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The Influence of Personality and Context on Risky Sexual Behavior among Young Adults

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Abstract

The present study sought to examine the relationship between alcohol and risky sexual behavior by analyzing related variables. Particularly, this study examined the relationship between context and risky sexual behavior (when participants were drinking alcohol) on an event-based level. Secondly, this study examined how certain personality traits affect risky sexual behavior in general. Finally, an interaction between context and personality was tested for its effects on risky sexual behavior. Results suggested that context plays a role in risky sexual behavior, but that personality was not an important factor. Interaction effects were not found between these variables. Future research on risky sexual behavior could benefit from including the context of sexual encounters in the research design.
Personality and Health Behavior Among Young Adults

Young people aged 15-24 acquire half of all new sexually transmitted infections (STIs). Adolescents and young adults (15-24) are at higher risk than older adults for contracting STIs for a combination of reasons (Centers for Disease Control and Prevention, 2013). Additionally, 82.5% of people aged 15-24 have used alcohol and 16.5% of these people meet the criteria for alcohol dependence (Anthony et al., 1994). Studies (e.g. Dermen et al., 1998) have shown that these two variables may be related. Logan, Cole, and Leukefeld (2002) found that alcohol use in sexual situations is associated with a higher likelihood of sexual intercourse with casual partners and lower probability of condom use. However, other studies have found no relationship between the two variables (Testa and Collins, 1997; Weinhardt and Carey, 2000). Leigh and Stall (1993) posited that the inconsistent nature of this relationship could be due in part to factors that act as third variables, which influence both alcohol use and sexual risk behavior.

Some research has lent support to the idea that risky behavior is associated with a number of personality traits. For example, Cooper et al. (2000) suggested that risk behavior is driven by neuroticism (with the motive to regulate negative affect) and that extraversion drives the use of risky behaviors in order to enhance positive affective experiences (Cooper et al., 2000). However, Cooper et al. found that the relationship between personality and risky behavior is extremely complex. For example, being extroverted increased the overall levels of risky sex practices, but primarily only if the individual was also impulsive.

Schmiege, Levin, and Bryan (2009) found that low self-esteem was significantly associated with risky sexual behavior whether or not there was a positive or negative relationship between alcohol and risky sex, which was consistent with prior research in this domain (Bryan et
al., 2004). Other personality traits, such as impulsivity and low self-efficacy have been found to be associated with risky sexual behavior (Noar et al., 2006; Robbins and Bryan, 2004).

Finally, the role of context has also been found to be important in the relationship between alcohol consumption and risky sexual behavior. An important contextual factor that moderates this relationship is the type of partner (Morojele et al., 2006). Specifically, alcohol tends to impact condom use with casual sexual partners more than with serious partners. Additionally, Senchak, Leonard, and Greene (1998) found that individuals drank more when they were in larger social gatherings. This suggests that physical location at the time of drinking has an effect on the amount of alcohol consumed, and thus may impact risk behavior while drinking.

Perhaps examining personality and context by themselves do not give complete pictures of the third variable relationship between alcohol consumption and sexual risk. The goal of this paper is to explore how these two variables interact on risky sexual behavior. There is scant research that involves the role of location at the time of drinking and how that affects the relationship between personality and risky sexual behavior. The present study aims to examine whether or not individuals higher on at-risk personality traits (e.g. higher impulsivity, sensation seeking, extroversion, neuroticism, positive alcohol outcome expectancies, and lower self-esteem) are affected by the context of their drinking more so than individuals who are lower on these traits. If this is true, then it may be possible to better target interventions for alcohol risk reduction and sexual risk reduction to people with personality traits that place them at higher risk for engaging in these behaviors, and by including intervention components that focus on risky contextual circumstances.
The contextual hypothesis of the present study is that those who drink and engage in intercourse at a party will engage in more risky behaviors than those who are drinking and having intercourse on a date. The personality hypothesis is that those with certain personality characteristics (higher impulsivity, sensation seeking, extroversion, neuroticism, positive alcohol outcome expectancies, and lower self-esteem) will engage in more risky sexual behaviors in general. Finally, the interaction hypothesis of this study is that context interacts with at-risk personality traits (e.g. higher impulsivity, sensation seeking, extroversion, neuroticism, positive alcohol outcome expectancies, and lower self-esteem) such that the influence of larger social contexts (a party) involving alcohol on risky sexual behavior will be much stronger for individuals who are higher on at-risk personality traits than individuals who are lower on at-risk personality traits.

