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Exploring the Moderating Effects of Drinking Context on the Relationship between Harmful Drinking and Risky Sexual Behaviors among College Females

Lauren A. Gardner
University of Southern Mississippi

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The University of Southern Mississippi

Exploring the Moderating Effects of Drinking Context on the Relationship between Harmful
Drinking and Risky Sexual Behaviors among College Females

by

Lauren Gardner

A Thesis

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EXPLORING THE MODERATING EFFECTS OF DRINKING CONTEXT

EXPLORING THE MODERATING EFFECTS OF DRINKING CONTEXT

Approved by

Michael Madson, Ph.D.,
Thesis Advisor
Professor of Psychology

D. Joe Olmi, Ph.D., Chair
Department of Psychology

Ellen Weinauer, Ph.D., Dean
Honors College

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Abstract

Females are engaging in harmful amounts of drinking at higher rates than ever before. Because these rates are increasing, studying harmful drinking in the college female population is imperative. Previous studies have noted that an increase in harmful drinking correlates positively with an increase in risky sexual behavior. Although these correlations are evident, no previous study has looked at drinking context as a moderator between these two variables. The current study examined the degree to which drinking context moderates the relationship between harmful drinking and risky sexual behavior in college females. This study consisted of 387 female college students ages 18-24 who had drunk alcohol in the past 30 days. In this sample, harmful drinking and each drinking context predicted risky sexual. However, drinking context did not moderate the relationship between harmful drinking and risky sex. The implications, limitations, and potential for future research will be discussed as well.

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Introduction

Approximately half of the individuals in the United States who are ages 18-24 are students in a university, either full-time or part-time (Blanco, Okuda, Wright, Hasin, Grant, Liu, & Olfson, 2008). Attending college is a time for many students when they engage in a wide variety of behaviors during the transition to adulthood. However, one aspect of the college experience that has been well documented is the increased use of alcohol by traditional age college students. In fact, a stable trend in the research is that college students regularly consume more alcohol than their non-college peers. According to the recent Monitoring the Future Survey (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2013), 43% of college students reported having been drunk in the past 30 days compared to 34% of non-college peers. Further, there is something unique about the college environment that is facilitative of increased alcohol consumption among many students. For this reason, alcohol use by college students has been the target of research, prevention and intervention efforts for over 30 years (Larimer, & Cronce, 2007). One major focus of these efforts has focused on harmful drinking due to the high amount of college students that engage in this behavior. For individuals who are ages 18- 24, 1 in 10 will engage in heavy drinking (Randolph, Torres, Gore-Felton, Lloyd, McGarvey, 2009). Binge drinking, consuming four or more standard drinks as a female and five or more drinks as a male within two hours, is an aspect of harmful drinking and has been considered normal behavior for many college students (Ham & Hope, 2003). Further, approximately 45% of traditional age college students (18-24) participate in binge drinking within a two week time period (Johnston et al., 2013). More specifically, Johnston and colleagues (2015) found that 13% of college students reported having 10 or more drinks in a row at least once in the prior week compared to 12% of

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non-college peers. Harmful drinking by college students also receives attention from researchers and university personnel because it increases students' risk for developing an alcohol use disorder (Blanco, et al 2008). For instance, one-third of college students showed signs of alcohol abuse and dependence (Borden, Martens, McBride, Sheline, Bloch, & Dude, 2011). Clearly harmful drinking by college students is an important public health concern however, there are differences between men and women in the rate and effects of harmful alcohol use.

Harmful Drinking Among College Women

Harmful drinking is becoming more commonplace for college females and can have various negative consequences as well. In past research, evidence supported the fact that males will drink more often during the week and will drink larger amounts of alcohol than females. (Christie-Mizell & Peralta, 2009). However, college women are exceeding the National Institute on Alcohol Abuse and Alcoholism's (NIAAA) safe drinking guidelines (no more than 3 drinks/day, 7 drinks/week for females) more often than college males (4 drinks/day; 14 drinks/week; Hoeppe, Paskausky, Jackson, & Barnett, 2013). Similarly, Johnston and colleagues (2013) found that roughly 10% of college age women have engaged in binge drinking in the last two weeks. Thus, the gender gap which once existed between men and women in the amounts of harmful alcohol consumption is narrowing and could suggest that female college students may not be aware of the safe drinking guidelines published by the NIAAA. Because smaller amounts of alcohol has stronger biological effects on females than males, females have a higher risk for alcohol related negative consequences due to the harsh effects that alcohol has on women compared to men (Moorer, Madson, Mohn, & Nicholson, 2013) increasing their risk for long term health problems (Hoeppe et al., 2013). One of the alcohol related negative

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consequences of harmful drinking is risky sexual behavior that can lead to other negative consequences for women.

