

Introduction

- Individual's drinking behaviors are motivated by different needs or purposes according to previous patterns of events and results. Motives for drinking alcohol create Cooper's (1994) Four Factor Model which consists of the following: a positive reinforcement motive to enhance a positive mood, a positive reinforcement motive to attain positive social rewards, a negative reinforcement motive to reduce a negative mood, and a negative reinforcement motive to avoid social rejection (Cooper, 1994). Research has found that drinking motives are critical elements when examining drinking behaviors (e.g., Cooper, 1994).
- With such findings regarding drinking motives and increased risky drinking, some researchers have focused their investigations on anxiety sensitivity and problem drinking (Stewart et al. 2001).
- Coping and conformity motives have been implicated in the relationship between anxiety sensitivity and increased drinking (Stewart et al. 2001). For example, it has also been found that high anxiety sensitivity (AS) has a significant association with coping motives, especially among high (AS) women. On the other hand, low (AS) has been significantly related to social motives (Stewart et al. 2001).
- Thomas, Randall, and Carrigan (2003) found that individuals with high social anxiety are more likely to drink alcohol as a coping mechanism against social fear. Results indicated that alcohol use was effective in reducing social anxiety among those with social fears within social situations. (78% Caucasian), providing evidence that coping drinking motives could be important in drinking among socially anxious individuals.
- Within the last year, three "in press" studies have focused on social anxiety and drinking motives. However, one major limitation is the lack of diversity among the samples, with the majority of participants being White/Caucasian.
- Ham and colleagues (in press) found that social anxiety was unrelated to coping motives (90% Caucasian).. However, when the sample was divided into social anxiety groups, coping motives were found to be the most prominent motive in the prediction of higher drinking rates and problems for middle and high social anxiety groups, but not for the low social anxiety group
- Buckner et al. (in press) found that social anxiety was related to increased alcohol related problems, but was not significantly related to drinking frequency or quantity. Results also suggested that alcohol consumption among those with social anxiety was used to avoid negative evaluation in social situations which alcohol was present.
- Stewart et al. (in press) found that two measures of social anxiety (Fear of Negative Evaluation and Social Avoidance and Distress Scale) were positively correlated with coping motives (ethnicity not reported).
- The current study examined the relationship between coping motives, social anxiety, and drinking in ethnic minority college students. It was hypothesized that social anxiety would be positively correlated with frequency of drinking to cope.

Method

- Participants were 299 undergraduate student volunteers representing ethnic minority groups ages 18 and over attending Florida International University (see Table 1). Each participant completed a questionnaire packet as part of a larger multisite college drinking study.

Table 1.
Summary of Sample Demographic and Study Variables.

Gender	
Male	93 (31.1%)
Female	199 (66.6%)
Ethnicity	
Asian, Asian American or Oriental	12 (4%)
Black or African American	32 (10.7%)
Black: Hispanic/ Latino	14 (4.7%)
White: Hispanic or Latino	186 (62.2%)
Mixed (parents from 2 Ethnic groups	39 (13%)
Other	16 (5.4%)
Age	$M = 18.6$ ($SD = 1.2$)
SIAS	$M = 19.3$ ($SD = 14.2$)
AUDIT	$M = 6.4$ ($SD = 6.0$)
DMQ	$M = 8.7$ ($SD = 7.7$)

Drinking Motives Questionnaire (DMQ)

- The DMQ is a 20-item self report questionnaire intended to evaluate the four drinking motives in Cooper's model: social, enhancement, coping, and conformity (DMQ-R; Cooper, 1994). For the present study, the 5-item coping scale was used in analyses.

Social Interaction Anxiety Scale (SIAS)

- The SIAS is a 19 item self-report questionnaire designed to measure the level of anxiety in social interactions (SIAS; Mattick & Clarke, 1989).

Alcohol Use Disorders Identification Test (AUDIT)

- The AUDIT is a 10-item questionnaire that measures the level of hazardous and harmful alcohol consumption, drinking behavior, and alcohol related problems (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993).

