Bystander intervention among college student drinking gamers: sexual assault attitudes, self-efficacy, and intent to intervene

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Bystander Intervention Among College Student Drinking Gamers: Sexual Assault Attitudes, Self-Efficacy, and Intent to Intervene

by

Rena L. Pazienza

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ABSTRACT

Heavy and problematic drinking and sexual assault warrant significant concern on U.S. college campuses. Emerging evidence suggests that the risk for sexual victimization is amplified in the context of high-risk drinking behavior—and despite recent attention to sexual assault (e.g., MeToo Movement), rates of perpetration remain largely unchanged. In applying the bystander intervention framework, our understanding of the relation between key factors that may facilitate or prevent behavioral action, or when and how these factors are most salient, is limited. The present study examined whether bystander attitudes and bystander self-efficacy predict bystander intent to intervene while accounting for prior intervention training exposure and social desirability bias. Hypotheses were tested among college student drinking gamers, a group at particular risk for involvement in situations of sexual violence.

Participants (N = 970) were traditional college-aged student drinking gamers recruited from three universities across the East and Southern United States. Analyses revealed that hypotheses were partially supported. The full model was significant, but bystander self-efficacy did not significantly moderate the relation between rape myth acceptance and bystander intent to intervene. Neither covariate (previous intervention exposure; social desirability) significantly contributed to the model. The discussion addresses implications for sexual assault prevention programs on college campuses and directions for future research.
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Bystander Intervention among College Student Drinking Gamers: Sexual Assault Attitudes, Self-Efficacy, and Intent to Intervene

The prevalence and consequences of heavy drinking (e.g., Hingson, 2010; Substance Abuse and Mental Health Services Administration, 2019; Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002) and campus sexual assault (i.e., unwanted sexual contact in the absence of affirmative consent) have been well-documented among college students (e.g., Katz & Moore, 2013; Krebs, Lindquist, & Barrick, 2011; Krebs, Lindquist, Warner, Fisher, & Martin, 2007). While each issue warrants significant concern alone, perhaps most concerning is the potential link between risky drinking behavior and sexual assault among college students—that is, there is a greater risk for sexual victimization in the context of high-risk drinking behavior.

College-aged women (ages 18-24 years-old) are at significant risk for sexual assault and associated consequences. Approximately one-quarter (20-25%) of women in college report experiences of sexual assault victimization (e.g., Fisher, Cullen, & Turner, 2000; Kleinsasser, Jouriles, McDonald, & Rosenfield, 2014; Sinozich & Langton, 2014; U.S. Department of Justice, 2016). In the U.S., incidence of rape among college women has been estimated to be five times higher than among noncollege women (Kilpatrick, Resnick, Ruggiero, Conoscenti, & McCauley, 2007). Alcohol consumption is reported to be involved in the majority of campus sexual assaults (i.e., by the victim, the perpetrator, or both; e.g., Abbey, 2002; Carey, Durney, Shepardson, & Carey, 2015) with incapacitated assault (i.e., when alcohol or other drugs are used) accounting for 69-72% of rapes reported in college student samples (e.g., Messman-Moore, Coates, Gaffney, & Johnson, 2008; Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004; Testa & Hoffman, 2012). First year students are at greatest risk, with rates of incapacitated rape increasing to 83% for this group (Carey et al., 2015). Furthermore, the likelihood of
acquaintance assault (i.e., occurring among acquaintances during social interactions) or more specifically, party assault (i.e., occurring off-campus or at a fraternity house, often targeting intoxicated women) is significantly amplified when alcohol is involved (e.g., Orchowksi et al., 2012).

**College Student Drinking Gamers.** Drinking games are high-risk drinking activities that typically involve heavy drinking and rapid intoxication (Borsari, 2004). Participation in drinking games is almost universal among those who have consumed alcohol before, with rates of participation in drinking games among American college students as high as 91% (Zamboanga et al., 2014). Extant research suggests that women engaging in drinking games may be at higher risk for sexual victimization than their counterparts who opt out; researchers have found positive relations between the amount of alcohol consumed while playing drinking games and (a) reported frequency of engaging in sexual behavior that one would not have participated in otherwise; and (b) having had sex when too intoxicated to consent (Johnson & Stahl, 2004; cf. Zamboanga et al., 2014). Moreover, recent research suggests that some who play drinking games select particular players to drink with the explicit goal of engaging in sexual behavior (i.e., attraction-based motives; Audley, Grenier, Martin, & Ramos, 2018). Participants of drinking games are considered to be at particular risk for sexual assault due to both this targeting behavior and the rapid inebriation which results in the inability to consent (Fairlie, Maggs, & Lanza, 2015; Johnson & Stahl, 2004; Lemay, Clark, & Greenberg, 2010). While additional research is needed to better understand the link between drinking games and sexual assault, emerging evidence suggests that those engaging in drinking games are likely at increased risk for perpetration and victimization (Fairlie et al., 2015; Johnson & Stahl, 2004).
**Negative Consequences of Sexual Assault.** Serious consequences associated with sexual victimization have been well-established. Victimization may result in physical injury (e.g., genital trauma, bruising), psychological consequences (e.g., anxiety, depression, disordered eating behavior, post-traumatic stress disorder, suicidal thoughts, and death by suicide; Basile & Smith, 2011; Black et al., 2011; Campbell, Dworkin, & Cabral, 2009), and other health-related consequences (e.g., sexually transmitted infections, unwanted pregnancy, heart attack; Campbell, Sefl, & Ahrens, 2003; Brieding et al., 2011). Further, consequences of victimization may be chronic (e.g., re-occurring gastrointestinal, gynecological, and sexual health problems; Basile & Smith, 2011) and long-lasting.

In addition to the above consequences, among college students, sexual victimization has been linked with greater engagement in risk behaviors (e.g., binge drinking and drug use), decreased academic achievement, and increased risk for re-victimization (Combs, Jordan, & Smith, 2014; Fisher et al., 2000; Jordan, Combs, & Smith, 2014). Many suffer from reductions in self-esteem and disruptions in their daily routine (Basile et al., 2016). Readjustment to work and school can be especially challenging, and victims may struggle in their personal relationships following sexual assault (e.g., Basile & Smith, 2011; Loya, 2014).

**Economic Impact.** While a thorough review of the economic impact of sexual violence is outside of the scope of the present paper, it is important to note that the impact of sexual violence extends beyond the individual(s) victimized. The impact is far-reaching, as society incurs costs related to the physical and mental health effects of sexual victimization (e.g., Campbell, 2002; Chrisler & Ferguson, 2006; Miller, Taylor, & Sheppard, 2007). Beyond the pain, distress, disability, and risk of death that victims and their loved ones are faced with, the quality of life, work loss, criminal justice, and medical care costs are significant (Loya, 2014; Tjaden &
Thoennes, 2006; Yang, Miller, Zhang, LeHew & Peek-Asa, 2014). To quantify: Yang and colleagues (2014) estimated the total cost of sexual violence in the state of Iowa during 2009 to be $4.7 billion, approximately $1,580 per resident, for example. Clearly, sexual violence represents a significant public health concern.