Alcohol-related Negative Consequences

One of the main reasons alcohol use among college students is concerning is the relationship between harmful alcohol consumption and alcohol-related negative consequences. College students who engage in harmful drinking are at a higher risk for alcohol related consequences. One consequence during intoxication is impaired judgment, which can lead to other consequences through poor decision making such as engaging in risky sexual behavior (White & Hingson, 2013). Students might also make poor academic decisions such as missing class, not studying for a test, or not doing homework. This can lead to a decline in the student's grades. Other, more serious risks of harmful drinking for these students might include death and the potential for long term chronic illnesses (Hoepfner et al., 2013). Approximately 1,800 students die each year as a result of alcohol related injuries (i.e. motor vehicle crashes; White & Hingson, 2013). For female college students, other major risks associated with harmful drinking is a higher likelihood of experiencing a sexual assault or engaging in risky sex (Abbey, Zawackia, Buck, Clinton, McAuslan, 2004). Approximately 97,000 students are sexually assaulted or date raped each year as a result of alcohol (White & Hingson, 2013).

Risky Sexual Behavior

Each year, approximately 100,000 college students state that they were too intoxicated to recall consenting to sex (NIAAA, 2013) and approximately 400,000 students will have unsafe sex due to alcohol consumption (White & Hingson, 2013). Risky sexual behaviors include engaging in sex (a) after using drugs or alcohol (b) with multiple sexual partners (c) with individuals who have risky factors such as STD's (d) or without using a condom (Howells &

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Orcutt, 2014). Harmful alcohol use among college women has been linked with increases in risky sexual behavior which can lead to a plethora of related negative consequences. Alcohol use, risky sexual behavior, and related consequences have been linked together (Lewis, Granato, Blayney, Lostutter, Kilmer, 2012). White and Hingson (2013) found that students who reported binge drinking at least once during a two week period were three times more likely to engage in risky sex behaviors. Further, students who are heavy drinkers are three times more likely to have more than one sexual partner than those who do not engage in heavy drinking (Mair, Ponicki, & Gruenewald, 2016).

Mair and colleagues (2016) found that alcohol increases risky sexual behavior more for men than women; however, 10% of college women stated that they had sex with someone they would not normally have had sex with while under the influence of alcohol (Moorer et al, 2013). Further, college women who engaged in more binge drinking also reported less condom use when engaging in sex (Patrick & Maggs, 2009). Several reasons have been cited as to why heavy drinking might lead to risky sexual behavior. One reason is because alcohol decreases judgment (Mair et al, 2016). Another reason could be that the expectations that an individual may have for sexual intercourse may increase once alcohol is consumed. Additionally, being around individuals who have been drinking may increase the chances of an individual engaging in risky sex even if they do not drink (Mair et al, 2016). Because of these prevalence rates, it is important to look further in to ways to decrease this risky behavior.

Increases in alcohol consumption among females are linked with increases in various negative sexual consequences including risky sexual behavior such as having unprotected sex or having sex with multiple partners (Moorer et al, 2013). Risky sexual behavior could lead to negative consequences for females such as unwanted pregnancy or STD's, which could impact

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the individual's college career. College women who have negative sexual consequences are more likely to engage in alcohol consumption, have declining mental health, and will use less protective behavioral strategies than their peers who do not have negative sexual consequences (Moorer et al, 2013). Because the link between harmful drinking and risky sex appears strong, it is important to examine factors that may attenuate this relationship, thus, identifying potential prevention and intervention targets. Harmful alcohol use and these risky may be related to the context in which these behaviors are taking place. One potential factor to examine for its influence on harmful alcohol use and risky sex is the context in which students are most often drinking. Thus, the purpose of this study was to explore the degree to which the common drinking context – convivial, intimate/romantic, and negative affect – moderate the association between harmful drinking and risky sex among traditional age females.