Method

Participants

Participants were recruited by distributing the opportunity to participate in the survey via social media and a social networking website called Reddit. It was expected that most participants would complete the study once they affirmed consent. However, 276 participants affirmed consent, but only 150 completed the survey. In order to test interaction questions in a within-subjects analysis, participants must have responded to questions about sexual encounters in both date and party contexts. Thus, the number of participants included in these analyses was only N=65. For the other analyses, the sample consisted of 125 of the 150 respondents who finished the survey. This small subset of 25 participants were excluded from analyses because extensive missing data or they failed to meet inclusion criteria for the study (they had never had sex). Participants were all between the ages of 18 and 24 and must have had sexual intercourse in
order to participate. The at-risk population for STI’s includes adolescents and young adults aged 15-24. However, it would not have been practical to obtain parental consent for an online survey for the participants aged 15-17; therefore they were excluded from this study.

A majority of the larger sample (N=125) was female (67.2% female). The average age of this sample was 21.15 years and ranged from 18 to 24 (SD=2.26). A majority (65.6%) of this sample was in a relationship. A relatively small proportion (12.9%) was affiliated with the Greek system (a member of a sorority or fraternity). A majority of the sample was white with the following distributions: 81.6% Non-Hispanic White or Euro-American; 2.4% Black or African-American; 4.0% Asian; 3.2% Latino or Hispanic-American; 1.6% Middle Eastern or Arab-American; 7.2% indicated that they were some other ethnicity. In terms of sexual orientation, 69.6% were straight/heterosexual, 7.2% was homosexual/gay/lesbian, 20.8% were bisexual, and 2.4% indicated that they were of some other sexual orientation.

The reduced sample for the within-subjects analysis (N=65) was predominantly female (70.8% female). The ages ranged from 18 to 24 with an average age of 21.24 (SD=2.19). 36.9% of the sample was single while 63.1% was in a relationship. The ethnicity of the sample was predominantly White, with the following distributions: 86.1% Non-Hispanic White or Euro-American; 4.6% Asian; 4.6% other; 3.1% Latino or Hispanic-American; 1.5% Middle Eastern or Arab-American. The three people chose “other” and indicated their ethnicity in the text box provided— one European, one mixed race Asian/Black, and one mixed race Black/White. 76.92% of the sample was heterosexual/straight, 18.46% was bisexual, 3.07% was homosexual/gay, and one person indicated that they were pansexual. 18.46% of the sample was affiliated with a Greek system (i.e. a member of either a sorority or fraternity).

Design
This study used a passive observational design in order to examine the associations between context and sexual risk, personality and sexual risk, and the interaction of context and personality on risky sexual behavior. The main independent variables in this study were the size of the context (either a date or party) and the self-reported scores on different personality traits (extraversion, impulsivity/sensation-seeking, neuroticism, self-esteem, and sex-related alcohol expectancies). The dependent variable in the present study was a measure of sexual risk (for a description of the variables used throughout this study, see below in the “measures” section).

To test the contextual hypothesis, independent-samples t-tests were performed to assess the difference in sexual risk between the date and party contexts. Because acquaintance with partner has been shown to be an important contextual factor in sexual risk, a correlation between the level of acquaintance to partner and condom use was examined in both the date and party contexts. To assess the second hypothesis (that certain personality traits are associated with risky sexual behavior), correlations were estimated between each of the personality traits and a host of sexual risk measures such as number of lifetime partners, lifetime condom use, condom use in the last 3 months, etc. Next, a regression was performed to assess how well different sexual risk variables were predicted by the personality traits individually (controlling for the other traits) and as a group. Finally, to test for interaction effects, a repeated-measures ANOVA was estimated to test for a context X personality X alcohol use interaction on condom use.

**Procedure**

Participants filled out an online survey on Qualtrics. Participants were informed that they could withdraw from participation at any time by closing the browser and that it would not negatively affect them in any way. Participants were informed that they would not be
compensated in any way for their participation. When they finished the survey, participants were thanked for their participation.

**Measures**

*Global-level variables*

Participants were first asked for their demographic information such as age, gender, marital status, Greek affiliation, sexual orientation, and ethnicity. Participants filled out the Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993), a measure of alcohol dependence. A sample item from the AUDIT is, “how often during the last year have you failed to do what was normally expected from you because of your drinking?”