**Sexual Violence Prevention: The Bystander Approach**

The risk for, prevalence of, and related negative consequences of sexual assault among college students, especially college student drinkers, is alarming. In an effort to reduce sexual violence on college campuses, *why focus on bystanders, rather than perpetrators?* In 2011, the American College Health Association (ACHA) recommended a shift from more traditional rape avoidance or risk-reduction programs (e.g., self-defense training) to community-based prevention efforts including a bystander intervention component (ACHA, 2011). Traditional programs were viewed as insufficient to end sexual assault on college campuses (Gidycz et al., 2015) due to limited, inconsistent reductions in rates of victimization (Ullman, 2007). What’s worse, programs designed to reduce men’s rape-supportive attitudes and rape perpetration behaviors were found to result in the opposite, actually predicting *increased* perpetration among men identified as “high risk,” perhaps due to participant backlash or defensiveness (Stephens & George, 2009). The bystander model took a new approach in an effort to reduce previous shortcomings, relying on social norms theory and focusing on the community as a whole. By approaching participants as allies or helpers, the bystander model reduces participant backlash and defensiveness, and the onus of ending sexual assault is shifted from the individual (victim or perpetrator) to the community.

Ultimately, bystander programs aim to *shift social norms*, promoting prosocial attitudes and behaviors related to helping, generally, and sexual assault, specifically. Social norms
approaches to sexual violence prevention challenge misperceptions related to perpetration and bystander intervention behavior, and reinforce positive, prosocial norms (e.g., Mennicke, Kennedy, Gromer, & O’Connor, 2018). By engaging community members in sexual assault awareness, empowering them as agents of change, and teaching skills to safely and successfully intervene, bystander programs aim to provide participants with the skills to help individuals at-risk for sexual victimization, and shift community and cultural norms related to sexual violence (e.g., Banyard, Plante, & Moynihan, 2004; Burn, 2009; DeKeseredy, Schwartz, & Alvi, 2000; Foubert, 2000).

**Key Study Variables**

**The Predictor: Rape Myth Attitudes.** The present study considers the impact of rape myth attitudes on sexual violence on college campuses. Growing out of second-wave feminism, attribution theory describes rape culture as perpetuating sexual violence (e.g., Armstrong, Hamilton, & Sweeney, 2006; DeKeseredy & Kelly, 1993; Lottes, 1997). Society’s pervasive belief in, or acceptance of rape myths, or “prejudicial, stereotyped, false beliefs about rape, rape victims, and rapists,” (Burt, 1980, p. 217) serves to create an environment conducive to rape and sets the foundation for violence towards women (Vandiver & Dupalo, 2012). Rape myth acceptance prescribes the idea that “any healthy woman can resist a rapist if she really wants to” (Burt, 1980, p. 217) or the idea that men are sexually aggressive by nature and that the victim was “asking for it” (due to dress or behavior).

Such erroneous beliefs about the causes of rape and stereotypical beliefs about victims and perpetrators is highly problematic (Mennicke et al., 2018). Rape myth acceptance shifts responsibility for rape prevention from the perpetrator to the victim (Armstrong, Hamilton, & Sweeney, 2006). Endorsement of rape myths has been associated with greater perpetration of
sexual assault (Thompson, Koss, Kingree, Goree, & Rice, 2011) and less likelihood to intervene as a bystander (e.g., Berkowitz, 2003). While victim blaming and other rape supportive beliefs alone do not account for the prevalence of sexual assault (i.e., we must account for other individual, interpersonal, and organizational factors), it is clear that rape myth acceptance significantly impacts the way victims are perceived and treated (e.g. Burt, 1980; Du Mont, Miller, & Myhr, 2003; Grubb & Turner, 2012).

**The Moderator: Bystander Self-Efficacy.** A growing body of research lends support for the role of self-efficacy on behavior change (e.g., Lorig, Ritter, Laurent, & Plant, 2007; Seligman, Rashid, & Parks, 2007), and in relation to health behavior (e.g., risky alcohol use; Bandura, 2004; Rimal, 2000; Krieger, Serrano, & Neighbors, 2017). Self-efficacy is defined as one’s belief in their ability to successfully attain a particular goal and is theorized to play an integral role in behavior change (Bandura, 1977). Importantly, unlike other psychological constructs, self-efficacy beliefs are hypothesized to be context- and domain-specific; that is, self-efficacy beliefs vary depending on the circumstances and the particular domain of functioning.

Limited research has examined the role of self-efficacy on bystander behavior in the context of sexual violence (Banyard et al., 2007; Banyard et al., 2005). Fischer and colleagues’ (2011) meta-analysis of bystander intervention in dangerous and non-dangerous emergencies lends support for the application of social cognitive theory and key constructs to the bystander intervention approach. They found that the bystander effect (i.e., reductions in positive bystander behavior when others are around; Darley & Latané, 1968), is less likely to occur if the bystander feels able, competent, and confident to intervene.

Findings from two recent meta-analyses suggest that bystander intervention programs have done well to promote bystander self-efficacy among participants. Kettrey and Marx (2019)
cited eighteen effect sizes across ten studies examining the effects bystander programs on participants’ self-efficacy. On average, effects were significant and positive (g = 0.48, 95% CI [0.25, 0.72]; Kettrey & Marx, 2019). Findings were consistent with those cited previously; in their meta-analysis, Katz and Moore (2013) found effects on bystander self-efficacy to be moderately large (d = 0.49). In conclusion, there is strong theoretical support, and emerging empirical support, for the role of self-efficacy on bystander intervention in the sexual violence literature.

The Outcome: Bystander Intent to Intervene. Bystander intervention training programs are modeled off of Latané and Darley’s (1968) five-step situational model and have been supported by empirical research. The model endeavors to account for the complexities associated with bystander intervention and outlines the process through which a bystander decides whether to act (bystander intent to intervene) in a risky situation. In predicting bystander intervention behavior, the theory posits that the bystander must (1) notice the event, (2) interpret it as an emergency, (3) take responsibility to act on behalf of the individuals involved, (4) decide how to act, and lastly, (5) choose to act (Latané & Darley, 1970). In theory, a bystander who is able to identify risk factors for sexual assault and identify these situations as problematic (i.e., as influenced by attribution and social norms theory) and who is equipped with appropriate skills, can effectively intervene to prevent sexual violence (i.e., as influenced by domain and context-specific self-efficacy beliefs).

The bystander intervention approach holds particular promise in reducing sexual assault on college campuses, where sexual assaults are most often committed by acquaintances (i.e., someone known to the victim, rather than a stranger; Fisher, Cullen, & Turner, 2000), occur in the presence of others in social settings (e.g., off-campus parties, residence halls, or fraternities,
Fisher et al., 2000), and with alcohol involved (e.g., Abbey, McAuslan, & Ross, 1996; Messman-Moore, Coates, Gaffey, & Johnson, 2008). Bystanders are often present during the “pre-assault phase” (Burn, 2009), and thus have unique opportunities to intervene to prevent sexual violence (Burn, 2009; Banyard, 2008), as in the context of a drinking game.

A Gap in the Literature

Despite increased awareness of campus sexual assault and wide implementation of the bystander programming in recent years, perpetration of sexual assault continues at alarming rates (Kettrey, Marx, & Tanner-Smith, 2019). In an effort to address this epidemic, greater research is needed. Surprisingly, the direct relation on which the bystander model rests (i.e., the link between bystander attitudes and behaviors) has not been widely examined. Instead, bystander intervention literature focuses overwhelmingly on key variables of the bystander intervention approach as outcome variables. Our understanding of the relation between key factors that may facilitate or prevent behavioral action—or when and how these factors are most salient, is limited (McMahon, 2010).

