ENTRY NAME:
Drinking Games

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KEYWORDS:
Drinking games, alcohol misuse, high-risk drinking, heavy episodic (binge) drinking, alcohol consequences, high school, college

OVERVIEW:
Drinking games encompass a variety of games in which losing or defeated players are penalized through obligatory alcohol consumption. As the overarching goal of drinking games is for participants to become intoxicated in relatively short periods of time, participation typically leads to heavy episodic or binge drinking (four drinks in a row for females and five drinks in a row for males) and high blood alcohol concentrations (BACs), which, in turn, increase risk for negative consequences, such as blacking out, sexual victimization, driving under the influence (DUI), and alcohol poisoning. Drinking game involvement is also correlated with excessive drinking behaviors and other high risk activities including prepartying, illicit prescription drug use, marijuana use, and tobacco smoking. Research suggests that youth and adolescents engage in drinking game playing for a variety of social reasons, and that a majority of adolescents matriculate into college having already participated in drinking games. Despite the established prevalence and risk associated with drinking game playing among adolescents, drinking games have not been the focus of harm reduction interventions or prevention efforts, and research on drinking game involvement among pre-college adolescents is sparse.
ENTRY ESSAY:

As early as the fifth century BC, ancient Greeks enjoyed drinking “symposia” in which a “master of drinking” was designated to predetermine both the potency and amount of wine to be consumed as well as impose penalties for violation of game rules (e.g., failure to recite a passage of poetry or exhibit the dexterity to aim a drop of wine through a intricate maze) (Garland, 1982). Modern day drinking games, however, are played predominantly by adolescents and young adults and have evolved to include an estimated 500 types of drinking games, including Kings, Power Hour, and Quarters, that test players’ drinking endurance and speed as they consume large amounts of alcohol in relatively short spans of time. The increasing popularity of these hazardous drinking activities are associated with escalated risk among youth, including hangovers, black outs, driving while intoxicated, risky sexual behaviors, and alcohol dependence (Borsari et al., 2007; Farrow, 1987; Johnson et al., 1998; Nagoshi, Wood, Cote, & Abbit, 1994; Zamboanga, Bean, Pietras, & Paban, 2005).

TYPES OF GAMES

Drinking games vary in structure, competitiveness, duration, requisite thinking and coordination, beverage choice, and resultant intoxication (Zamboanga et al., 2007). For example, verbal games (e.g., I Never), in which responses or questions control consumption, tend to rely on players’ capacity to share information or remember rules whereas media games (e.g., Roxanne), in which words or actions from television, movies, or music cue consumption, test players’ perception and listening skills. Endurance games (e.g., Power Hour), which involve mindless but excessive consumption in short periods, are particularly risk-enhancing. The most popular of drinking games, however, are those oriented around individual or team competition.
(e.g., *Beer Pong, Quarters*). Because these types of drinking games are structured around specific skill set goals (e.g., throwing a ping pong ball into cup of beer from across a ping pong table), players are incentivized to force opponents to drink as much as possible while retaining as much personal visuospatial and motor functioning as possible, in spite of inebriation. Regardless of type, however, all drinking games are governed by *reversal of competence* or the notion that the longer the game is played, the more inebriated and inept players become (Green & Grider, 1990). Four of the most popular drinking games are described as follows:

**Beer Pong (Beirut):** Beer Pong is a game in which players throw a ping pong ball across a table with the intent of landing the ball in a cup of beer on the other end of the table. The game typically consists of two, two-player teams. Six to ten cups are set up on each side of the table, typically in a triangle formation. The goal of the game is to eliminate the other teams' cups before one's own cups are eliminated. When a ball lands in a cup, which is generally filled with 2 to 3oz of beer, that cup is eliminated and the defending team must consume all of the beer inside that cup. Once a team has eliminated all of the opposing cups (with the opponents having consumed all the beer in the cups), the losing team must also consume all the beer remaining in the winning team's cups.

**Flip Cup (Cup):** Flip Cup is a team-based drinking game in which two teams stand on opposite sides of a table, facing one another. In front of each teammate is a plastic cup filled with a standard amount of beer (generally 2 to 4 oz.). At the start of the race, the first member of each team drinks his or her beverage. When finished, the cup is placed face up at the edge of the table, and the player who drank it attempts to flip the cup, by setting it on the edge of the table and flicking or lifting the bottom until it flips and lands face down on the table, sitting on its mouth. The player may not use two hands to help "guide" the cup to flip over. If he or she is not
successful on the first try, the cup must be reset and re-flipped. Only after the first teammate is done flipping the cup successfully can the next person proceed. Whichever team finishes drinking and flipping all of their respective cups is the winner.