The extraversion and neuroticism scales were the short version subscales from the Eysenck Personality Questionnaire-Revised (EPQ-R; Eysenck et al., 1985). The extraversion scale from the EPQ-R consisted of 11 items (α=.88; sample item: “do you enjoy meeting new people?”). The neuroticism scale consisted of 12 items (α=.87; sample item: “would you call yourself a nervous person?”). Self-Esteem was measured using the Rosenberg Self-Esteem scale (Rosenberg, 1965) and consisted of 10 items (α=.94; sample item: “on the whole, I am satisfied with myself”).

The Impulsivity and Sensation Seeking scale (IMPSS) is a subscale of the Zuckerman-Kuhlman Personality Questionnaire (Zuckerman, 1994; Zuckerman et al., 1993) and contained 19 items (α=.83; sample item: “I enjoy getting into new situations where you can’t predict how things will turn out”). This scale was preferred over other impulsivity and sensation seeking scales because it focuses on the psychological constructs of the personality dimension without referring to specific behaviors, such as condom use or alcohol use, which would be confounded with other measures in the study (Bryan, Ray, and Cooper, 2007).
The sex-related alcohol expectancy trait was measured using Derman and Cooper’s (1994 a, b) measure for adolescents. The scale contained 13 items and measured the positive expectancies for sex when drinking alcohol (α=.88; sample item: “After a few drinks of alcohol, I am a better lover”).

**Sexual risk.** Many measures of sexual risk were taken from prior studies of sexual risk behavior (e.g., Bryan, Aiken, & West, 1996; Bryan, Aiken, & West, 2002). The number of sexual partners across participants’ lifetime was recorded in a free response question in which they could enter any number they wished. Lifetime condom use was assessed by asking participants what percent of the time they used a condom during sexual intercourse in increments of 10% (i.e. 0%, 10%, 20%, etc.). Lifetime birth control use was assessed in the same way (this indicates birth control use other than condoms).

Total sexual risk in the last 3 months was assessed by multiplying two measures: 1) a scale from one to five of frequency of sexual intercourse (1=once a month, 2=once a week, 3=2-3 times a week, 4=4-5 times a week, 5=almost every day) and 2) a reverse-scored scale of percent condom use (1=100% condom use, 2=90%, 3=80%, 4=70%, 5=60%, 6=50%, 7=40%, 8=30%, 9=20%, 10=10%, 11=0%). The reason these items were multiplied is best expressed by two hypothetical examples. Imagine that Participant A responds that her partner uses a condom 0% of the time, but they only have intercourse once a month. Participant A would engage in intercourse without a condom three times over the last 3 months. Now imagine participant B uses a condom 50% of the time, but he engages in intercourse almost every day, say 80 out of the last 90 days. Participant B engaged in intercourse without a condom 40 times in the last 3 months. It is clear that participant B is engaging in more risky sex, but this would not be reflected in
condom use alone. Thus, frequency of intercourse must be multiplied by condom use in order to accurately reflect sexual risk in the last 3 months.

*Event-level variables*

In order to examine the effects of context on sexual risk behavior, participants were asked to report two specific events in which they both drank alcohol and engaged in sexual intercourse. One event was in a date context and one event was in a party context. Because of the novelty of the present hypothesis, there were no established measures to use. Thus, these measures were new and untested in previous research. The questions in each context were identical.

First, participants were asked how much alcohol they consumed during the day/night of the date/party (1=1-2 drinks, 2=3-4 drinks, 3=5-6 drinks, 4=7-9 drinks, 5=10 or more drinks). Next, they were asked to estimate how much alcohol their partner consumed (same scores, and included “I don’t know” as an option). They were then asked if they or their partners used a condom. Similar to the sexual behavior measures, participants were asked if they or their partners used any *other* form of birth control (other than condoms). Next, participants were asked how well they knew the person with whom they engaged in intercourse (1=“Someone I'm in a serious monogamous relationship with (includes being engaged or married),” 2=“someone I'm seriously dating, but not in a monogamous relationship with,” 3=“someone I’m casually dating,” 4=“someone who is a casual sexual partner,” 5=“someone I just met”). Note that the scores increase as partner “risk” increases. This was done to reflect the risk of the encounter (i.e. higher numbers=higher risk). The same was done with all the measures (yes, condom=0, no condom=1, etc.). Finally, participants were asked if they knew the HIV status of their partners (0=partner was negative, 1=don’t know, 2=partner was positive).
An aggregate score of “risk behavior” was then formed. Alcohol consumption and acquaintance were rescored from .2-1 (1=.2, 2=.4, 3=.6, 4=.8, 5=1). This was done so alcohol consumption and acquaintance would not drastically outweigh condom use, birth control use, and HIV status of the partner. When examining the risk behaviors individually, scoring was left in the original form.