Current Study

Preliminary research suggests that bystanders’ rape myth acceptance, including attribution of responsibility (i.e., whether the rape victim is at fault for their own rape, or victim blaming) and perception of victim “worthiness” impact bystander intention to intervene (Burn, 2009; McMahon, 2010), such that those endorsing greater rape myth acceptance are less likely to intervene. There is also limited support for the positive relation between self-efficacy and bystander behavior, yet little attention has been devoted to this relation (e.g., Banyard, 2008; Banyard & Moynihan, 2011). To date, rape myth acceptance, bystander self-efficacy, and bystander intent to intervene have not been examined together. The current study extends
previous research on the bystander approach to sexual violence prevention by clarifying the relations between rape myth acceptance attitudes and bystander intent to intervene, and further, by evaluating the influence of self-efficacy on the aforementioned relationship. The impact of prior bystander intervention training and social desirability bias were included as covariates, as these variables are important to consider, and have often been overlooked in previous research. Relations were examined in a large, multi-site sample of college student drinking gamers, a population at particular risk for both perpetration and victimization, and simultaneously well-positioned to intervene in the prevention of sexual violence.

This study aimed to answer the following research questions: Among college student drinking gamers, (1) To what extent are bystander attitudes (rape myth acceptance) related with bystander behavioral intentions (bystander intent to intervene), and (2) To what extent does bystander self-efficacy moderate the relation between rape myth acceptance and bystander intent to intervene? It was hypothesized that higher levels of self-efficacy would strengthen the relation between attitudes and behaviors, while lower levels of self-efficacy would weaken the main effect. In sum, it was hypothesized that low rape myth acceptance and high perceptions of self-efficacy would interact to predict the highest intent to intervene among college student drinking gamers.

Method

Participants

Participants were recruited from three universities across the East and Southern United States. Participants were recruited for a study examining “drinking games and health related behaviors,” and met the following inclusion criteria: (a) students 18-25 years of age, (b) who
have consumed alcohol in the past month, and (c) participated in a drinking game in the past month. The sample was limited to traditionally aged college student drinking gamers.

Sufficient sample size ($N = 647$) to find a significant interaction effect at 80% using the conventional $\alpha = .05$ was calculated with an a-priori statistical power analysis (G*Power; Faul, Erdfelder, Lang, & Buchner, 2007). The final sample size consisted of 970 college student drinking gamers between the ages of 18-25 ($M = 19.5, SD = 1.45$). Participants were primarily female (68%), White (66.8%), American students (91.6%) early in their college experience (38.5% first year, 27.1% second year). See Table 1 for more details on participant characteristics. Means, standard deviations, correlation coefficients, and Cronbach’s alpha coefficients were examined for all scales (see Table 2).

**Procedure**

**Recruitment and Compensation.** Recruitment and compensation varied between each of the three recruitment sites. Procedures unique to each site are outlined, below.

**Site 1.** Flyers including a link to access the online survey were posted on and around campus to promote participation. Additionally, with instructor permission, recruitment announcements were made in undergraduate classes, inviting students to participate and offering basic information about the voluntary nature of the study, rights of participants, and compensation (see Appendix A). Students interested in participating were emailed a brief description of the study, a reminder of the voluntary nature of the study, and a web link to the study (see Appendix B). Research recruitment requests were distributed to instructors across majors and course levels to increase participant variability, and thus, to enhance representativeness of the sample.
Compensation. Students at site 1 were given the option to enter into a drawing for one of two $25 Amazon gift cards for their participation. Participants choosing to enter the raffle were linked to a survey stored separately from their survey data where they were asked to provide contact information. Upon completion of the study and selection of the raffle winners, all contact information was destroyed.

Sites 2 & 3. On both campuses, participants were recruited via their respective Psychology Department’s participant recruitment pool. All advertisements indicated eligibility criteria (i.e., students 18-25 years of age, who have consumed alcohol in the past month, and participated in a drinking game in the past month). Those enrolled in Introduction to Psychology could meet the course research requirement by completing surveys made available through the Psychology Subject Pool, Sona system database.

Compensation. Students at sites 2 & 3 who were recruited via Sona systems had the opportunity to receive one credit toward a psychology course research requirement for their participation. Participants were provided a link which redirected them to a separate survey where they could enter their personal information to receive research participation credit. This separate survey was in no way linked to their anonymous survey responses and was deleted once instructors provided students with research credit.

Survey Protocol. Regardless of recruitment method, all students accessed the online survey delivered through the Qualtrics platform using a web link. They were first directed to a consent form (see Appendix C) where they were asked to provide their consent to participating by clicking “continue.” Participants were then asked to ensure their eligibility by responding to required items outlining inclusion criteria. Ineligible participants (i.e., under 18 or above 25 years-old, non-drinkers, or those who have not engaged in a drinking game within the past
were directed to a final page thanking them for their interest and notifying them that they were not eligible to complete the survey.

Volunteers who consented to participate and met eligibility criteria were directed to complete the demographic questionnaire (see Appendix D). Following completion of the demographics questionnaire, participants completed a series of survey questionnaires that were randomly counterbalanced to prevent order effects.

After completion of the study questionnaires, participants responded to the following validity check item: “It is vital that we only include responses from people that devoted their full attention to this study and were not distracted by other things (e.g., other people, TV) during the study. You will receive credit for this study regardless of how you respond to this question. In your honest opinion, should we use your data in our analyses for this study?” This item was included to assist with identifying careless responding. Last, participants were presented with a list of campus and community resources related to alcohol use and academic or personal concerns (e.g., peer assistance hotline, counseling centers, health center, Alcoholics Anonymous). Resources were specific to each site.

**Design**

This study used a cross-sectional, ex-post facto design. An online survey was used to examine the relation between participants’ attitudes towards rape using the Rape Myth Acceptance Scale-Short Form (IRMA-SF; Payne, Lonsway, & Fitzgerald, 1999) and bystander intent to intervene using the Bystander Attitudes Scale-Revised (BAS-R; McMahon, 2010; McMahon & Farmer, 2011). The primary moderator, bystander efficacy, was measured with the Bystander Efficacy Scale (BES; Banyard et al., 2005). Social desirability, measured with the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960; Reynolds, 1982) and
prior involvement in bystander intervention training, measured using a single item (“Have you completed a sexual violence intervention program?”) were entered into the model as covariates.

Measures

The Illinois Rape Myth Acceptance Scale-Short Form (IRMA-SF; Payne, Lonsway, & Fitzgerald, 1999; see Appendix E). This 20 item instrument measures participant rape myth acceptance on a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The 20-item IRMA-SF differs from the 45-item full scale in that it is designed to assess only general rape myth acceptance, rather than assessing agreement with particular components of rape myths (i.e., subscales). Short-form scale construction included item selection from the full-scale to optimize content-related and statistical properties and included approximately half of the items from each subscale (She asked for it, It wasn’t really rape, He didn’t mean to, She wanted it, She lied, Rape is a trivial event, and Rape is a deviant event). Example items include, “If a woman is raped while she is drunk, she is at least somewhat responsible for letting things get out of control;” “If a woman doesn’t physically fight back, you can’t really say that it was rape;” “A lot of women lead a man on and then they cry rape”. There are three negatively worded filler items to help control response sets. A total score is used to measure rape myth acceptance. In the present study, a total score was calculated for the IRMA-SF, with higher scores indicating greater acceptance of rape myths.