Drinking Contexts

Harmful drinking and related behaviors, such as risky sex, may be related to the context in which students often drink. Drinking context is any environment (social, emotional, or situational) that an individual might be likely to engage in alcohol consumption (O'Hare, 2001). The amount of exposure that an individual has to risky sexual behavior may be dependent on the context in which they are drinking (Mair et al, 2016). In addition, some drinking contexts are related to more harmful drinking and less safe drinking behaviors among college students (Beck, Caldeira, Vincent, & Arria, 2013). Drinking context could be a moderator for heavy drinking and risky sexual behavior (Mair et al, 2016). However, data on the amount of alcohol consumed within drinking context is limited (Mair et al, 2016).

Social/Convivial

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Students may drink in a convivial or social context such as at a bar, club or party. The highest amount of alcohol intake takes place within this drinking context (Ham, Zamboanga, Bridges, Casner, & Bacon, 2013). In this context, students might attempt to pace their alcohol intake with that of their peers (Senchak, Leonard, & Greene, 1998). Because of this, the social context can also include the social group with whom the individual is drinking (Senchak et al, 1998). In prior research, males have engaged in higher drinking while in smaller, all male groups. However, females engage in higher rates of drinking while in larger, male and female groups (Senchak et al, 1998). This means that females engage in higher drinking when they are with males, which could lead to an increased risk of engaging in risky sexual behavior. In addition to this, students will drink, on average, the same amount as their peers to be socially accepted (Cullum, O'Grady, Armeli, & Tennen, 2012). These setting may serve as an outlet for college students to have increased heavy drinking and, therefore, increased risky sexual behavior. Drinking at campus events (sporting events, concerts, dances) had the highest amount of drinking (Mair et al, 2016). Heavy drinking at bars had the highest amount of each of the different types of risky sexual behavior (i.e. having sex with multiple partners or unprotected sex; Mair et al., 2016).

Personal-Intimate

Though many students drink in social settings, approximately 15% of college students will drink in other contexts (Keough, Connor, Sherry, & Stewart, 2015). One context some students may also drink in a romantic context with a partner they are dating because they believe drinking will either enhance their sexuality or enhance the intimacy (O'Hare, 2001). Given that this context relates to greater intimacy, drinking in this context can lead to risky sexual behavior or other consequences such as having unplanned sex, becoming a victim of sexual assault, or

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engaging in sex without a condom (O'Hare, 2001). In fact, Howells and Orcutt (2014) found that condom use remained constant for individuals in different drinking contexts. Students believe that this context has the highest potential for negative consequences (Ham et al, 2012). Research is limited pertaining to the role of personal-intimate drinking contexts and the relationship between harmful drinking and risky sexual behavior (Keough et al, 2015).

Negative Coping

Finally, students may drink to alleviate negative affect or to cope with mental health or life difficulties (O'Hare & Sherrer, 2005). In this context, individuals might also use sex in order to decrease negative affect (Howells & Orcutt, 2014). Students report the most negative consequences when drinking in negative coping contexts; this is a result of the long term issues that accompany drinking to alleviate any socioemotional issues the individual is facing (O'Hare, 2001). This can result in risky sexual behavior after consumption of alcohol. Keough and colleagues (2015) also found that when students drink alone, they often engage in more harmful drinking, have increased negative consequences from alcohol, and use the alcohol as self-medication. This means that the negative affect group, especially if they are drinking alone, could be at higher risk for alcohol related problems. In addition to this, it is more likely that individuals who engage in drinking alone have an increased chance for developing an alcohol use disorder over individuals who drink in the social context (Keough et al, 2015).

Purpose of Study

These different drinking contexts may have differing effects on student drinking behavior. For instance, students report drinking in larger quantities when in social situations such as at a party or a bar than when they are in more intimate situations such as on a date or home alone (Ham, Zamboanga, Bridges, Casner, & Bacon, 2012). Given that drinking context has been

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related to alcohol use behaviors, it is likely that it may also attenuate the relationship harmful drinking has with engaging in risky sex among college women. As such, the purpose of this study was to further examine the relationship between harmful drinking and risky sexual behavior among college female drinkers by exploring the moderating effects of the three drinking contexts by addressing the two questions below:

Question 1: To what degree does harmful drinking relate to risky sexual behavior?