Results

Tables 1 and 2 show descriptive statistics about the full sample and the subsample of 65 participants who were included in the within-subjects analysis. The smaller sample (M=31.84) had significantly greater sex-related alcohol expectancies than the larger sample (M=29.48; \( t(148)=-2.12, p<.05 \)). The smaller sample (M=6.84) was also more extraverted than the larger sample (M=5.55; \( t(135)=-2.41, p<.05 \)). The smaller sample (M=85.38%) had significantly higher rates of birth control use (other than condoms) than the larger sample (M=74.08%; \( t(168)=2.25, p<.05 \)).

Because there are often effects of gender on aspects of risky sexual behavior, gender differences in the full sample are presented in table 3. Women had significantly lower self-esteem and were significantly more neurotic. Women engaged in more risky sex in the last 3 months and this difference was marginally significant. The other variables were not significantly different between genders.

**Hypothesis 1: context effects on sexual risk**

The data were first examined in a between-subjects analysis comparing all individuals who reported a drinking/sex event at a party to all those who reported a drinking/sex event in a date context. A chi-square test revealed that the observed frequencies of condom use in dates and parties were significantly different than the frequencies that would be expected from chance
PERSONALITY, CONTEXT, AND RISKY SEXUAL BEHAVIOR

(χ²(1)=30.22, p<.001). Specifically, if participants used a condom in one situation, they were highly likely to also do so in the other situation. Likewise, the observed frequencies of other birth control use in dates and parties were significantly different than the frequencies that would be expected from chance (χ²(1)=35.83, p<.001). The majority of participants used birth control in both situations. The exact proportions from these analyses can be found in tables 4 and 5.

When drinking alcohol and engaging in sexual intercourse, participants in the party context (M=2.85) drank significantly more alcohol than those in the date context (M=1.41; t(131)= -10.08, p<.001). This indicates that participants in the party context were drinking approximately 3 more drinks than those in the date context. The results of this t-test can be seen in Figure 1. Likewise, partners’ alcohol consumption was significantly greater in the party context (M=2.81) than in the date context (M=1.47; t(100)= -8.10, p<.001). These results can be seen in Figure 2. The final t-test revealed that (while drinking alcohol and engaging in sexual intercourse) participants in the party context (M=3.00) reported having partners who were significantly more casual in nature than in the date context (M=2.13; t(149)= -3.76, p<.001). Thus, the “average” participant in the party context was having sex with someone he was casually dating, while the “average” participant in the date context was having sex with someone he was seriously dating, but not in a monogamous relationship with. The results of this t-test can be seen in Figure 3.

There was a significant negative correlation between acquaintance and condom use in the date context, r(95)= -.24, p<.05. This relationship indicates that the better a participant knew their sexual partner, the less likely they were to use a condom. However, there was no significant correlation between these variables in the party context, r(76)= -.18, ns, though the relationship was in the same direction.
Hypothesis 2: personality effects on sexual risk

Table 6 displays the correlations between the personality trait and sexual risk measures assessed in this study. As can be seen in the table, extraversion was positively related to impulsivity, self-esteem, and sex-related alcohol expectancies. Neuroticism was negatively associated with both extroversion and self-esteem. Interestingly, none of the personality variables were associated with condom use or risky sex. However both impulsivity and sex-related alcohol expectancies were positively associated to alcohol-related risky sexual behavior, both in party and date contexts. Extraversion, impulsivity, and sex-related alcohol expectancies were positively associated with AUDIT scores.

A multiple regression analysis revealed that when all the personality traits were combined (extraversion, impulsivity/sensation seeking, neuroticism, self-esteem, sex-related alcohol expectancies), they did not significantly predict total sexual risk in the last 3 months ($R^2=.06$, $F(5, 68)=.92$, ns). Only 6% of the variance in total sexual risk was explained by the personality traits and none of the individual coefficients were significant.