The IRMA-SF is an excellent proxy for the full-scale; the uncorrected correlation between the 20-item IRMA-SF and the full, 45-item IRMA is $r = .97, p < .001$ (Payne et al., 1999). The scale development study demonstrated acceptable internal consistency using a sample of undergraduate students ($\alpha = .87$; Payne et al., 1999). Internal consistency was good in the present study ($\alpha = .91$).
Bystander Efficacy Scale (BES; Banyard et al., 2005; see Appendix F). Bystander efficacy was measured with the Bystander Efficacy Scale (Banyard et al., 2005). The BES depicts 14 bystander behaviors. Participants were asked to indicate confidence in performing each of the behaviors (e.g., “Express my discomfort if someone says that rape victims are to blame for being raped,” “Do something to help a very drunk person who is being brought upstairs to a bedroom by a group of people at a party”) on a likert-type scale ranging in intervals of 10%, from 0% (can’t do), 10% (quite uncertain) to 100% (most certainly can do). The mean across all 14 items becomes the total score, with higher scores indicating higher bystander self-efficacy. The internal consistency of the BES has been demonstrated in previous research among samples of college students (e.g., $\alpha = .93$, Banyard, Moynihan & Cares, 2014; $\alpha = .89$; Foubert, Tatum, & Godin, 2010). In the present study, the BES demonstrated good internal consistency ($\alpha = .92$). The BES has been found to correlate with other instruments measuring bystander efficacy (e.g., $r = -.35$, $p < .001$, Slaby Bystander Efficacy Scale; Slaby, Wilson-Brewer, & DeVos, 1994; $r = -.58$, $p < .001$, MVP Efficacy Scale; Ward, 2001) providing evidence of its convergent validity.

Bystander Attitudes Scale-Revised (BAS-R; McMahon, 2010; 2011; see Appendix G). Bystander attitudes were measured using the Bystander Attitudes Scale-Revised (McMahon, 2010; 2011). The original BAS was revised to include language relevant for a college student population and renamed the BAS-R; the BAS-R, therefore, uses language specific to the population herein (McMahon, Postmus, & Koenick, 2011). The BAS-R measures likelihood or willingness of bystanders to intervene before, during, or after sexual assault. This 16-item attitudinal measure asks participants to indicate how likely they are to engage in each bystander behavior from 1 (Not likely) to 5 (Extremely likely). The scale includes items about direct
intervention strategies aimed at overt acts of sexual violence (e.g., “Confront a friend who plans to give someone alcohol to get sex”) as well items about intervening as a bystander to impact the culture supportive of sexual violence (e.g., “Challenge a friend who uses ‘ho,’ ‘bitch,’ or ‘slut’ to describe girls”). The range of summed scores is 16 to 80, with higher scores indicating greater intent to intervene. The BAS-R has demonstrated good internal consistency among a sample of first-year college students (e.g., $\alpha = .86$; McMahon, Allen, Postmus, McMahon, Peterson, & Hoffman, 2014). Internal consistency in the present study was good as well ($\alpha = .81$).

Marlowe-Crowne Social Desirability Scale-Short Form C (MC-C; Crowne & Marlowe, 1960; Reynolds, 1982; see Appendix H). The 13-item short form (MC-C) was derived from the 33-item Marlowe-Crowne Social Desirability Scale and designed to measure an individual’s tendency to distort self-presentation towards a socially desirable bias; that is, assessing whether respondents are concerned with social approval. The MC-C is comprised of true-false statements concerning personal traits and attitudes, tapping endorsement of “behaviors which are culturally sanctioned and approved, but which are improbable” (Crowne & Marlowe, 1960, p. 350). Participant responses are recoded and scored for social desirability; for each item, a score of 1 is high and 0 is low on social desirability. Sample items include “No matter who I’m talking to, I’m always a good listener” (true = 1), and “There have been occasions when I took advantage of someone” (false = 1). Social desirability bias is indicated via an affirmative response on 5 items, and a negative response on 8 items. A total score (ranging from 0 to 13) is calculated, and a higher score (i.e., a higher number of socially desirable responses) indicates greater concern with social approval.

The 13-item short form (MC-C) has demonstrated good psychometric properties. Scores on this form have been found to correlate highly with those on the full-scale MC (i.e., .91 to .96;
Fischer & Fick, 1993; Loo & Thorpe, 2000; Reynolds, 1982). Estimates of internal consistency on the MC-C range from .62 to .76 (Ballard, 1992; Loo & Thorpe, 2000; Reynolds, 1982; Zook & Sipps, 1985), and six-week test–retest correlations are good (α = .74; Zook & Sipps, 1985). While the internal consistency of the MC-C in the present study was below that of other study measures, this finding is consistent with previous research. The MC-C demonstrated fair internal consistency in the present study (α = .69).

**Demographics questionnaire (see Appendix D).** Participants were asked to report age, gender identity, class year, student status, sexual orientation, Greek affiliation, athletics involvement, and race/ethnicity. These variables were used to describe the sample and to aid in the interpretation of findings.

**Prior Sexual Violence Intervention Training Exposure.** Participants were asked, “Have you completed a sexual violence intervention program?” This facilitated an analysis to examine whether previous bystander training exposure was associated with mean differences in rape myth acceptance, bystander self-efficacy, and intent to intervene.

**Results**

**Preliminary Analyses**

**Missing Data & Outliers.** Prior to the major analyses, data was checked for missing values. Little’s (1988) Missing Completely at Random (MCAR) test was used to determine whether there was a pattern to missing values. The MCAR test was conducted and the result was nonsignificant at the p < .05 level [p = .643] indicating that the data was missing completely at random (Schlomer, Bauman, & Card, 2010). The original sample size (N = 2,021) was reduced to omit those who failed to respond to more than 10% of any one measure (Bennett, 2001; Tabachnick & Fidell, 2013; N = 517). The sample size was reduced again to include only those
meeting eligibility criteria (18 – 25-year-old student drinkers who had played a drinking game in the past month) and who responded affirmatively to a validity check item. Participants in the remaining sample \((N = 970)\) were missing < 10% of data.

In order to determine the percentage of each variable that was missing, a missing values analysis was conducted in SPSS. Overall, missing data for specific variables ranged from 0.0% to 0.4%. While there is no firm consensus regarding the percentage of missing data that becomes problematic, scholars have suggested that between 5% and 20% of missing data will yield biased results. Since data were found to be missing minimally, and missing completely at random (MCAR, Schlomer et al., 2010), missing data was addressed by using the nearest point procedure within the VIM package (Templ, Alfons, Kowarik, & Prantner, 2016). The KNN Nearest Neighbor Imputation method imputes data according to an algorithm that matches each point with its closest neighbor, assuming that a point can be approximated by the values of the points that are closest to it, based on other variables.

Next, data was checked for outliers that may bias results. Outliers were considered values that fell outside of \(|3.9|\) standard deviations of the mean (Field, 2013) or that otherwise exerted undue influence over the model parameters, as indicated by influence, leverage, and discrepancy statistics. The following residual statistics were used to gauge influence: Cook’s distance \([D = .002]\) and Studentized residual values \([SDR = .00]\). Seven cases were identified that exceeded suggested cutoff values, falling outside of \(|3.9|\) standard deviations of the mean. Outlier cases were removed prior to analyses.

**Normality.** Multivariate normality was assessed by reviewing quantile-quantile (Q-Q) plot and probability-probability (P-P) plots, examining measures of skewness and kurtosis, and running the Kolmogorov-Smirov test. A visual examination of Q-Q and P-P plots indicated that
data was normally distributed. Across all study variables, skewness did not exceed the suggested cut-off of 3.0, and kurtosis did not exceed the suggested cut-off of 8.0 (Tabachnick & Fidell, 2013). Non-significant Kolmogorov-Smirnov tests \( p = 1.00 \) further indicated that the data for the dependent variable (bystander intent to intervene) was normally distributed.

**Meeting Multivariate Analysis of Variance Assumptions.** Additional preliminary analyses were run to ensure that assumptions of ordinary least squares (OLS) regression were not violated. First, data was examined to rule out multicollinearity among variables. Relationships between variables were explored by reviewing variance inflation factors (VIF) for each factor and a correlation matrix of the observed variables to meet the assumption of non-multicollinearity (i.e., that predictors are not highly correlated). Study variables were loosely correlated \( r = -.02 \text{ to } .61; \text{ see Table 2} \) but did not exceed suggested cut-off value \( r = .80 \). Results suggest that the assumption of multicollinearity was not violated.