**Power Hour:** With its variant Centurion (or Century Club), Power Hour is a drinking event in which every player consumes one shot of beer every minute for one hour. Each shot contains approximately 1.5 fluid ounces, for a total of 90 fl. oz. of consumption during the power hour. For purposes of blood alcohol content, this amount of beer is roughly equivalent to 7.5 drinks. In the Centurion variant, beer shots are consumed one per minute for 100 minutes, roughly equating to 10 drinks. All players successfully completing the total number of shots without retiring are considered winners.

**Quarters:** Quarters can be played with any number of players. All players sit around a table or other hard surface, with a single shallow glass placed in the middle. The goal is to try to bounce a quarter off the table and into the glass. If successful, the player selects any other player to have a drink, and receives another turn. If the player fails, play passes to the next in the circle. If the player successfully bounces a quarter into the glass three times in a row, this player may make a rule. As with other drinking games, the rule can be anything that includes drinking as an outcome. For example, nobody is allowed to say a chosen word, or everyone must drink before each attempted bounce, or perhaps no one is allowed to point with his or her fingers. If any rule is broken during the course of play, the violator must consume alcohol.

**PREVALENCE**

Studies to date that have examined high school drinking game participation have revealed high rates of game playing among both male and female adolescents. In a recent study of 477
first-year college students, 54% reported playing a drinking game during the last months of high school. Those students who played a drinking game in their last month of high school averaged nearly four game playing events per month and played drinking games during 44% of all high school drinking occasions (Kenney, Hummer, & LaBrie, 2010). In another study of 1,252 students attending precollege summer orientations, data compiled from three consecutive years revealed that 66% of females and 60% of males had played drinking games and, of these, approximately one in five reported weekly and nearly one in two reported monthly or biweekly drinking game playing (Borsari, Bergen-Cico, & Carey, 2003). Evidence suggests that initiating drinking game playing during high school is predictive of drinking game participation in college (Borsari et al., 2003; DeJong & DeRicco, 2007; Johnson et al., 1998; Kenney et al., 2010; Douglas, 1987). Thus, although heavy drinking and drinking game playing among college students has often been attributed to newfound freedom from parental monitoring and immersion into collegiate social cultures that condone and even revere unsupervised underage drinking (Hingson, Heeren, Winter, & Wechsler, 2005; O’Malley & Johnston, 2002; Toomey, Lenk, & Wagenaar, 2007; White et al., 2006; White & Jackson, 2004), considerable evidence suggests that college drinking may primarily be an extension of pre-established high-risk alcohol behaviors, such as drinking game playing, that persist or intensify when students enter collegiate environments (Baer, Kivlahan, & Marlatt, 1995; Hersh & Hussong, 2006; Leibsohn, 1994; Wechsler, Davenport, Dowdall, & Moeykens, 1994). Regardless, drinking games are thought to act as ritualized drinking contexts by which incoming college students are socialized into heavy drinking peer cultures (Adams & Nagoshi, 1999).

Although the majority of college students report past month drinking game participation, younger students, particularly first-year students, have the highest rates of drinking game
involvement (Adams & Nagoshi, 1999; Crawford & Nellis, 1988). In fact, in a survey of 3,830 drinking students from 58 U.S. colleges, 73% of first-years had played a drinking game in the past month as compared to 38% of sophomores, juniors, and seniors (Engs & Hanson, 1993). In a more recent study of 360 male and female undergraduates aged 18 to 25 years, 18- and 19-year-olds were five times more likely to engage in drinking games than older students (Sharmer, 2005). Although previously considered a male-dominated activity (Borsari, 2004; Clapp, Shillington, & Segars, 2000; Engs, Diebold, & Hanson, 1996; Johnson et al., 1998), recent research shows comparable rates of drinking game engagement among men and women (Engs & Hanson, 1993; Kenney et al., 2010; Pedersen & LaBrie, 2006). This finding coincides with trends of college women’s binge drinking that are increasingly converging with those of male peers (O’Malley & Johnston, 2002; Wechsler et al., 2002; Young, Morales, McCabe, Boyd, & D’Arcy, 2005). Although males appear to drink more while participating in drinking games than do females (Johnson & Sheets, 2004), both males and females report drinking significantly more during drinking games than during other drinking situations (Johnson et al., 1998; Pedersen & LaBrie, 2006). In regard to race and ethnicity, drinking games appear to be most popular among whites as compared to other racial-ethnic groups (Pedersen & LaBrie, 2006; Kenney et al., 2010).