Hypothesis: There will be significant positive association between harmful drinking and risky sex such that increases in harmful drinking will be related to increases in risky sex thus replicating previous research (Lewis et al, 2012).

Question 2: To what degree is the relationship between harmful drinking and risky sex moderated by the three drinking contexts?

Hypothesis: The relationship between harmful drinking and risky sex will be moderated by the social and personal-intimate drinking contexts but not the negative affect/coping context.

The results of this study will better inform intervention and prevention efforts aimed at reducing harmful drinking and risky sexual behavior among traditional college age students thus likely supporting student success and safety.

Method

Participants and Procedures

Data for this study was collected in 2014-2015 as part of a larger study examining personality, behavior, and alcohol use. The participants of this study were 387 traditional college age females ages 18- 25 (M= 19.76 SD= 1.68) who attended a university in the Southeastern

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region of the United States and who consumed alcohol at least once within the past 30 days.

Participants identified as White non-Hispanic (60%), African American (37%), and other (3%) and were academically classified as freshmen (38%), sophomore (28%), junior (21%), and senior (16%). Potential participants were recruited through the Psychology department on-line recruitment system- SONA system. After completing a University Institutional Review Board (IRB) approval informed consent participants completed the demographic form and randomly presented questionnaires through Qualtrics, a secure, on-line survey system.

Measures

Demographic Questionnaire Students completed a demographic questionnaire and three measures presented randomly. This questionnaire asked questions regarding the individual's age, race, school classification, and gender.

Alcohol Use Disorder Identification Test (AUDIT). The AUDIT (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993) was used to assess participant's harmful drinking. This is a ten item, self-report measure designed to detect harmful drinking. Some sample items include, "How many days have you drunk in the last month?" Participants respond using a five point Likert-type scale from 0 (never), to 4 (often). The first 8 questions are measured on the five point scale, but the last two are measured on a three point scale with an answer of 0 (not in the past year), 2 (yes but not in the past year), or 4 (yes, in the past year; Saunders et al., 1993). The total score for the AUDIT includes scores that range from 0-40 with higher scores more indicative of more problematic drinking. This test demonstrated acceptable reliability and validity (Saunders et al., 1993).

Drinking Context Scale. The Drinking Context Scale was used to gather information on the participant's drinking context (O'Hare & Sherrer, 2005). This scale contains 9 items that

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encompass the three different drinking contexts: convivial, intimate, and negative affect (O'Hare, & Sherrer, 2005). Participants rated the extent to which they agree to certain statements on a 1-5 scale with 1 being low and 5 being high. An example statement for the convivial context include participants rating the extent to which they might find themselves drinking "When I am at a party." An example of the intimate context would be, "When I'm on a date," and an example of negative affect would be, "When I'm angry with myself or someone else." (O'Hare & Sherrer, 2005). This scale has been proven both reliable and valid by running a confirmatory factor analysis on the Drinking Context Scale (O'Hare & Sherrer, 2005). Each subscale demonstrated acceptable reliability in the present study, with Cronbach's alpha scores of .79 for the convivial context, .88 for the negative coping context, and .82 for the intimate context.

Risky Sex Scale. The Risky Sex Scale was used to measure risky sex (O'Hare, 2001). This is a five point scale (1 = extremely low to 5 = extremely high) where participants will mark the level of agreement they have with each of the statements (O'Hare, 2001). This questionnaire allows factors of risky sex to be assessed. Some example items that help in measuring risky sex include: "alcohol makes me enjoy sex more" and "alcohol makes me more sexually responsive." Higher scores indicate that the participant is engaging in more risky sexual behaviors. Previous research has demonstrated acceptable reliability and validity of the Risky Sex Scale (O'Hare, 2001). In the current study, the Risky Sex Scale had a Cronbach's alpha coefficient of .93, indicative of excellent reliability.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) program was used to analyze the data. Prior to testing the hypotheses, descriptive statistics, which included examining means, standard deviation, and intercorrelations of the measures were run. To test the hypotheses,

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hierarchical multiple regression analyses was utilized; this reflected procedures outlined by Hayes (2013) to determine the amount that the three drinking contexts moderate the relationship between binge drinking and risky sex. The dependent variable in this study is risky sex. The predictor variables were centered and entered in to Step 1 as main effects. Main effects of binge drinking on risky sexual behavior were initially analyzed. I then looked at the effects that each of the drinking contexts had on risky sexual behavior. In Step 2, I studied the interaction effects between the predictor variables and the moderating variable. I looked at the interaction between each of the predictors (i.e., binge drinking X convivial context) and examined how each of those interacted to predict risky sex. Simple slopes analysis was utilized to interpret any interactions that might occur (Aiken & West, 1991). The research and data collected determined whether drinking context plays an important role in risky sex while the female has been binge drinking.

