”: A Qualitative Examination of Drinking Game Motives, Harms and Protective Behavioral Strategies among University Students in Australia

Amanda M. George^a , Byron L. Zamboanga^b  and Brett Scholz^c 

^aDiscipline of Psychology, School of Health Sciences, Faculty of Health, University of Canberra, Canberra, Australia; ^bDepartment of Psychological Science, University of Arkansas, Fayetteville, Arkansas, USA; ^cANU Medical School, College of Health & Medicine, Australian National University, Canberra, Australia

ABSTRACT

Background: Most research on drinking games (DG) behaviors and cognitions has been conducted among university students from the United States. Understanding why DGs are played, consequences and protective behavioral strategies (PBS) to reduce negative consequences is needed among Australian students. **Objectives:** In Australia, five focus groups (n=3-8) were held with 27 university students (63% female) aged 18-24 years who had played a DG in the past month. The study aimed to identify motives for playing DGs, consequences and adoption of PBS. **Results:** Four themes were identified: (1) social lubrication and conformity: playing to fit in; (2) community and camaraderie (perceived social benefits of DGs); (3) a means to an end (where getting drunk/predrinking was the goal and avoidance of PBS was prevalent); and (4) it is not a levelled playing field, which highlights that the risks are not equal for everyone. **Conclusions:** The interplay between DG motives, PBS and associated harms was identified. Expanding measurement of pre-existing DG motives and PBS is recommended, as well as the potential of DG motives to inform proposed interventions.

KEYWORDS

Drinking games; alcohol use; drinking motives; protective behavioral strategies; university students

Introduction

Participation in drinking games (DGs) is common among university students (Zamboanga et al., 2014). DGs are associated with rapid consumption of alcohol (Zamboanga et al., 2013) and negative alcohol consequences (Zamboanga et al., 2021). Perhaps, this may help explain why alcohol-related problems have been frequently reported by university students (e.g., Rickwood et al., 2011; Zamboanga et al., 2010). Research on DG participation among university students is primarily from the United States (U.S.; George & Zamboanga, 2018; Zamboanga et al., 2014, 2021). While more limited, evidence also suggests that DG participation is common among students in other countries, such as Australia (George & Zamboanga, 2018), New Zealand and Canada (Zamboanga et al., 2021) the United Kingdom and areas of Europe (e.g., McInnes & Blackwell, 2021) and Nigeria, especially among male students (Dumbili & Williams, 2017). Nonetheless, the bulk of research is from the U.S. and applicability of findings to other contexts, including Australia, may be questionable, especially acknowledging differences in legal drinking age and cultural differences on campus (e.g., fraternities/sororities; Murugiah & Scott, 2014).

In general, a DG is a social drinking activity that encourages alcohol intoxication, is played based on rules regarding

when players drink, and requires participants to perform a mental and/or physical task (Zamboanga et al., 2013). DGs can be differentiated by competition/non-competition and those involving skill versus chance (Polizzotto et al., 2007). The Hazardous Drinking Game Measure (HDGM; Borsari et al., 2014) differentiated eight game types (e.g., team, card, verbal games) but each has established rules for play. Importantly, games differ in risk, with some (e.g., consumption games) associated with more negative consequences (George & Zamboanga, 2018; Hoyer & Correia, 2022; LaBrie et al., 2013).

There is less research on DGs in an Australian context, and noting the differences in risk by game type, it is important to examine game popularity and reasons for play. Of limited qualitative studies in an Australian context, Polizzotto et al. (2007) identified that DGs were common among university students aged 18–25 years, considered socially acceptable, and seen as beneficial for comradery and developing community. Murugiah and Scott (2014) conducted interviews with 18 women from a regional university who played DGs, and they identified that women played to bond, to get drunk more quickly, and to minimize expenditures when out (e.g., to predrink/preload). While these studies are important, recent advances in the literature have furthered our understanding of DG motives and consequences.