Next, data was tested for autocorrelation to ensure independence of residuals. Results of Durbin-Watson’s \( d = 1.56 \) indicated independence of residuals. Finally, to meet the assumption of homoscedasticity, data was checked to ensure that the residual variance in the outcome variable (bystander intent to intervene) was equivalent across the regression line and across all values of the moderator variable (bystander self-efficacy; Fairchild & MacKinnon, 2010). A visual examination of the scatterplot revealed no violations of homoscedasticity.

**Primary Analyses**

Hayes’ (2012) PROCESS model was used to analyze the hypothesized moderation, or two-way interaction. Analyses estimated a simple moderation model with the effect of rape myth acceptance (X) on bystander intent to intervene (Y) moderated by bystander self-efficacy (M). Covariates of social desirability (C) and prior bystander training experience (C2) were included
in the model. The predictor (rape myth acceptance) and moderator (bystander self-efficacy) variables were mean-centered (i.e., for each variable, the mean was subtracted from all values so the mean is equal to zero) to diminish multicollinearity between the main effect and interaction effects, and aid with interpretation. Next, covariates, followed by predictors, and the interaction term were entered into SPSS.

The full model was significant $F(5, 964) = 147.49; p = .000, R^2 = .43$. The test of the unconditional interaction $F(1, 965) = .0218; p = .88, \Delta R^2 = .00$ was not significant. Hypotheses were therefore partially supported, such that (1) higher rape supportive attitudes (rape myth acceptance) were negatively associated with bystander intent to intervene, but (2) bystander self-efficacy did not significantly moderate the relation between bystander attitudes (rape myth acceptance) and bystander intent to intervene (see Table 3) among college student drinking gamers.

Since self-efficacy did not significantly moderate the relation between rape myth acceptance and bystander intent to intervene, a simple linear regression between the former moderator (bystander self-efficacy) and the dependent variable (bystander intent to intervene) was conducted, accounting for covariates. Results revealed that there was a significant relation between bystander self-efficacy and bystander intent to intervene $[F(3, 966) = 196.25; p = .00, R^2 = .379]$. This direct relation indicates that as self-efficacy increases, bystander intent to intervene increases $[B = .213, SE = .609, t = 23.823, p < .000]$.

**Discussion**

While the bystander approach to sexual assault prevention has been backed by legislation and widely implemented, the most important consequence, incidence of sexual assault, has not significantly changed. Given emerging research suggesting a link between drinking games and
sexual assault (e.g., Fairlie et al., 2015) the present study focused on this unique population: college student drinking gamers. Hypotheses were tested across a diverse, multi-site sample of college student drinking gamers in various regions of the U.S. and at different stages of their undergraduate career.

Results of this study replicate and extend previous research, highlighting the critical relation between rape myth attitudes and bystander intent to intervene. Results lend further support for the theory of bystander behavior and suggest that the bystander model holds among college student drinking gamers, a group that has not previously been examined. Given that the relation holds among this group at particular risk for involvement in sexual assault, results further emphasize the utility of bystander intervention programming on college campuses.

The application of theory to better understand the role of social norms and attribution of blame upon rape supportive attitudes meaningfully contributes to the field of sexual violence prevention. Findings demonstrated that beliefs in rape myths were negatively related to drinking gamers’ intentions to intervene as bystanders (hypothesis 1). As predicted by social cognitive theory, findings demonstrated that self-efficacy also played an important role in predicting bystander intent to intervene. That is, there was a significant positive relationship found between bystander self-efficacy and behavioral intent. In this particular sample, however, self-efficacy did not moderate as predicted. Rape myth acceptance and bystander self-efficacy each shared significant relationships with behavioral intention, but they did not interact to predict bystander intent to intervene (therefore hypothesis 2 was not supported).

Results indicated that college student drinking gamers in the present sample largely disagreed with rape myths ($M = 1.78$, with items rated from “strongly disagree” to “strongly agree” on a likert-scale of 1 – 7). However, some items were more highly endorsed than others,
providing useful information to inform future prevention efforts. Items with the highest mean scores, “Rape happens when a man’s sex drive gets out of control” \((M = 3.19)\) and “Men don’t usually intend to force sex on a woman, but sometimes they get too sexually carried away” \((M = 2.65)\) emphasize the need for prevention programming to address the notion that \textit{He didn’t mean to,} excusing perpetrator behavior as innocent or accidental. Moreover, present findings emphasize the need to dispel myths that undermine reporting, painting victims as \textit{liars.} For example, the item, “Rape accusations are often used as a way of getting back at men” had one of the highest mean scores \((M = 2.47)\). Despite national attention to sexual assault, greater exposure to sexual violence training and resources on college campuses, and widespread policy changes, the present findings illuminate the persistent and pervasive nature of rape myth acceptance. In the present sample, issues of victim blaming and excusing the perpetrator remain – and endorsement of such attitudes has been demonstrated to share a direct relation with intent to intervene (or lack thereof; e.g., Martini & DePicolli, 2020).

The present sample generally reported high bystander self-efficacy as well \((M = 9.27,\) with items rated from “can’t do” to “very certain can do” on a likert-scale of \(1 – 11)\). Participants reported the greatest self-efficacy in their ability to help a \textit{friend,} such as: “Get help and resources for a friend who tells me they have been raped” \((M = 10.21)\); “Ask a friend if they need to be walked home from a party” \((M = 10.13)\). They reported less confidence in their ability to intervene with \textit{strangers} (e.g., “Do something to help a very drunk person who is being brought upstairs to a bedroom by a group of people at a party; \(M = 9.80\); “Ask a stranger if they need to be walked home from a party;” \(M = 8.23)\). They reported the least confidence in their ability to “speak up in class if a professor is providing misinformation about sexual assault” \((M = 6.93)\) – an item combining issues of authority with behaviors on the lower end of the sexual violence
continuum. Findings are consistent with previous research demonstrating differences in ratings of self-efficacy between friends and strangers (e.g., Banyard et al., 2014), and emerging research examining selection and consequences of various intervention strategies among groups (e.g., direct, delegate, distract; Moschella & Banyard, 2020). Better understanding the relation between participant identity (e.g., gender), context, and self-efficacy may be important in informing bystander intervention programming.

Findings also indicated that the present sample generally reported high intent to intervene as bystanders in situations involving sexual violence ($M = 4.06$; with items being rated from 1 to 5 on a likert-type scale with 5 being “extremely likely” to engage in bystander behavior). Participants endorsed greater intent to intervene in some situations over others, providing useful information to inform future programming efforts. Social desirability was positively correlated with intent to intervene, however, so findings should be interpreted with caution. Participants reported the greatest likelihood to engage in effort to change their own sexual behavior (“Stop sexual activity when asked to, even if I am already sexually aroused;” $M = 4.79$), followed by intent to intervene in situations involving overt sexual violence (“Confront a friend who is hooking up with someone who is passed out;” $M = 4.77$). The present sample endorsed the least likelihood to intervene in situations on the other end of the sexual violence continuum, such as monitoring self ($M = 2.65$) or others ($M = 2.60$) in use of sexist language (“ho,” ‘bitch,’ or “slut”) or sexist jokes. The present findings are consistent with previous research (McMahon, 2010), and suggest that college student drinking gamers may not view all behaviors on the sexual violence continuum as problematic or harmful.
Implications

Positive findings suggest that shifting community attitudes to challenge rape culture may not only predict greater bystander intent to intervene, but also decrease sexual violence perpetration, something existing programs have been unable to do. Findings have practical implications for colleges and universities and theoretical implications for researchers. Support for the full model, in the context of the Theory of Bystander Behavior (Latané & Darley, 1968), emphasize the importance of attending to college student drinking gamers’ attitudes towards sexual violence as a critical point of intervention, and suggest that interventions targeting self-efficacy may be particularly important as well.