Findings further suggest that playing drinking games represents a social normative behavior in certain subgroups of college students, namely collegiate athletes (Grossbard et al., 2007; Zamboanga, Rodriguez, & Horton, 2008) and fraternity/sorority members (Sher, Bartholow, & Nanda, 2001; West, 2001). Not only may athletes and Greeks value the social and competitive nature of drinking games, but high rates of heavy drinking in these populations contribute to higher rates of high risk drinking activities. In fact, heavy drinkers have been
shown to be nearly seven times more likely to play drinking games than students not classified as heavy drinkers (Sharmer, 2005). Although one study found that of students enrolled in college, those living away from home encountered significantly greater drinking opportunities (i.e., gatherings with drinking games, alcohol, and drunk people present) than those living with parents, no significant differences emerged between college and same aged non-college attending respondents’ drinking opportunities (White et al., 2008). Thus, despite lack of direct data, it appears that drinking games may be quite common among non-college youth.

Even though they consistently represent unique forms of high risk drinking contexts (Borsari et al., 2007; Kenney et al., 2010; Zamboanga et al., 2010), drinking game playing often occurs as a form of prepartying (aka. front-loading, pregaming or pre-funking), which entails consuming alcohol prior to attending a planned event or activity (e.g., party, bar, concert or sporting event) at which more alcohol is often consumed (DeJong & DeRicco, 2007; Pedersen & LaBrie, 2007). Still, drinking games have no temporal requirement and can be played at any point during the course of the entire drinking occasion (refer to the prepartying entry for additional information).

MOTIVATIONS

Among youth, drinking games are believed to serve multiple functions; for example, they may offer contexts in which youth can conform to peer group behavior, ease stresses associated with social interaction, and foster group camaraderie. Adolescents may engage in drinking game playing due to a confluence of potential risk factors associated with the developmental period. These include the decreased salience of parents and increased salience of peers, greater exposure to the modeling of peer behavior, transition to adulthood and orientation toward autonomy and
nonconventional behaviors, and emphasis on drinking as a social lubricant associated with fun (Jessor, Donovan, & Costa, 1991; Palmqvist, Martikainen, & von Wright, 2003; Palmqvist & Santavirta, 2006). College transitions marked by heavy alcohol consumption, increased drinking opportunities, and unprecedented personal stressors (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002; White et al., 2006) are expected to be particularly risk-enhancing for incoming students with prior high school game playing experience as these students may be inclined to perceive heavy drinking as a means by which to ease social discomfort and establish their identity amid unfamiliar peers. However, considering the normative role that heavy drinking plays in collegiate cultures, drinking game playing in college may differ fundamentally from precollege drinking game playing. Considering that 48% of college student drinkers report the importance of drinking to get drunk (Wechsler & Nelson, 2008), it is not surprising that drinking games have been embraced by this population. Self-reports have revealed that college students most commonly play drinking games for social enhancement; for instance, to act as a social lubricant (Borsari, 2004; Polizzotto, Saw, Tjhung, Chua, & Stockwell, 2007; Zamboagna et al., 2007). Moreover, perceived positive expectancy effects (e.g., sociability or liquid courage) are positively associated with drinking game participation (Nagoshi, Wood, Cote, Abbit, 1994; Zamboanga et al., 2005; Zamboanga et al., 2010). Players are likely to view getting drunk positively, take pride in their ability to drink large quantities, and anticipate approval for heavy drinking (Green & Grider, 1990; Newman, Crawford, & Nellis, 1991).

Consistent with research examining normative misperceptions of alcohol use among peers, male and female students appear to consistently overestimate the frequency of peers’ drinking game participation. Although these misperceptions have been correlated with actual drinking game behavior (i.e., frequency of participation and quantity consumed) for males only,
they nonetheless indicate the need for further research examining drinking game-related norms among college students, regardless of gender.