Drinking motives have been described as “the final common pathway” to alcohol use (see Kuntsche et al., 2005). There are general drinking motives (Cooper, 1994) but recent work has highlighted consideration of motives *specific* to drinking patterns, such as DGs (Zamboanga et al., 2019). For example, the Motives for Playing Drinking Game instrument (MPDG; Johnson & Sheets, 2004) was originally developed and recently validated and revised with U.S. (Zamboanga et al., 2019) and Australian (George et al., 2018) young adult samples. The revised MPDG comprises seven motives for DGs: competition, conformity, enhancement/thrills, social lubrication, novelty, sexual pursuit, and boredom. Using a sample of Australian university students, and considering age, gender, and general alcohol consumption, George et al. (2018) found that DG motives of conformity (e.g., to fit in), enhancement/thrills (e.g., to get drunk) or sexual pursuit (e.g., “in order to have sex with someone”) were positively associated with negative DG consequences (e.g., taking foolish risks, memory loss). While this is helpful, it was derived from a measure developed with a U.S. sample. Perhaps other motives for playing DGs specific to an Australian context are not yet captured on the MPDG, but with a lack of qualitative research, this is unknown. Moreover, Polizzotto et al. (2007) identified that many students “were proud of their extreme intoxication and regarded many negative outcomes, such as losing consciousness or vomiting, as ‘badges of honour’” (p. 472). This highlights the difficulty in implementing strategies to address the risks associated with drinking heavily, perhaps while playing DGs, if some consequences are perceived positively. Further research is required to determine if this remains the state of play and whether students do employ strategies to reduce their risk of alcohol-related harm while playing DGs.

Protective behavioral strategies (PBS) are strategies used to help reduce alcohol consumption and risk for related harms (Martens et al., 2004). These include, but are not limited to, having a designated driver or alternating alcoholic/non-alcoholic beverages. Several measures of PBS are available (for review, see Pearson et al., 2012, Peterson et al., 2021, and Prince et al., 2013). For example, the Protective Behavioral Strategies Scale (Martens et al., 2005; Stephens et al., 2021) assesses serious harm reduction strategies (e.g., knowing where your drink is), strategies which relate to stopping/limiting drinking (e.g., drinking water) and strategies related to manner of drinking (e.g., not trying to out-drink others). A qualitative study of Australian undergraduate students identified that health messages around alcohol use could increase likelihood for harm by students trying to drink beyond guidelines (Hallett et al., 2014). This highlights the challenge of PBS implementation. Given the limited research on PBS in an Australian context (Dekker et al., 2020; Jongenelis et al., 2016) and lack of PBS research among Australian university students (Crawford-Williams et al., 2016), we do not yet know enough about PBS use among this group, especially in the context of a DG. For example, strategies related to “manner of drinking” are difficult to adopt in a DG setting, given the focus is often rapid consumption of alcohol (Borsari, 2004) and achieving

“communal intoxication” (Dresler & Anderson, 2018, p. 216). Indeed, one item in the scale is “avoid drinking games” (Treloar et al., 2015). However, recent work has measured PBS specific to predrinking (Pedersen et al., 2020). Predrinking, also known as *pregaming*, refers to consumption of alcohol before an event (Zamboanga & Olthuis, 2016). While different from DG participation, it is worth noting that DGs can be played in the context of predrinking (e.g., Ford et al., 2022; Hummer et al., 2013) and as such, the identified PBS may be applicable. For example, the Protective Behavioral Strategies for Pregaming (PBSP) Scale (Pedersen et al., 2020) includes items related to safety/familiarity PBS (such as predrinking with friends), as well as strategies for reducing intoxication (e.g., avoiding caffeinated drinks). These would arguably be applicable within a DG setting. However, not enough is known about PBS used during game play. Additionally, the perceived efficacy of strategies to reduce intoxication while predrinking can be problematic. For example, Dresler and Anderson (2018) identified that tactically vomiting was seen as a problem-solving strategy among young men in New Zealand for excessive intoxication. As such, it is imperative to examine PBS used by students when playing DGs. This information will help to develop/adapt instruments to assess PBS specific to DGs, and identify the perceived utility of different PBS as a harm reduction strategy for playing DGs.

The current study will enable us to qualitatively examine DG participation, motives for play, perceived risks and consequences, and importantly, strategies for reducing harm, among a sample of Australian students. This may assist in the development of new measures to assess these constructs if new DG motives and PBS are identified that are not already captured by existing instruments. Additionally, the study can offer insights which may assist health professionals when engaging with students who play DGs. Therefore, the aims of this study are threefold:

1. identify motives for playing DGs;
2. examine DG consequences; and
3. consider the use/perceived utility of PBS when playing DGs to reduce consumption/negative consequences.