All of the personality traits together were marginally associated with date risk in a multiple regression analysis ($R^2=.13$, $F(5, 77)=2.32$, $p=.051$) with 13% of the variance in date risk explained by the personality traits (extraversion, impulsivity/sensation seeking, neuroticism, self-esteem, sex-related alcohol expectancies). The main effects of both impulsivity/sensation seeking ($b=.05$, $t(78)=1.93$, $p=.058$) and sex-related alcohol expectancies ($b=.03$, $t(78)=1.79$, $p=.078$) were marginal.

All the personality traits (extraversion, impulsivity/sensation seeking, neuroticism, self-esteem, sex-related alcohol expectancies) significantly predicted party risk in a multiple regression analysis ($R^2=.38$, $F(5,50)=6.13$, $p<.001$) with 38% of the variance in party risk
explained by these personality traits. Similar to the date context, the main effects of impulsivity/sensation seeking ($b=.10$, $t(51)=-, p<.01$) and sex-related alcohol expectancies ($b=.07$, $t(51)=2.70$, $p<.01$) were significant.

**Hypothesis 3: interaction between context and personality traits**

A repeated-measures ANOVA revealed that context had a significant effect on the amount of risk a participant encountered during a sexual encounter in which the participant was drinking alcohol when controlling for each personality trait (extraversion—$F(1,37)=19.83$, $p<.001$; Neuroticism—$F(1,36)=21.04$, $p<.001$; Sex-related alcohol expectancies—$F(1,26)=26.63$, $p<.001$; impulsivity/sensation seeking—$F(1,31)=24.76$, $p<.001$). Participants engaged in riskier behavior in the party context than in the date context.

However, in each of these models, the interaction between context and the personality trait was not significant. The interaction between context and extraversion was not significant ($F(10,37)=.353$, not significant). The interaction between context and neuroticism was not significant ($F(12,36)=.502$, not significant). The interaction between context and sex-related alcohol expectancies was not significant ($F(21,26)=1.723$, not significant). Finally, the interaction between context and impulsivity/sensation seeking was not significant ($F(16,31)=.839$, not significant).

**Discussion**

The results from the analyses on hypothesis 1 indicate that participants used condoms differently depending on what context they are in. The significance of the chi-square indicates that condoms are used differently in different contexts. However, this relationship is not the one hypothesized. There are nearly equal proportions of “double yes” participants (people who used a condom in both contexts) and “double no” participants (people who did not use a condom in
PERSONALITY, CONTEXT, AND RISKY SEXUAL BEHAVIOR 15

both contexts). The mixed response participants were exactly equal (“yes-no” and “no-yes”). These results suggest that a participant is either going to use a condom or not and that a participant does not change what they do depending on the context. In other words, they are fixed in their ways.

The chi-square for birth control between contexts lacked variance, so conclusions from the results are limited. A majority of people used birth control in both contexts (“double yes” category) and this did not allow for enough people to fill the other categories. However, just like with condoms, the second largest group were the people who did not use birth control in either context (“double no” category). There was such an overwhelming majority of people in the “double yes” category, that definitive conclusions are not possible.

The t-test results were more clear-cut. It seems as though when individuals engage in sexual intercourse while drinking at a party, they drink more, their sexual partners drink more, and they know their sexual partners less. Both participant and partner alcohol consumption means differed across contexts by about 1.4 points. Each point accounts for about 2 drinks, so the mean differences between groups were around 3 drinks. These alcohol consumption differences make sense because more drinking tends to occur at parties. The acquaintance difference also makes sense because party-goers are meeting new people and are more likely to engage in intercourse with someone they know less than when they are on a date. Dates tend to occur when two people already know each other to some degree.

A negative correlation was found between acquaintance and condom use such that when the participant knew their sexual partner better, condom use decreased. This is a common finding in the literature. It can most likely be explained by increasing trust as people get to know their sexual partners. They are or at least may believe themselves to be surer of the status of their
partners health and have less fear of STI transmission. Although the correlation was found in both the date and party contexts, it was only significant in the date context. The reason for this difference is up for interpretation, but could be due to the difference in acquaintanceship between the participant and his/her partner across contexts. Acquaintanceship was generally higher in the date context so it is possible that condom use changes more between casually dating someone and being in a monogamous relationship with someone than between having sex with a casual sexual partner and casually dating them. The monogamy may be the key change between these groups. It may be that as soon as monogamy is introduced in a relationship, condom use drops significantly. This would be rational because monogamy—so long as both partners remain faithful—reduces the possibility of new STI’s being introduced to the sexual relationship.