CONSEQUENCES

The rapid intoxication associated with drinking games makes self-regulation appreciably more difficult and negative consequences more likely. Studies have linked game playing to alcohol-related problems in high school students (e.g., driving under the influence) (Farrow, 1987) as well as college students (e.g., hangovers, illicit prescription drug use, marijuana use, tobacco smoking, campus violations, reliance on alcohol, sexual victimization, DUI, and car accidents) (Borsari et al., 2007; Johnson et al., 1998; Nagoshi, Wood, Cote, & Abbit, 1994; Simons et al., 2005; Zamboanga, Bean, Pietras, & Paban, 2005). Unfortunately, engaging in drinking games during high school appears to amplify both proximal and prospective risk. One recent study found that participating in drinking games during high school predisposed adolescents to risky high school drinking—game players consumed over 5 times more weekly drinks than non-game players and 64% of game players engaged in binge drinking during typical drinking occasions—as well as college drinking (over and above high school consumption) and college consequences (over and above high school and college consumption) (Kenney et al., 2010). Not surprisingly, drinking game participation is also highly predictive of binge drinking in college populations. Event-level studies of drinking game occasions have evidenced that game players, as compared to non-game players, experienced an estimated 50% greater likelihood for binge drinking (Pedersen & LaBrie, 2006) and significantly higher blood breath alcohol concentrations (BrAC) during drinking game events (Clapp et al., 2008).
Fueled by high rates of drinking game involvement, first-year undergraduates are found to face the greatest likelihood for adverse outcomes related to drinking game involvement (Adams & Nagoshi, 1999; Newman et al., 1991). This may be particularly important with regard to incoming students as risky drinking may compromise successful negotiation of the transition into college or lead to problematic drinking trajectories that may persist throughout college (Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism, 2002; Schulenberg et al., 2001). Other evidence has indicated that compared to male peers, females report experiencing greater alcohol consequences after participating in drinking games, such as increased likelihood for unprotected, unplanned, or unwanted sexual intercourse, date rape or sexual victimization (Johnson & Stahl, 2004; Pedersen & LaBrie, 2006). In fact, some studies have documented that some men view drinking games as a means by which to intoxicate women or persuade them into sexual encounters (Johnson & Stahl, 2004; Newman et al., 1991).

Although more research is needed to better understand the role of race and ethnicity in drinking game involvement, event-level self-reports have indicated that among students participating in drinking games, non-Caucasians, even despite lower rates of participation, experienced greater ensuing negative consequences than Caucasians (Pedersen & LaBrie, 2006).

PREVENTION & HARM REDUCTION

Despite the established relationship between drinking game participation and alcohol misuse and consequences, no systematic efforts to date have focused on this prevalent and high-risk drinking context. Information on drinking games, however, may be easily incorporated into existing harm reduction strategies that have been effective in delaying age of onset and reducing drinking among youth. For example, at the high school level, drinking game-specific information
may supplement school-based educational, parental awareness, and peer social norms campaigns. At the college level, drinking game-specific social norms or harm-avoidance strategies (i.e., cognitive-behavioral skills-based, personal feedback-based or motivational interventions) may compliment multi-component alcohol interventions that have demonstrated effectiveness in reducing risky drinking (see Larimer & Cronce, 2007 for review). For example, college students tend to overestimate the occurrence of drinking game playing among their peers, and these overestimations have been found to be predictive of individual consumption and game playing rates (Pedersen & LaBrie, 2008). Educating students about the more moderate norms while providing additional information, such as the strong relationships between game playing and a range of negative consequences, may positively impact individuals’ decision making about whether and how much to participate in drinking games.

Still, the high prevalence and heightened risk associated with drinking game playing in adolescent populations highlights the importance of early high school or junior high school initiatives geared to prevent game playing and reduce harm associated with risky drinking before dangerous patterns may be established. In addition to harm reduction initiatives focused on drinking games, providing opportunities for safer alternative social-contextual activities may be advantageous by appealing to youth drawn to drinking games for social reasons. For example, school-sponsored field trips or social events preceding athletic games or dances may offer proxies for socializing and networking.

METHODOLOGICAL ISSUES AND DIRECTIONS FOR FUTURE RESEARCH

The majority of research on drinking games has compared students’ overall self-reported engagement in drinking games with overall alcohol consumption and consequences. However,
event-level analyses that examine specific drinking game playing events with related consumption and consequences may best assess the direct impact of drinking game involvement (e.g., Clapp et al., 2003, Pedersen & LaBrie, 2006). For example, assessing typical durations of game playing events as well as gauging the differential impact of drinks consumed before, during, and after game playing would provide insight into specific risks associated with this high risk context.

Further, most of what is known about drinking games is restricted to collegiate populations, thus leaving a void as it relates to younger adolescents and non-college attending youth. Given the prevalence and prospective risk associated with drinking game playing among pre-college adolescents, future research should further examine early and mid-adolescents’ motivations for playing drinking games (e.g., social facilitation, peer pressure, competition/social comaraderie) as well as the peer cultures in which they are embedded. Research providing insight into youth’s predispositions toward risky drinking behaviors will help to better define the role of game playing in this important developmental period. For instance, qualitative studies or student focus groups may illuminate the extent to which socially learned peer group behavior or sensation-seeking personality styles may contribute to engagement in these high risk drinking contexts as well as current and prospective alcohol risk. The widespread popularity of drinking games among U.S. youth may indicate deeper cultural issues that should be explored more fully.
REFERENCES:


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