Method

Participants

Students from one university campus aged 18–24 years who had played a DG in the prior month were eligible to participate. Participants were recruited via circulation of fliers around campus, print advertising on campus, and via snowballing methodology which was helpful for recruiting such a targeted group. We recruited 27 participants (63% female; 81% lived in on campus accommodation; 89% full-time students; 48% first-year students) with a mean age of 20.2 years ($SD=1.31$; range = 18–24 years) into one of five focus groups ($n=3-8$ participants). All but one focus group ($n=3$ males) were mixed gender. Participants had played a DG an average of 7.6 days in the prior month ($SD=4.5$, range = 1–16 days).

Measures

A semi-structured question format was used to facilitate the focus groups with students encouraged to bring into the discussion new information particularly salient to their DG experiences. The initial question (*How would you define a DG?*) ensured understanding of what constituted a DG for the purpose of the current research (a social activity that consists of rules designed to promote heavy alcohol consumption, specify when and how much to drink and requires players to perform a motor and/or mental task (Zamboanga et al., 2013), with examples provided [e.g., beer pong, flip cup]). Additional questions included assessing motives for DG participation (*Why do you play DGs?*) and use of PBS (*What strategies do you [or other university students] use to reduce consumption when playing DGs, or to avoid these risks from playing DGs?*).

Procedure

Focus groups were facilitated pre-COVID during October 2018 and March 2019 by the lead author ($n=2$) or co-facilitated by the lead and third author ($n=3$). Prior to the commencement of each focus group, participants provided informed consent, and had the opportunity to ask questions. Participants confidentially provided brief demographic information (age, gender, frequency of playing DGs, whether they lived on campus, year level, and enrollment status). They were informed that the session would be recorded for accuracy and asked not to use names or to provide identifying information. Each participant received a \$25 Visa debit card at the end of the group. Ethics approval was obtained prior to by the Human Research Ethics Committee of the university (HREC 0429).

Data analysis

Focus groups were digitally recorded and professionally transcribed. The lead author checked transcripts for accuracy and then destroyed recordings. Transcripts were imported into software program NVivo 12. We adopted the thematic analysis approach of Braun and Clarke (2006). Consistent with their proposed six step approach, full transcripts were reviewed by the 1st and 2nd authors to become familiar with the data, and an initial approach to coding the data was discussed. The lead author then coded all transcripts using a combination of deductive (e.g., drinking motives and use of PBS) and inductive approaches (Braun & Clarke, 2006) and iteratively refined each code via NVivo 12. The 2nd and 3rd authors independently coded extracts of transcripts. All authors met and discussed the codes and contributed to the production of the final coding scheme. Codes were used to develop themes through another iterative process of mapping data and codes into clusters forming preliminary themes. Quotes presented in the analysis were chosen as they exemplified each particular theme.

Results

Through thematic analysis of the data, we constructed four themes which encompassed motives for play, DG consequences

and use of PBS, consistent with the research aims of the study. These themes were: i) social lubrication and conformity: playing to fit in; ii) community and camaraderie: perceived benefits of DG participation; iii) a means to an end; and iv) it is not a leveled playing field. Each theme is discussed with reference to verbatim quotes from participants.

Theme 1. Social lubrication and conformity: playing to fit in

Across groups, participants noted that DGs helped them to socialize with others and game play was considered a social lubricant. For instance, as one participant said *it breaks the ice to begin with and then as the night progresses, you'll start to break away from the game a little bit and just kind of talk to people around you (FG2)* highlighting the role of DGs in facilitating their interactions with others beyond the game. Further, DGs assisted with making friends, especially during the first year of transition to university. The vulnerability of first years (referred to by some participants as “freshers” in extracts below) to negative consequences was identified. As in Extract 1, they were seen to play more regularly.

Extract 1 (FG1)

People want to prove themselves. I think that happens sometimes with all of the freshers, and like I've seen it happen...like I see a few freshers who are like, “no I'm so, I can do this, my liver can take this” and you're like [sigh].

Participants suggested it was not only first year students' greater freedoms and lack of awareness of their own tolerance and risks that led to more frequent DG playing, but also their lower perceived workload and responsibilities. The normality of DGs is expanded on further in the following extract.

Extract 2 (FG2)

...the peer pressure that is definitely around certain drinking games, like if you're somebody who doesn't really know their tolerance yet and the rest of the table don't know it either, say the rest of the table have a higher tolerance or know their tolerance a little better, this person is now trying to keep up with everyone because of the societal pressure.