Results

The means, standard deviations and intercorrelations for each of the variables can be found in Table 1. On average, students in this sample reported drinking below the cut-off score of 5 on the AUDIT (M= 4.51) for harmful drinking; however, 28% of the sample met the cut off score. Out of all of the participants, 283 (80.2%) had 4 or more drinks within 2 hours at least once in the past year, 300 (83.8%) had 3 or more drinks in a day at least once in the past year, and 208 (65.6%) had 7 or more drinks in a week at least once in the past year exceeding the NIAAA safe drinking guidelines outlined for women. As expected, students reported drinking most often in the convivial context followed by negative-coping and personal-intimate contexts. Risky sex was positively correlated with all drinking contexts with the strongest link to the personal-intimate context.

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Table 1
Descriptive Statistics and Intercorrelations of Measures

	1	2	3	4	5
1. Risky Sex	—				
2. Personal-Intimate	.473**	—			
3. Negative Coping	.381**	.519**	—		
4. Convivial	.406**	.518**	.425**	—	
5. Harmful Drinking	.346**	.317**	.357**	.388**	—
<i>Mean</i>	30.45	7.44	6.35	9.77	5.75
<i>Standard Deviation</i>	10.53	2.93	6.35	2.90	4.51

** $p < .01$.

As seen in Table 2, a hierarchical multiple regression analysis was used to examine the moderating effects of the three different drinking contexts on the relationship between harmful drinking and risky sexual behavior. Main effects were found for harmful drinking ($\beta = -.16, p = .001$), convivial drinking context ($\beta = .16, p = .005$), personal-intimate drinking context ($\beta = .29, p = .000$), and negative coping context ($\beta = .11, p = .033$) such that college females who engaged in more harmful drinking, or drank in more convivial, personal-intimate, and negative coping drinking contexts reported more risky sexual behavior. However, no interaction effects emerged in the current sample. Thus, the second hypothesis was partially supported.

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Table 2
Drinking Context as a Moderator of Harmful Drinking and Risky Sex

	Harmful Alcohol Use		
	R^2	ΔR^2	β
<i>Step 1</i>	.293**	.293***	
Harmful Drinking			.157***
Convivial			.148**
Negative Coping			.112*
Personal-Intimate			.288***
<i>Step 2</i>			
Harmful Drinking x Convivial			-.027
Harmful Drinking x Negative Coping			.022
Harmful Drinking x Personal-Intimate			-.075

* $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

The purpose of this study was to assess the degree to which the relationship between harmful drinking and risky sexual behavior was moderated by different drinking contexts. Given the increases in alcohol consumption among females and the problem of risky sex and sexual assault on college campuses the goal of this research was to better inform prevention and intervention efforts. Consistent with previous studies (Lewis et al., 2012; Moorer et al., 2013), we found positive relationships between harmful drinking and risky sexual behavior. One potential explanation for these findings may be that the high amounts of alcohol being consumed in each of the contexts diminishes judgment and results in increased risky sexual behavior in each of the drinking contexts. These results indicate that following high levels of alcohol consumption in each of the drinking contexts, risky sexual behavior is likely to occur for females.

The second hypothesis was partially supported. Specifically, as predicted, we found that the negative coping context did not moderate the relationship between harmful drinking and

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risky sexual behavior in females. Because women may use sex to cope with negative affect, this could be one reason that women are engaging in risky sexual behavior whether they are engaging in harmful drinking or not (Howells & Orcutt, 2014). If individuals in this context are engaging in risky sexual behavior to cope instead of alcohol, it is important that they understand the risks of engaging in risky sexual behavior and use protection when possible.