The relationship between personality and sexual risk is tentative at best, according to the results of the present study. None of the personality traits included in this study were correlated with the total sexual risk measure over the last 3 months. Impulsivity was significantly correlated with party risk, but was only marginally significantly correlated with date risk (when participants are drinking alcohol). The correlation was almost double the strength in the party context, which would normally indicate that there was an interaction between impulsivity and context. This could possibly mean that impulsivity has more of an effect on sexual risk when individuals are drinking and are around a lot of new people than when they are drinking and are on a date.

On the other hand, impulsivity was correlated with AUDIT scores, which indicates that more impulsive participants consumed more alcohol in general. Alcohol consumption was higher in the party context than in the date context, so this could explain why higher impulsivity was associated with higher party risk (i.e. alcohol consumption was a mediating variable that
explained this relationship). More research is required to explain the relationship between these variables fully.

There was a marginally significant correlation between extraversion and date risk, however, extraversion and risk were not significantly correlated in the party context. This would be a very surprising result because it is counterintuitive that extraverts would be more prone to sexual risk in the date context than in the party context. It would be expected that extraverts would be more likely to be swept up in the moment when they are around a lot of people because that is when extraverts thrive and are stimulated the most. Again, the interaction effects were found to be non-significant in a repeated-measures ANOVA.

Another interesting finding from these results was that the personality traits were not significant predictors of sexual risk in the last 3 months, but were significant predictors of date and party risk. This finding suggests that the relationship between personality and risky sexual behavior may be stronger when individuals are consuming alcohol, and the relationship is weaker in the common, “every-day” sexual encounters. These regression analyses also revealed that impulsivity and sex-related alcohol expectancies were the only personality traits with significant main effects on date and party risk. However, the results of the sex-related alcohol expectancies may be confounded, as explained in the limitations section below.

Overall, the results of the present study suggest that context may play a role in risky sexual behavior when individuals consume alcohol. There were some hints that impulsivity may moderate this relationship, however more research is necessary to support this conclusion.

**Limitations and Future Directions**

A major limitation in this study was the role that alcohol was playing in these relationships. Particularly, the date and party risk variables are only relevant for situations in
which participants were drinking alcohol. In contrast, the overall sexual risk variable would have included both sexual events that included alcohol and also those that did not. In some ways, this was a way of measuring two different types of sexual risk, however it may have been beneficial to focus on just one type of sexual risk. The other difference between the date/party risk variables and the total risk variables is that the total risk variable only took into consideration condom use and frequency of sexual intercourse, while the date/party risk variables took into consideration alcohol consumption, partner alcohol consumption, condom use, birth control use, and HIV risk. It might have been helpful to include more facets in the total risk variable.

On this topic, the date and party risk variables may have not had the best facets. For example, it was assumed that alcohol consumption by the participant and by the partner were risky behaviors, while the connection between alcohol consumption and sexual risk is not well understood. Furthermore, birth control use is a factor of pregnancy risk, while condom use is a factor of both STI and pregnancy risk, so they are measuring different constructs. Overall, this was not an established measure of event-based risk and it was flawed in many ways. A future project could be to establish a measure of event-based sexual risk that is more reliable and valid, because the present literature mostly focuses on condom use during an event and does not take into account other factors of risk.

Sex-related alcohol expectancies were excluded from the final interaction analyses (repeated-measures ANOVA’s) because it was likely that this variable was confounded with the outcome sex risk variables. The construct that was desired was having general positive expectancies for alcohol consumption; however, this survey was specifically about sexual expectancies from alcohol consumption. Some of the questions on the sex-related alcohol expectancies survey included questions about how likely they were to have sex with someone
new when they drank alcohol, and then the date and party risk variables had questions about the acquaintance to sexual partners when the participant drank alcohol. These were very similar constructs and were probably confounded and would have resulted in inaccurate results. A general alcohol expectancies measure may have been more appropriate because the present study used alcohol consumption and acquaintance as measures of sexual risk. In a study that uses more objective measures of risk (such as condom use only), the sex-related alcohol expectancies measure is more appropriate (as is often argued in the literature).