Extract 2 is a representative example of participants' views about how conforming to the perceived culture was common including peer pressure identified in some instances. Participants had a solid understanding of risks related to playing DGs, particularly noting the danger of getting too drunk from rapid consumption of alcohol. Some strategies to mitigate risks reflected the need to fit in, as illustrated in Extract 3.

Extract 3 (FG5)

P3: Usually when an ace is drawn, waterfall, so you start drinking, I'll just really slowly, slowly take little sips - - -

P1: Yeah, because you and I drink the cans.

P3: - - - but hold it up here so it looks like I'm drinking, if I'm not really keen on drinking.

P1: Yeah, because they can't see inside the cans, unlike everyone else who is drinking via beer cans or beer bottles, or - - -

P3: Usually I just go for it but if I'm not keen then I'm like okay, little sips but hold it up here, so it looks like I'm drinking a lot, or I'll use that to target another person next to me, so it's like, if this person, I wanted him to get really drunk, I just act like I'm chugging but I'm not, so he has to keep doing it.

Such strategies described in Extract 3 about drinking from cans, rather than clear cups/bottles enabled students to conceal how much was consumed during a game so as to not lose face within the group—although it should be noted that some participants described this strategy as “cheating” and, as illustrated by Extract 3, it could be used to trick others into consuming more.

While participants described how some students do not *really know their tolerance yet* (as in Extract 2), there was also discussion about how, over time, individuals became more aware of their own alcohol tolerance/limits as in the following extract.

Extract 4 (FG1)

...I can be a giant enormous a-hole when I'm drunk and that's not very nice for my friends to deal with, and so like, there was a while, like, and it was just really horrible...I just decided like after there was one really bad night, I just stopped drinking for months.

As this participant emphasizes, their social relationships could be impacted by their behavior while intoxicated which could in turn also influence future drinking patterns, again highlighting the need to “fit in” and desire to avoid social risks.

Theme 2: community and camaraderie: perceived social benefits of DG participation

Positive aspects of DGs were acknowledged by participants, especially how DGs could build a sense of community (as in Extract 5).

Extract 5 (FG1)

like it's an actual tournament, where you get into like a group of two usually and like you versus people, and it's like, it's a proper tournament, it's a sporting thing...it's fun, even, like there were people in ours for instance, that didn't drink, and they still enjoyed it and yeah, it's that comradery, like it's fun, I enjoy it. I can be involved in this kind of sport.

The participant in Extract 5 provides an overview of how some games (particularly skill-based games) could be viewed as sporting events. Such events in turn facilitate students' sense of community driven by competition. Even for those who did not participate, they could watch the “tournament” thereby increasing the inclusivity of the setting.

Different game preferences and rules for similar games were identified across communities, which also meant that the participation was viewed as being fun and novel, such as by learning new game types/variations. Some described the fun in games whereby *rules are different* (FG2) depending on who was playing.

While perceived positively, participants (as in Extract 6) noted the risks of such game play, especially as their skills became poorer with increased consumption.

Extract 6 (FG3)

P1: I feel like playing with girls it's not as hard core as with guys. I feel like guys get right into it, so they have bigger drinks, more drinks and you feel like you have to keep up with them.

P3: And unfortunately guys can drink probably more than most girls, so you're trying to keep up with them, which means you get drunk faster, you get sick faster, 'cause you can't hold it in as much as the guys can.

P4: Sometimes it's a bit of a full-on competition between us—men and men.

An important issue exemplified in Extract 6 is the gender differences discussed across focus groups. Participants emphasized the competitive element especially associated with play amongst men, and associated risks for those trying to “keep up.” The community orientation to DGs was also associated with particular use of PBS—expanded upon in the following extract.

Extract 7 (FG1)

... I like to think that most of the time, like even with like the younger people, like the

freshers and stuff, the older people and the people that have lived (on campus) longer, take

care of ... I can get very protective, like mumma bear, over some freshers.

Participants were aware of people in DGs looking out for friends and sticking within their gaming group when they went out clubbing following game play (seen as “pre-drinks”). The recognized vulnerability of some students meant that some older students looked out for first years, particularly during key periods of high levels of drinking (such as Orientation weeks). Although, participants also acknowledged that the ability to look out for others was often impeded by their own drunkenness and the benefits of having someone sober (or being able to access help), as illustrated in Extract 8.