We hypothesized that the relationship between harmful drinking and risky sex would be moderated by the social and personal-intimate drinking contexts but not the negative affect/coping context because of literature that discusses the higher amounts of risky sexual behavior in these two contexts (see O'Hare, 2001). However, in this study, these associations did not occur. There are several potential reasons why this could have occurred. Because previous studies have looked at each of the drinking contexts in isolation, they found their context of interest to demonstrate moderating effects (Ham et al., 2013; O'Hare, 2001; Howells & Orcutt, 2014). However, our study looked at each of the contexts together rather than in isolation. This could mean that some of the results were washed out and could explain lack of interaction effects. As seen in Table 2, none of the moderating effects were significant for any of the drinking contexts. Though these findings were not expected, the information is still important and necessary for several reasons. Because each of the drinking contexts has the potential to lead to risky sexual behavior, increased awareness is warranted so females can protect themselves from sex-related consequences, such as STD's. They may also be encouraged to use more protective strategies if they wish to. Additionally, counselors might also want to be aware of this risk when they are helping females reduce alcohol-related harm. It may be imperative for females to be aware of these risks even if they are drinking in their own home.

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These findings might have occurred for several reasons. One reason might be that individuals who are drinking in order to cope may also use risky sex to cope as well. People in all the contexts may also have impaired judgment due to the high levels of alcohol consumed. At these high levels of alcohol intake, it might be possible that individuals are more willing to engage in risky sexual behavior regardless of what context they are in. Some research suggests that women will engage in alcohol consumption to feel sexier or to increase their sexual enhancement (Benson, Gohm, & Gross, 2007). This could be a reason for the increased sexual activity following alcohol consumption in each of the drinking contexts. For example, a female who is nervous about being at a college party and flirting with others might use alcohol consumption in order to feel more attractive. Moreover, females may also be overestimating the amount of risky sex that other females are engaging in, which might also account for the higher amounts of risky sexual behavior in each of the drinking contexts (Lewis, Lee, Patrick, & Fossos, 2007; Lewis, Litt, Crouce, Blayney, & Gilmore, 2014). Other research has also indicated that women might be using alcohol as a way to justify engaging in risky sexual behavior (Massie, 2013). Because of this evidence, it is likely that many women are engaging in harmful drinking as a way to enhance their experience while engaging in sexual activity. The null findings regarding the interaction effects illustrate that no matter the context, it is important for women to be aware of the risks of engaging in risky sexual behavior and to reduce alcohol-related harm.

Clinical Implications

These findings have several clinical implications. Associations among harmful alcohol use, drinking contexts, and risky sex may be beneficial to include in specific prevention efforts with college females to enhance their knowledge. These results emphasize the importance of

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increasing awareness for females when engaging in drinking, regardless of their drinking context. Counselors and students alike should raise awareness of safe drinking and safe sex so that females have options to protect themselves. Additionally, attention should be given to the dangers of risky sexual behavior because of the frequency it occurs. Psychoeducation could be used to inform college females about the risks that accompany harmful drinking within the different drinking contexts. If students are made aware of the danger that harmful drinking poses, it is possible that they may be more likely to take proactive steps to prevent alcohol-related harm. Dangers such as STD's and unwanted pregnancies are just a few of the negative consequences that college students could experience as a result of engaging in risky sexual behavior while drinking. If more attention is given to these consequences and safe drinking awareness is further promoted, it is possible that engagement in risky sexual behavior in females may decrease.

Limitations/ Future Research

The findings from this study should be interpreted within its limitations, which might have decrease the generalizability of the findings. First the study consists of a single sample from a Southeastern University, which could conservatively skew drinking statistics. Future research should replicate this study at other universities as well to be certain that the findings generalize to other sample groups. Second, the majority of the participants identified as White non-Hispanic. There is not enough diversity within the sample to generalize the results to members of other racial groups (i.e. Asian-Americans, Hispanics). Additionally, it must be noted that these results only relate to individuals who have engaged in harmful drinking and can only be generalized to females in this category. Finally, because the self-report questionnaires were completed after the individual has engaged in harmful drinking, it might be difficult for them to recall previous drinking and sexual experiences, consequently influencing data collected. Further, considering

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the sensitive content of some questions asked on the survey, underreporting of engagement in risky sexual behavior and alcohol consumption could skew the study's findings.