Social norms approaches hold promise to shift beliefs and behaviors towards sexual violence and bystander intervention. While earlier research on social norms approaches were limited by short-term follow-up and lack of behavioral indicators, (e.g., Katz, Heisterkamp, & Fleming, 2011; Katz, Olin, Herman, & DuBois, 2013; Potter, Moynihan, & Stapleton, 2011), Mennicke and colleagues’ (2018) recent publication suggests that social norms marketing campaigns may promote longer-term change. Their sexual violence campaign targeted college men across a five-year period; results suggested that both self-reported and perception of peer attitudes and beliefs improved over time, as well as the discrepancy between the two (Mennicke et al., 2018). Moreover, participants reported increased frequency of positive and prosocial behavior over time (Mennicke et al., 2018).

While bystander intervention programming is presently informed by the social norms approach, future programming should consider greater emphasis on this component of training programs. Results suggest that it may be especially useful to focus on perpetrator responsibility among college student drinking gamers, as participants most commonly endorsed rape myths
excusing perpetrator behavior as innocent or accidental. Moreover, Mennicke’s (2018) results demonstrated that statistically significant changes in attitudes, beliefs, and behavior did not emerge until the third year of programming. Administrators and policy makers should consider mandating ongoing sexual violence programming to most effectively promote change.

Lastly, examining the moderating role of self-efficacy is unique and has important practical implications. Unlike stable state-characteristics (e.g., gender) that cannot be targeted for change in an intervention setting, self-efficacy can be influenced by contextual variables (e.g., social models, rewards, social comparisons, and forms of feedback; Bandura, 1977) and therefore represents an avenue for intervention. While self-efficacy was not found to significantly moderate the relation between attitudes and behavior, it was found to predict intervention behavior directly. Findings thus emphasize the utility of targeting self-efficacy during bystander intervention training.

Key contributors to self-efficacy include successful past behavior (e.g., having effectively intervened in the past), vicarious experience (e.g., having observed others effectively intervening in the past), physiological and affect states at the time of the event, and verbal encouragement (Bandura, 1977). While intervention programming cannot duplicate successful intervention in the classroom setting, simulation of hypothetical scenarios may encourage self-efficacy among trainees. Moreover, intervention training may consider incorporating opportunities for role-plays related to bystander intervention in sexual assault situations (e.g., Cimini et al., 2009; Krieger et al., 2017).

**Limitations and Future Directions**

The proposed study is not without limitations. Importantly, causal inferences cannot be made given the absence of temporal precedence that is inherent to the cross-sectional, ex-post
facto design of the study. Correlations cannot be interpreted to imply causation, but instead, suggest significant relations between variables. A longitudinal study design, wherein data is collected across multiple time points should be conducted to better understand directionality and causality among the variables.

Additionally, while the sample was gathered from multiple universities, the sample was not representative of all college student drinking-gamers in the U.S. Convenience sampling methods were used across institutions, likely yielding self-selection bias. Additionally, the present sample is limited to only 3 of over 4,000 degree-granting institutions listed by the National Center for Education Statistics (Snyder, de Brey, & Dillow, 2019), and specifically to college students who engaged in alcohol use and drinking games within 30 days of data collection. Data may have also been influenced by the self-report nature of the measures. While results of the Marlowe-Crowne Social Desirability Scale-Short Form was included to control for social desirability bias, and results did not indicate that participant responses were significantly impacted by bias, validity of participant responses may otherwise be threatened by stigma not captured by this scale.

Further, the study measured bystander intentions to intervene, not intervention behaviors. Previous research has demonstrated positive correlations between intention to intervene and actual intervention, however, this relationship is complicated by factors including opportunity to engage in bystander intervention, and available evidence suggests that programs may have greater success in promoting intention than behavior (e.g., Katz & Moore, 2013). Results of the proposed study may not, therefore, be reflective of participants’ actual bystander behavior.

Additionally, the self-efficacy and behavioral scales were not mirrored: that is, some items on the behavioral scales may have been interpreted by participants as more extreme (e.g.,
physically intervening a sexual encounter v. confidence intervening when some uses derogatory language). Such differences may have contributed to a gap in ratings of confidence versus behavioral intent and may have been further confounded by participant identity factors (e.g., gender). Utilizing a parallel set of items to measure self-efficacy and behavioral intention could inform a new standard of measurement in self-efficacy behavior prediction.

Finally, the proposed study is limited in scope. There are myriad individual and environmental variables warranting further research attention, including participant demographics and characteristics (e.g., gender, race/ethnicity, membership in athletics or Greek life), intervention setting (e.g., geographic region, college or university characteristics) and intervention characteristics (e.g., mixed or single-gender group, group membership, group size, duration of intervention).

Findings in the present study demonstrated that prior intervention training did not significantly impact responses, despite approximately half of the present sample having had prior training experience. This finding that may indicate time-limited effects of programming, consistent with previous research (Kettrey et al., 2019). Additional randomized control trials are needed, as well as follow-up measures to quantify the duration of program effects. Perhaps most importantly, future research should examine other mediating and moderating variables to better understand nuances of the bystander intervention model, maximize program effects, and ultimately, reduce sexual violence among college student drinking gamers. More empirical research is needed to develop effective evidence-based sexual assault prevention programs aimed at college students, and particularly drinking gamers. High risk drinkers are disproportionately involved in incidences of sexual assault, and currently, there is a dearth of research in this area.
References


power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191. doi:10.3758/BF03193146


doi:10.1097/01.mlr.0000233678.80203.c1


doi:10.1080/00224499709551867


Figure 1. Proposed conceptual model investigating the impact of rape myth acceptance and bystander self-efficacy on bystander intent to intervene among college students.
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<th>N</th>
<th>%</th>
</tr>
</thead>
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<td></td>
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<td>18-25</td>
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<td></td>
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<tr>
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<td><strong>Gender</strong></td>
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<td></td>
</tr>
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<td>Second</td>
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</tr>
<tr>
<td>Third</td>
<td>182</td>
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</tr>
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**Athletic Involvement in past 12 Months**

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<tr>
<td>Exercise regularly</td>
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<td>Exercise occasionally</td>
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<tr>
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**Race/Ethnicity**

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**Residence**

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**Wanted to go to a Party School**

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**NOTES:** N = 970.
Table 2. Bystander Intent to Intervene, Rape Myth Acceptance and Bystander Self-Efficacy Means and Correlations

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<tr>
<th></th>
<th>M</th>
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<th>BES</th>
<th>MCC</th>
<th>BASR</th>
<th>TRN</th>
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<tr>
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<td>1.46</td>
<td>0.45**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Desirability (MCC)</td>
<td>1.99</td>
<td>0.36</td>
<td>-0.06</td>
<td>0.12**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bystander Intent to Intervene</td>
<td>4.06</td>
<td>0.51</td>
<td>0.49**</td>
<td>0.61**</td>
<td>0.11**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Intervention Training (TRN)</td>
<td>1.51</td>
<td>0.50</td>
<td>0.02</td>
<td>-0.03</td>
<td>0.02</td>
<td>-0.02</td>
<td>1</td>
</tr>
</tbody>
</table>