The sample was not ideal in this study. Approximately 270 people consented to participate, but only 150 finished the survey. This is an issue because this narrowed down the sample systematically so the sample consisted of only people who were able to sit through a 15-20 minute survey and finish it. It could be that some of this attrition was due to participants not reading the consent form and not being eligible to finish the survey. 25 more participants were excluded from analyses because they did not answer enough of the questions. This further changed the sample systematically. The repeated-measures ANOVA was only able to be run on the participants who responded to both the date and party context questions, and included only 65 participants. Furthermore, these analyses required people to answer all of the questions on the personality questionnaire. This shrunk the sample down to around 40 for some of the analyses. This was not an adequate sample size to create enough power to detect an effect of personality and context interactions. Future studies should include more participants.

Finally, the sample was strongly skewed toward female participants. The samples were both approximately 70-80% female. Females had higher averages for sexual risk and had different proportions of personality traits than males. These differences may have skewed the results overall. Often, women are more likely to volunteer for research and many studies put a
cap on the number of female participants and continue collecting data with only male participants to achieve equal proportions. This study should have used these procedures to ensure equal proportions of male and female participants.

**Implications**

Overall, the results of the present study suggest that context may play a role in risky sexual behavior when individuals consume alcohol. There were some hints that impulsivity may moderate this relationship, however more research is necessary to support this conclusion. Future research could examine more specific aspects of impulsivity in order to discover what about impulsivity makes risky sexual behavior more likely. Other than impulsivity, other personality traits seemed to have little to no relationship with risky sexual behavior. This finding is different than previous research, so these findings may be the result of methodological issues which were described in the limitations section. The main implication that this study has on future research is that context should be considered when examining the relationship between alcohol and risky sexual behavior. Given more research, it is possible that interventions to reduce risky sexual behavior should include components that focus on risky contextual circumstances.

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PERSONALITY, CONTEXT, AND RISKY SEXUAL BEHAVIOR

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### Table 1

*Larger Sample (N=125) Characteristics*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean score/total possible</th>
<th>standard deviations</th>
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<td>Sex-related Alcohol Expectancies</td>
<td>29.15/52</td>
<td>8.08</td>
</tr>
<tr>
<td>Date risk</td>
<td>1.98/6</td>
<td>.91</td>
</tr>
<tr>
<td>Party risk</td>
<td>2.78/6</td>
<td>1.16</td>
</tr>
<tr>
<td>Total Sex Risk (last 3 months)</td>
<td>17.85/55</td>
<td>15.31</td>
</tr>
<tr>
<td>Percent Condom Use (life)</td>
<td>53.68%</td>
<td>34.72%</td>
</tr>
<tr>
<td>Percent Birth Control Use (life; other than condoms)</td>
<td>74.08%</td>
<td>39.56%</td>
</tr>
</tbody>
</table>
Table 2

*Smaller Sample (N=65) Characteristics*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean score/total possible</th>
<th>standard deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIT</td>
<td>8.34/40</td>
<td>5.87</td>
</tr>
<tr>
<td>Extraversion</td>
<td>6.84/11</td>
<td>3.36</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>5.97/12</td>
<td>3.70</td>
</tr>
<tr>
<td>Impulsivity/ Sensation-Seeking</td>
<td>9.63/19</td>
<td>4.26</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>20.14/30</td>
<td>6.19</td>
</tr>
<tr>
<td>Sex-related Alcohol Expectancies</td>
<td>31.84/52</td>
<td>6.56</td>
</tr>
<tr>
<td>Date Risk</td>
<td>1.96/6</td>
<td>.93</td>
</tr>
<tr>
<td>Party Risk</td>
<td>2.59/6</td>
<td>1.09</td>
</tr>
<tr>
<td>Total Weighted Sex Risk (Last 3 Months)</td>
<td>19.23/55</td>
<td>16.32</td>
</tr>
<tr>
<td>Percent condom use (life)</td>
<td>54.46%</td>
<td>31.48%</td>
</tr>
<tr>
<td>Percent Birth Control Use (life; other than condoms)</td>
<td>85.38%</td>
<td>28.72%</td>
</tr>
</tbody>
</table>
Table 3