Future studies may include males to examine any gender differences in these relationships. Further, it might also be important to assess drinking motives and outcome expectancies in relation to engaging in risky sexual behavior. Finally, it may also be worth exploring to research drinking norm perceptions and their associations with harmful drinking to provide further context behind one's engagement in risky sexual behavior. Exploring these factors might explain why females are engaging in risky sexual behavior regardless of what context they are in. For example, looking at sex-related expectancies might give be an interesting area to look at in future research because it would give more information as to why some individuals are engaging in both risky sexual behavior and harmful alcohol use based on gender stereotypes (Abbey, McAuslan, Ross, & Zawacki, 1999). Each of these variables could be potentially good areas for future research regarding this specific topic.

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Appendix A

Institutional Review Board Approval



INSTITUTIONAL REVIEW BOARD

118 College Drive #5147 | Hattiesburg, MS 39406-0001

Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

EXPLORING THE MODERATING EFFECTS OF DRINKING CONTEXT

Appendix B

Demographic Form

Please circle or answer each question

What is your age?

How do you identify yourself?

Male

Female

How do you identify yourself?

1. African American
2. Asian American
3. Eastern Indian American
4. International student
5. Latina/Latino
6. Middle Eastern American
7. Multiracial
8. Native American
9. White (non-Hispanic)
10. Other (specify):

Have you drunk alcohol in the past year? YES NO

Have you drunk alcohol in the past 30 days? YES NO

How many times have you drunk alcohol in the past year? _____

How many times have you drunk alcohol in the past 30 days? _____

Please identify your academic status

Freshman

Sophomore

Junior

Senior

FEMALES - In the past year how many times have you had:

4 or more drinks in 2 hours

3 or more drinks in a day

7 or more drinks in a week

MALES - In the past year how many times have you had:

5 or more drinks in 2 hours

4 or more drinks in a day

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14 or more drinks in a week

Appendix C

Alcohol Use Disorders Identification Test (AUDIT)

	Never (0)	Less than Monthly (1)	Monthly (2)	Weekly (3)	Daily or almost daily (4)
How often during the last year have you found that you were not able to stop drinking once you had started? (AUD_4)	<input type="radio"/>				
How often during the last year have you failed to do what was normally expected from you because of drinking? (AUD_5)	<input type="radio"/>				
How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session? (AUD_6)	<input type="radio"/>				
How often during the last year have you had a feeling of guilt or remorse after	<input type="radio"/>				

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drinking? (AUD_7)					
How often during the last year have you been unable to remember what happened the night before because you had been drinking? (AUD_8)	<input type="radio"/>				

Please answer each of the following items.

	No (0)	Yes, but not in the last year (2)	Yes, during the last year (4)
Have you or someone else been injured as a result of your drinking? (AUD_9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has a relative or friend, or a doctor or other health care worker been concerned about your drinking or suggested you cut down? (AUD_10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix D
Risky Sex Scale

EXPLORING THE MODERATING EFFECTS OF DRINKING CONTEXT

	Strongly Agree (1)	Agree (2)	Not Sure (3)	Disagree (4)	Strongly Disagree (5)
I often feel sexier after I've had a couple of drinks	<input type="radio"/>				
I'm a better lover after a few drinks	<input type="radio"/>				
Women can have orgasms more easily if they have been drinking	<input type="radio"/>				
I enjoy having sex more if I've had some alcohol	<input type="radio"/>				
I am more romantic when I drink	<input type="radio"/>				
I feel more feminine after a few drinks	<input type="radio"/>				
After a few drinks, I am more sexually responsive	<input type="radio"/>				
If I have been drinking or using other drugs, I am probably more likely to engage in unprotected sex	<input type="radio"/>				
If I have been drinking or using other substances with a new date, I am more likely to have sex with that person	<input type="radio"/>				
I am more likely to have unplanned sex if I have been drinking or using other substances	<input type="radio"/>				
If I have been drinking or using other substances with a familiar companion, I am more likely to have sex with that person	<input type="radio"/>				

Appendix E

Drinking Context Scale

Based on your personal experience, how would you RATE THE CHANCES that you might find yourself drinking excessively in the following circumstances?"

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	Extremely Low (1)	Low (2)	Moderate (3)	High (4)	Extremely High (5)
When I'm at a party					
When I'm at a concert					
When I'm celebrating something important to me					
When I've had a fight with someone close to me					
When I'm feeling sad, depressed, or discouraged					
When I'm angry with myself or someone else					
When I'm with my lover					
When I'm on a date					
Before having sex					