NOTE: N = 970, p < .05, p < .01**
<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>$p$</th>
<th>$SE$</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Desirability (MCC)</td>
<td>0.060</td>
<td>0.085</td>
<td>0.035</td>
<td>- 0.035 - 0.129</td>
</tr>
<tr>
<td>Intervention Training (TRN)</td>
<td>-0.004</td>
<td>0.878</td>
<td>0.025</td>
<td>- 0.052 - 0.045</td>
</tr>
<tr>
<td>Rape Myth Acceptance (IRMA)</td>
<td>-0.170</td>
<td>0.000**</td>
<td>0.019</td>
<td>- -0.134 - 0.207</td>
</tr>
<tr>
<td>Bystander Self-Efficacy (BES)</td>
<td>0.172</td>
<td>0.000**</td>
<td>0.010</td>
<td>0.153 - 0.191</td>
</tr>
<tr>
<td>Rape Myth Acceptance x Bystander Self-Efficacy</td>
<td>-0.001</td>
<td>0.883</td>
<td>0.009</td>
<td>-0.019 - 0.016</td>
</tr>
</tbody>
</table>

NOTE: N = 970, $p < .05, p < .01**
APPENDIX A

Classroom Recruitment Script Inviting Students to Participate

I would like to invite you to participate in a research study being conducted by Dr. Jessica Martin, Associate Professor of Counseling Psychology, and approved by the University at Albany Institutional Review Board.

The purpose of this study is to investigate factors that might influence college students’ attitudes and behaviors while engaging in drinking games. Students who are 1) between the ages of 18 and 25 years old, 2) who consume alcohol, and 3) who have played a drinking game at least once in the past month are eligible to participate. If you choose to participate, you will be asked to complete questionnaires online that should take about 20 minutes. You will first read a consent form that outlines the purpose of the study and includes information regarding your rights as a participant. As compensation for your time, you may choose to enter a raffle for a chance to win one of two $25 Amazon e-gift cards.

Participation is completely voluntary; you are under no obligation to participate. Contact information provided to enter the raffle will be kept completely separate from any data that you provide, so there will be no way to link your responses to your name, and your responses to the surveys are completely confidential. Are there any questions so far?

If you are interested in participating, please provide your email address so that I can send you a link to complete the survey online. If you are not interested in participating, please write “NO” on the sheet of paper you receive. Please write legibly. When you’re done, fold the paper in half and pass them up.

Should you have any questions about the study or your participation, you may contact Dr. Jessica Martin, at jlmartin@albany.edu.
APPENDIX B

Email Script in Response to Participant Interest

Subject: College Drinking Games Study

Hello! Thank you for your interest in participating in this study focusing on drinking games and health related behaviors. The study is being conducted by Jessica Martin, Ph.D. in the division of Counseling Psychology at the University at Albany, SUNY. The purpose of the study is to investigate the psychological, social, and sociocultural characteristics that might influence college students’ behaviors while engaging in drinking games. The study has been approved by the IRB at the University at Albany.

Participation in the study is voluntary. If you choose to participate, a link to the website containing the questionnaires is provided below. It will take you approximately 20 minutes to complete the surveys. Your responses will be anonymous and confidential.

After completing the questionnaires, you may choose to provide your contact information to enter to win one of two $25 Amazon e-gift cards as compensation for your time. Your contact information will not be linked to your data, and it will be destroyed at the end of the study.

You are eligible to participate in this study if you:

(a) Are a current drinker

(b) Are between 18 to 25 years of age

(c) Have played a drinking game at least once in the past month

If you are eligible to participate based on the 3 criteria above, click on or copy and paste this URL into your internet browser to begin:

https://albany.az1.qualtrics.com/jfe/form/SV_06SxeOQBhOApvIr
In the event that you have any questions or concerns about this study, you may contact Jessica Martin, Ph.D. at jlmartin@albany.edu.
Investigator Identification: This research study, *Drinking Games and Health Risk Behaviors*, is being conducted by Jessica Martin, Ph.D. in the division of Counseling Psychology at the University at Albany, State University of New York. This is a collaborative research project with individuals from the following universities: Smith College, University of Arkansas, University of North Texas, Old Dominion University, and University of Central Florida. See Participant Information section for further details about the collaboration.

Study Description: The purpose of the study is to investigate the psychological, social, and sociocultural characteristics that might influence college students’ behaviors while engaging in drinking games.

Eligibility: To be eligible to participate in the study, you must meet the following criteria:

(a) Be a current drinker

(b) Be between 18 to 25 years of age

(c) Have played a drinking game at least once in the past month

Participation: You will be expected to complete questionnaires that ask for demographic information and information related to psychological, social, and sociocultural characteristics that might influence college students to consume alcohol and engage in a variety of different drinking practices. Completing the questionnaires should take approximately 20 minutes.

Compensation: After completing the questionnaires, you can choose to provide your email address in order to be entered to **win one of two $25 Amazon e-gift cards** as compensation for
your time. Your contact information will not be linked to your data. Your email address will be used only to verify completion of the survey for compensation purposes, will not be used as data, and will be destroyed at the end of the study.

**Possible Risks and Benefits:** A possible risk of this study involves experiencing discomfort when filling out the questionnaires. A possible personal benefit of this study is that by filling out the questionnaires you will gain more insight into your own alcohol use and engagement in various drinking behaviors and practices.

**Participant Information:** Your participation in this research is completely voluntary. You may discontinue your participation in the study at any time without penalty. You may also choose to not answer any question(s) that you do not wish to, for any reason. Your name will not appear anywhere on the questionnaires. If you provide any demographic information that could be identifying (e.g., the only member of a particular ethnic group), then this information will be combined with other participants. This is a collaborative research project with individuals from the following universities: Smith College, University of Arkansas, University of North Texas, Old Dominion University, and University of Central Florida. At the conclusion of data collection, de-identified data will be shared with the principal investigators at the aforementioned institutions for inclusion in one large pool of data from participants across all of the institutions. The data will be used by principal investigators for publication and presentation in professional journals and conferences.

**On-Line Data Collection:** This project has been approved by the University at Albany Institutional Review Board. Approval of this project only signifies that the procedures adequately protect the rights and welfare of the participants. Please note that absolute confidentiality cannot be guaranteed due to the limited protections of internet access. All
information obtained in this study is strictly confidential unless disclosure is required by law. In addition, the Institutional Review Board and University or government officials responsible for monitoring this study may inspect these records.

**Contact Information:** If you have any questions about this study or problems completing the questionnaires, please contact Dr. Jessica Martin, by email at jlmartin@albany.edu or by phone at 518-442-4935. If you would like a copy of this consent form, you should print it before answering the question below.

**IRB contact about your rights in the study or to report a complaint:**

Research at the University at Albany involving human participants is carried out under the oversight of the Institutional Review Board (IRB). This research has been reviewed and approved by the IRB. If you have any questions concerning your rights as a research subject or if you wish to report any concerns about the study, you may contact University at Albany Office of Regulatory & Research Compliance at 1-866-857-5459 or hsconcerns@albany.edu.
APPENDIX D

Demographic Questionnaire

Instructions: The items in this section include questions about your background. Please read each question carefully and thoughtfully.