Extract 8 (FG4)

P2: Depends on the scenario, usually yeah. Yes. Unless you're at their house or something and you can just get them smashed and just put them in bed. But yeah, I suppose, more public, yeah, you try and keep them alive...

P3: ...Yeah. I'd say, I'm kind of the one that gets water out towards the end of the night. Making sure they don't get super hung over and stuff like that. If, like, they're throwing up, I'll hold their hair or whatever.

As in Extract 8, participants noted that risks and mitigating strategies were context dependent—such as the difference between excessive drinking at home or out in public.

Theme 3: a means to an end

For many participants, DGs were an essential “means to an end” where the motive for playing was to preload and to get drunk, often before heading out nightclubbing. Playing DGs and preloading also ensured that they could save money, given the perceived exorbitant price of drinks when

clubbing. Given this goal, playing DGs in order to achieve these aims was associated with a lack of PBS and some harmful practices. One participant quipped that *eaters are cheaters* (FG5) to which their fellow focus group member noted that those who do not eat save money getting drunk. Similarly, other participants described themselves (or others) having a “tactical vomit” so that they could ingest more alcohol, as demonstrated by Extract 9.

Extract 9 (FG3)

P4: If you're going for your third round of Beer Pong and you know there's no room left in there - - -

P1: That's beautiful; force yourself to vomit, so that you can keep on drinking.

Q1: A tackie?

P1: A tackie. A tactical vomit.

Playing to preload/get drunk was viewed by some participants as a delicate balance, whereby they needed to get as drunk as possible, while also maintaining a sense of control. Extract 10 expands upon this balance.

Extract 10 (FG2)

P3: Obviously, ever, yeah, and you're topping yourself off, you're topping other people off and it's just completely encouragement of getting as drunk as possible.

P1: Yeah.

P2: That's the dark side of it, you have to reach a nice optimal level, like the peak, and then once you get over the peak, I suppose everything after that - - -

An understanding of their own tolerance across time (as discussed in Extracts 2 and 4) was thought to assist participants, but the game types and types of drinks consumed, often reiterated that the end goal of playing DGs was to become intoxicated.

Theme 4: it is not a leveled playing field

While there were positive aspects to playing DGs and the inclusivity of DGs were identified, participants also noted that some students were at increased risk for DG harms. This theme highlights the vulnerability of some players both to increased harm, as well as vulnerabilities based on needing to adhere to perceived norms. As noted, first year students were particularly associated with playing DGs, but Extract 11 provides an example of opinions about risk, tolerance and maturity.

Extract 11 (FG2)

P3: ...like maybe this is just me, but I feel like my freshman year I would actually throw up from drinking, not regularly but it would happen and now I feel like I haven't done that this whole term – and I don't know if it's just because my tolerance has changed and I'm older or whatever, but I do think younger people

P2: They're just not aware, yeah...

P1: ...Yeah, when you're playing games as well, after you played for a few years now, you kind of know a little few tricks to not drink as much.

This reflection on how, while they still very much played DGs, participants had matured since their earlier days is one way that they suggested they were better at mitigating risks and navigating through a DG. This suggests some type of alcohol metacognition, and that DG risks are different across students. The lack of a leveled playing field is further illustrated in Extract 12 by the potential to target players during game play.

Extract 12 (FG1)

P4: It's more, like you'll start playing and then someone's like, oh, hey we should, you know, it's not, if it's a trick for someone's birthday, if they haven't played, like if someone says like if they haven't the game before.

P5: Also, feel like, because they feel like, like my friend's picked on me before. It's not in malice.

Thus, selecting individuals was possible, such as getting someone to drink more if it was their birthday. Some game types were more problematic for selecting others to get them drunk, although this was not seen by participants as cruel (rather it was perceived as “funny”). However, it was also noted that some students were more assertive and able to deflect the perceived social pressure, even in the face of perceived social consequences. This illustrates the individual differences which were recognized by participants in terms of noting that some had increased vulnerability to harm, while others were considered assertive. For instance, one participant discussed how some individuals have *got thick skin* to be able to say no and *take a slur of insults* for not drinking (FG5).

As noted previously in relation to Extract 6, gender differences were a common point for discussion across focus groups and this related DGs not being a leveled playing field for all. For example, men reflected upon the greater perceived pressure to drink more and to “keep up,” consistent with masculine drinking norms, as elaborated further in Extract 13.

Extract 13 (FG4)

P2: More pressure for the men to drink more, yeah.