*T-Tests of Gender Differences in Larger Sample (N=125)*

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>5.60</td>
<td>3.41</td>
<td>5.53</td>
<td>3.78</td>
<td>.10</td>
<td>85</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMPSS</td>
<td>9.34</td>
<td>3.57</td>
<td>8.66</td>
<td>4.71</td>
<td>.89</td>
<td>102</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>21.73</td>
<td>7.09</td>
<td>18.21</td>
<td>6.97</td>
<td>2.62</td>
<td>78</td>
<td>&lt;.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>4.51</td>
<td>3.84</td>
<td>6.79</td>
<td>3.58</td>
<td>-3.18</td>
<td>75</td>
<td>&lt;.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRAE</td>
<td>29.66</td>
<td>7.95</td>
<td>29.40</td>
<td>8.19</td>
<td>.17</td>
<td>74</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDIT</td>
<td>7.08</td>
<td>5.87</td>
<td>6.87</td>
<td>5.46</td>
<td>.18</td>
<td>74</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date risk</td>
<td>1.89</td>
<td>.99</td>
<td>2.02</td>
<td>.87</td>
<td>-.56</td>
<td>57</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Party risk</td>
<td>2.63</td>
<td>1.24</td>
<td>2.84</td>
<td>1.14</td>
<td>-.58</td>
<td>21</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total sex risk</td>
<td>13.89</td>
<td>14.59</td>
<td>19.55</td>
<td>15.38</td>
<td>-1.92</td>
<td>70</td>
<td>&lt;.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(last 3 months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condom use (life)</td>
<td>60.00%</td>
<td>34.13</td>
<td>50.60%</td>
<td>34.79</td>
<td>1.44</td>
<td>81</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth control use</td>
<td>70.24%</td>
<td>42.04</td>
<td>75.95%</td>
<td>38.41</td>
<td>-.73</td>
<td>73</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(life; other than</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>condoms)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 4

*Chi-square proportions of condom use*

<table>
<thead>
<tr>
<th>Date condom use</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40.6%</td>
<td>7.8%</td>
</tr>
<tr>
<td>No</td>
<td>7.8%</td>
<td>43.8%</td>
</tr>
</tbody>
</table>

### Table 5

*Chi-square proportions of birth control use*

<table>
<thead>
<tr>
<th>Date birth control use</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>82.8%</td>
<td>4.7%</td>
</tr>
<tr>
<td>No</td>
<td>1.6%</td>
<td>10.9%</td>
</tr>
</tbody>
</table>
Table 6

*Correlation matrix of personality traits and sexual risk variables*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personality variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. extra</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. IMPSS</td>
<td>0.31*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. neuro</td>
<td>-0.36*</td>
<td>-0.11</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. RSE</td>
<td>0.39**</td>
<td>-0.08</td>
<td>-0.64**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. SRAE</td>
<td>0.25*</td>
<td>0.37*</td>
<td>0.12</td>
<td>-0.17</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Risk variables** |       |      |      |      |      |      |      |      |      |      |
| 6. daterisk | 0.26* | 0.27* | -0.09 | 0.07 | 0.28* | 1.00 |      |      |      |      |
| 7. partyrisk | 0.20 | 0.52** | 0.00 | -0.04 | 0.53** | 0.60** | 1.00 |      |      |      |
| 8. condom use | 0.09 | -0.07 | -0.01 | 0.18 | -0.08 | -0.42** | -0.37* | 1.00 |      |      |
| 9. riskysex | -0.16 | 0.04 | 0.10 | -0.13 | -0.08 | 0.44** | 0.36* | -0.62** | 1.00 |      |
| 10. AUDIT | 0.37* | 0.39** | 0.12 | -0.09 | 0.61** | 0.28* | 0.46** | -0.12 | 0.15 | 1.00 |

*p < .1; *p < .05; **p < .01

*Note* extra=extraversion; IMPSS=impulsivity and sensation seeking; neuro=neuroticism; RSE=self-esteem; SRAE=sex-related alcohol expectancies; daterisk=aggregate of all risk factors in date context; partyrisk=aggregate of all risk factors in party context; condom use= lifetime condom use percentage; riskysex=sexual intercourse frequency multiplied by condom use percentage (last 3 months); AUDIT=Alcohol Use Disorders Identification Test.
Figure 1. Consumption of alcohol by participant according to context.

Figure 1. Consumption of alcohol by participant according to context.
Figure 2. Consumption of alcohol by partner according to context
Figure 3. Consumption of alcohol by type of sexual partner

Note higher scores indicate less acquaintance
1= “someone I’m in a serious monogamous relationship with (includes being engaged or married)”
2= “someone I’m seriously dating, but not in a monogamous relationship with”
3= “someone I’m casually dating”
4= “someone who is a casual sexual partner”
5= “someone I just met”