1. What is your current age?

2. Gender identity:
   (1) Male
   (2) Female
   (3) Transgender: Male to Female
   (4) Transgender: Female to male
   (5) Other, please specify

3. Class year:
   (1) First year student
   (2) Second year student
   (3) Third year student
   (4) Fourth year student
   (5) Fifth year student
   (6) Other, specify:

4. Student Status:
   (1) Full Time
(2) Part Time

5. Which of the following best describes your sexual orientation?

(1) Heterosexual

(2) Gay

(3) Lesbian

(4) Bisexual

(5) Another sexual orientation, please specify

(6) Questioning or Unsure

(7) I prefer not to respond

6. Are you a member of a Greek fraternity/sorority?

(1) Yes

(2) No

7. Have you completed a sexual violence intervention program?

(1) Yes

(2) No

8. How many sexual violence intervention programs have you completed?

(1) 1

(2) 2

(3) 3

(4) 4

(5) 5
9. When did you most recently complete a sexual violence intervention program?
   (Month/Year)

10. How would you define your typical level of athletic involvement in the past 12 months?
   (Select one)
   (1) Elite athlete (national or international level)
   (2) Varsity athlete
   (3) Recreational athlete (e.g., club sports, intramural, or other organized teams)
   (4) Recreational athlete (informal competitions, e.g., pickup basketball)
   (5) Exercise regularly
   (6) Exercise occasionally
   (7) I do not exercise

11. Are you an international student?
   (1) No
   (2) Yes

12. My ethnicity is:
(1) Asian or Asian American, including Chinese, Japanese, and others.

(2) Black or African American.

(3) Hispanic or Latina/o, including Mexican American, Central American, and others.

(4) White, Caucasian, Anglo, European American; not Hispanic.

(5) American Indian/Native American.

(6) Other (specify):

13. Where do you live?

(1) In parents’ home

(2) In relatives’ home

(3) On-campus dorms/residence halls

(4) On-campus or university-owned apartments

(5) Fraternity/Sorority house

(6) Off-campus apartments or house

(7) Other (specify)

14. I chose to attend my university because I wanted to go to a “party school.”

(1) True

(2) False
APPENDIX E

Illinois Rape Myth Acceptance Scale-Short Form (IRMA-SF)

Instructions: Please rate your level of agreement with each of the statements below.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Uncertain</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

1. If a woman is raped while she is drunk, she is at least somewhat responsible for letting things get out of control.

2. Although most women wouldn’t admit it, they generally find being physically forced into sex a real “turn-on.”

3. If a woman is willing to “make out” with a guy, then it’s no big deal if he goes a little further and has sex.

4. Many women secretly desire to be raped.

5. Most rapists are not caught by the police.

6. If a woman doesn’t physically fight back, you can’t really say that it was rape.

7. Men from nice middle-class homes almost never rape.

8. Rape accusations are often used as a way of getting back at men.

9. All women should have access to self-defense classes.

10. It is usually only women who dress suggestively that are raped.

11. If the rapist doesn’t have a weapon, you really can’t call it a rape.

12. Rape is unlikely to happen in the woman’s own familiar neighborhood.

13. Women tend to exaggerate how much rape affects them.

14. A lot of women lead a man on and then they cry rape.

15. It is preferable that a female police officer conduct the questioning when a woman reports a rape.
16. A woman who “teases” men deserves anything that might happen.

17. When women are raped, it’s often because the way they said “no” was ambiguous.

18. Men don’t usually intend to force sex on a woman, but sometimes they get too sexually carried away.

19. A woman who dresses in skimpy clothes should not be surprised if a man tries to force her to have sex.

20. Rape happens when a man’s sex drive gets out of control.
APPENDIX F

Bystander Efficacy Scale (BES)

Instructions: Please read each of the following behaviors. Indicate how confident you are that you could do them. Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

<table>
<thead>
<tr>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>can't do quite uncertain</td>
<td>moderately certain</td>
<td>very certain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Express my discomfort if someone makes a joke about a woman’s body.
2. Express my discomfort if someone says that rape victims are to blame for being raped.
3. Call for help (i.e., call 911) if I hear someone in my dorm yelling “help.”
4. Talk to a friend who I suspect is in an abusive relationship.
5. Get help and resources for a friend who tells me they have been raped.
6. Able to ask a stranger who looks very upset at a party if they are ok or need help.
7. Ask a friend if they need to be walked home from a party.
8. Ask a stranger if they need to be walked home from a party.
9. Speak up in class if a professor is providing misinformation about sexual assault.
10. Criticize a friend who tells me that they had sex with someone who was passed out or who didn't give consent
11. Do something to help a very drunk person who is being brought upstairs to a bedroom by a group of people at a party.
12. Do something if I see a woman surrounded by a group of men at a party who looks very uncomfortable.
13. Get help if I hear of an abusive relationship in my dorm or apartment
14. Tell an RA or other campus authority about information I have that might help in a sexual assault case even if pressured by my peers to stay silent.
APPENDIX G

Bystander Attitudes/Behaviors Scale—Revised

Instructions: Please read the following list of behaviors and check how likely you are to engage in these behaviors using the following scale:

\[
\begin{array}{cccc}
1 & 2 & 3 & 4 & 5 \\
\text{(not at all likely)} & & & & \text{(extremely likely)} \\
\end{array}
\]

1. Ask for verbal consent when I am intimate with my partner, even if we are in a long term relationship
2. Stop sexual activity when asked to, even if I am already sexually aroused
3. Check in with my friend who looks drunk when s/he goes to a room with someone else at a party
4. Say something to my friend who is taking a drunk person back to his/her room at a party
5. Challenge a friend who made a sexist joke
6. Express my concern if a family member makes a sexist joke
7. Use the word “ho,” “bitch,” or “slut” to describe girls when I was with my friends
8. Challenge a friend who uses “ho,” “bitch,” or “slut” to describe girls
9. Confront a friend who plans to give someone alcohol to get sex
10. Refuse to participate in activities where girls’ appearances are ranked/rated
11. Listen to music that includes “ho,” “bitch,” or “slut”
12. Confront a friend who is hooking up with someone who is passed out
13. Confront a friend if I hear rumors that s/he forced sex on someone
14. Report a friend that committed a rape
15. Stop having sex with a partner if s/he says to stop, even if it started consensually
16. Decide not to have sex with a partner if s/he is drunk
APPENDIX H

Marlowe-Crowne Social Desirability Scale - Short Form (MC-C)

Instructions: Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you.

<table>
<thead>
<tr>
<th>True</th>
<th>Neither true nor false</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>It is sometimes hard for me to go on with my work if I am not encouraged.</td>
<td>(F)</td>
</tr>
<tr>
<td>2.</td>
<td>I sometimes feel resentful when I don’t get my own way.</td>
<td>(F)</td>
</tr>
<tr>
<td>3.</td>
<td>On a few occasions, I have given up doing something because I thought too little of my ability.</td>
<td>(F)</td>
</tr>
<tr>
<td>4.</td>
<td>There have been times when I felt like rebelling against people in authority even though I knew they were right.</td>
<td>(F)</td>
</tr>
<tr>
<td>5.</td>
<td>No matter who I’m talking to, I’m always a good listener.</td>
<td>(T)</td>
</tr>
<tr>
<td>6.</td>
<td>There have been occasions when I took advantage of someone.</td>
<td>(F)</td>
</tr>
<tr>
<td>7.</td>
<td>I’m always willing to admit it when I make a mistake.</td>
<td>(T)</td>
</tr>
<tr>
<td>8.</td>
<td>I sometimes try to get even, rather than forgive and forget.</td>
<td>(F)</td>
</tr>
<tr>
<td>9.</td>
<td>I am always courteous, even to people who are disagreeable.</td>
<td>(T)</td>
</tr>
<tr>
<td>10.</td>
<td>I have never been irked when people expressed ideas very different from my own.</td>
<td>(T)</td>
</tr>
<tr>
<td>11.</td>
<td>There have been times when I was quite jealous of the good fortune of others.</td>
<td>(F)</td>
</tr>
<tr>
<td>12.</td>
<td>I am sometimes irritated by people who ask favors of me.</td>
<td>(F)</td>
</tr>
<tr>
<td>13.</td>
<td>I have never deliberately said something that hurt someone’s feelings.</td>
<td>(T)</td>
</tr>
</tbody>
</table>