P1: I don't know whether it's testosterone. I don't know. Guys always, usually, just,

wanting to be a bigger man. “Oh, I can do this.”

P3: Out-do each other.

P2: Yeah. Who can drink more, usually.

P3: Sort of like a pissing contest.

P2: Yeah, exactly. Whereas women just look at it and go, “Oh, you idiots.”

The impact of this was also apparent for women. Participants noted different risks for different genders, such as females drinking faster and consuming more alcohol when playing competitive games with males. As such, it was clear that there was not a leveled playing field in mixed gender groups.

Discussion

The current study examined motives for playing DGs, PBS use, and negative consequences from playing DGs among

university students who regularly played them. What was apparent (and somewhat unexpected) was the *interplay* between motives, consequences and PBS, such that particular DG motives were associated with increased risk of harm and linked to PBS attempts/non-attempts. This was identified across three of our identified themes—namely, “social lubrication and conformity” (playing to fit in), “community and camaraderie” (perceived social benefits of DG participation) and “a means to an end” (reflecting preloading/getting drunk). Our final theme, “it is not a level playing field” reflected the knowledge of DG harms and vulnerability of certain players.

We considered the possibility of identifying new DG motives. DG motives have been assessed with the Motives for Playing Drinking Games Measure (MPDG; Johnson & Sheets, 2004) and this measure was recently validated among an Australian sample (George et al., 2018). Five of the seven motives from the measure were arguably identified within the themes from the current study. Namely, competition (reflected by the sporting element and tournament approach), conformity (playing to fit in), social lubrication (playing to help make friends), novelty (enjoying different rules and games), and enhancement/thrills (e.g., playing to get drunk). Playing for social and conformity motives was particularly apparent, although one could argue these were related, rather than distinct motives, in some instances. For example, participants noted the social nature of DGs and how game play could facilitate friendships, especially for those new to university, consistent with past research (e.g., Brown & Murphy, 2020). The need to fit in was paramount and as such, conforming to the perceived norm of DG participation was key to perceived acceptance. The MPDG assesses two other DG motives (boredom and sexual pursuit) which were not included in our themes, although boredom was a code. The absence of sexual pursuit motives may reflect social desirability concerns, given the face-to-face discussion in a group setting. Creating new items to expand existing DG measures (e.g., consideration of community) would be worthwhile, as well as expanding the item pool for others (e.g., learning new games or rules for novelty motives).

Players were knowledgeable of DG harms, risks associated with particular games and vulnerable groups. First year students were identified as higher risk, due to a lower tolerance for alcohol, with many reflecting on how they have come to understand their own limits over time. Some games were likened to sporting events, with the resulting sense of community presenting both advantages and increased risks. Such “tournaments” were particularly associated with males for whom competition seemed a focus. Past research has identified that male students are more likely to play competitive DGs (Alfonso & Deschenes, 2013; Dumbili & Williams, 2017; George & Zamboanga, 2018). This is supported by earlier research in the U.S. which identified that male students took games more seriously, with heavy drinking seen as a marker of masculinity and a sign of accomplishment (Peralta, 2007), also consistent with research from Vietnam which identified that alcohol consumption among male medical students was viewed as an expression of masculinity (Nguyen et al., 2021). Similarly, in a qualitative

study of Nigerian students, differences in game type by gender were identified, including the domination of DG participation by men and preference for competitive games (Dumbili & Williams, 2017). One of the novel findings of the current study is that a positive camaraderie was noted to increase “looking out” for each other. From a harm reduction perspective, leveraging the mateship aspect of masculinity might foster interpersonal support. Our findings also highlight that women are at increased risk when participating in competitive types of DGs with men. This has health implications for women who play DGs given prior findings from simulated DG research indicated that women consumed as much alcohol as men (Cameron et al., 2011; Correia & Cameron, 2010).

A key challenge is the implementation of any PBS within a DG context. PBS have previously been categorized as serious harm reduction, limiting/stopping drinking and manner of drinking (Martens et al., 2005). Examining items for these scales shows some limited applicability within a DG context. However, leveraging off the PBS identified for pre-drinking by Pedersen et al. (2020), especially noting the identified “means to an end” of DGs as part of predrinking, could be beneficial. While implementing some PBS, such as those targeting “manner of drinking,” may be particularly challenging, given the goal of DGs to get drunk and the need to “keep up,” strategies identified within “safety and familiarity” and “minimizing intoxication” in the measure of PBS for predrinking (Pedersen et al., 2020) may be particularly relevant. These include, but are not limited to, avoiding caffeinated beverages and supporting friends. A key challenge in a DG context is the identified perceived social pressure to play and strategies which can be employed without “losing face” with the group. This was exemplified by participants noting that “eaters are cheaters” and their use of strategies which faked greater consumption. Results here could be used to adapt PBS for predrinking and develop PBS specific to game play. Some PBS will likely require assertiveness within the social context of a DG, such as drinking water and not sculling drinks. Consistent with suggestions from Kenney et al. (2014) that students with lower drink refusal self-efficacy may benefit from PBS skills training, we note that this might be particularly beneficial for students who are more vulnerable, such as first year students.

Findings from the current study provide several important directions for both future research and potential interventions, although findings must be interpreted with respect to study strengths and limitations. While recruitment was from one university, the Australian context is a strength, given the focus to date on survey-based methods when examining DGs among university students (Zamboanga et al., 2014). The qualitative nature of the current study allowed us to examine possible new DG motives and perceived utility of various PBS not captured in existing instruments, many of which were developed with university students in the U.S. Further, the qualitative approach allowed exploration of participants’ unique strategies that they perceive as protective against the harms of excessive drinking while gaming. The qualitative approach allowed

us to examine these areas in depth. Statistical-probability generalizability cannot be determined through such an approach. For instance, the current sample was comprised of those who had played a DG in the prior month and, while noting variation, the average number of days participants had engaged in DGs was 7.6 days in the prior month. As such, our sample could be described as frequent gamers and results may not extend to those who play DGs less frequently. However, by recruiting frequent gamers, we have gained relevant insights into trends in game play, and our findings are likely to generalize through transferability to other contexts in which potentially risky behaviors exist. While not a direct aim of the current study, we note that gender differences were apparent in some aspects of gaming, such as the identified masculine drinking norms and associated increased risk for women playing with men. Examining students' performance of gender was beyond the scope of this study, but future research might seek to do so, given the identified gender differences for some aspects of DG participation (e.g., Dumbili & Williams, 2017; Peralta, 2007).

Additionally, for future research, we recommend that larger pools of DG motive items/community motives be considered, with potential for updates to existing measures. Given the centrality of motives in directing game play, we recommend that researchers and practitioners consider (a) PBS strategies and increased vulnerabilities to harm (e.g., if predrinking), and (b) DG specific motives (rather than general motives). We also suggest that potential PBS when playing DGs be adapted/explored (e.g., Pedersen et al., 2020; Stephens et al., 2021), as well as examining how confident students would be in using each strategies, noting the social nature of DGs. Findings indicate that PBS for DGs should be considered within a harm reduction framework whereby the efficacy of PBS and the reasons for playing DGs are closely considered. For example, playing for social/conformity motives was common and highlights the need for students to be able to adopt PBS without losing face in the group. This could be drinking from cans to consume less alcohol, as some participants noted, or using strategies to cope with the comments when one drinks less/refuses to participate. If we challenge perceived utility of harmful practices, such as "tactical vomiting," which has also been identified previously (Dresler & Anderson, 2018) and leverage off the perceived community whereby students look out for each other, PBS for game play could be utilized. The ability to look out for others could be impeded by one's own drunkenness, so any strategy must be carefully considered. Past research has identified that students find messaging designed to reduce alcohol consumption irrelevant, with suggestions to include the target group in the design of any strategy (Hallett et al., 2014). Consistent with this, and noting the importance of the peer group, especially for vulnerable students, any strategy to reduce associated harms or promote PBS use during game play should include representation from the students themselves to be effective.

DG participation remains common and it is apparent that the risks associated with DGs can differ across students.

This study elucidated the dynamic interplay between DG motives, PBS and related harms among university students which would likely not have been identified in a quantitative investigation. Results help pave the way for researchers to develop survey instruments that are designed to measure motives to play DGs and PBS use while playing DGs among university students in an Australian context. Examining the psychometric properties of these instruments will then move researchers one step closer to having a DG motives scale and a PBS DGs measure that were developed and validated with this student population.

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ORCID

Amanda M. George  <http://orcid.org/0000-0003-4154-973X>
Byron L. Zamboanga  <http://orcid.org/0000-0001-9763-2407>
Brett Scholz  <http://orcid.org/0000-0003-2819-994X>

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