Results

- Consistent with the hypothesis, Pearson's correlation indicated that that DMQ-R coping motives were positively related with social anxiety (as assessed by the SIAS), $r = .26$, $p < .01$. As expected given previous research, coping motives were also positively correlated with problem drinking (as assessed by the AUDIT), $r = .32$, $p < .01$.
- Problematic drinking and social anxiety were entered into an one way ANOVA. Results show that there was a significant relationship between scores on the DMQ-R, AUDIT, and SIAS.
- To further examine these results, the sample was divided into three social anxiety groups. The low social anxiety group consisted of scores from the first quartile of the SIAS (ranging from 0-8), the middle social anxiety consisted of scores from the second and third quartile (ranging from 9-28), and the high social anxiety group consisted of scores from the fourth quartile (29 and higher).
- A one way ANOVA was conducted in order to find mean scores for all three measures as divided into the three groups based on low (DMQ-R: $M = 7.46$, $SD = 3.87$; AUDIT, $m = 8.24$, $SD = 8.02$; SIAS, $m = 4.16$, $SD = 2.69$), middle (DMQ-R: $m = 8.44$, $SD = 4.06$; AUDIT: $m = 5.75$, $SD = 5.07$; SIAS: $m = 17.11$, $SD = 6.11$), and high (DMQ-R: $m = 10.66$, $SD = 6.01$; AUDIT: $m = 5.70$, $SD = 4.57$; SIAS: $m = 30.51$, $SD = 9.35$) social anxiety levels.
- Differences in DMQ-R coping motives and AUDIT scores across the three social anxiety groups were evaluated using ANOVA with both LSD and Bonferroni *post hoc* analyses. Results indicated that those in the high social anxiety group reported higher DMQ-R coping motive levels than both low ($MD = -3.20$, $p < .001$) and middle ($MD = -2.22$, $p = .002$) social anxiety groups, but the low and middle groups did not differ in coping motives ($MD = -.98$, $p = .16$).
- Results from the AUDIT indicated that those in the high social anxiety group had lower levels of hazardous drinking than the low social anxiety group ($MD = 2.53$, $p < .01$). However, the high social anxiety group had higher AUDIT levels of hazardous drinking than the middle social anxiety group ($MD = -.05$, $p = .96$). Furthermore, those with low social anxiety had higher levels of hazardous drinking than the middle social anxiety group ($MD = -2.48$, $p = .01$).

- SIAS comparisons between low SIAS and middle SIAS groups ($MD = -12.95$, $p = .00$), low and high SIAS groups ($MD = -34.35$, $p = .00$), and middle and high SIAS groups ($MD = -21.40$, $p = .00$) each indicated a significant difference.
- Correlational analysis comparing hazardous drinking and coping motives for each group found a significant positive relationship among those in the low ($r = .46$), moderate, ($r = .32$) and high social anxiety groups ($r = .39$). These positive correlations, suggest coping motives seemed to be related to more drinking whether individuals fell within a low, moderate, or high social anxiety group.

Table 2
Correlations Among Coping Motives and Hazardous Drinking for Low, Medium, and High Socially Anxious Groups.

Variable	AUDIT	DMQ
Low (n = 68)		
AUDIT	—	.46**
DMQ		—
Middle (n = 122)		
AUDIT	—	.32**
DMQ		—
High (n = 71)		
AUDIT	—	.39**
DMQ		—

Note. **Correlation is significant at the 0.01 level (2-tailed)
Measures used include the Alcohol Use Disorders Identification Test (AUDIT) and the Drinking Motives Questionnaire (DMQ).
Low group scored 0 – 8, medium scored 9 – 28, and high scored 29 – 74 on Social Interaction Anxiety Scale

Discussion

- Given evidence indicating potential associations between coping motives, hazardous drinking, and social interaction anxiety the purpose of the current study was to examine these relationships' constructs among an ethnic minority sample of college students.
- Findings from current research suggest that there was a significant positive relationship between coping motives, hazardous drinking, and social interaction anxiety.
 - Furthermore, in all of the groups coping motives were associated with hazardous drinking.
- However, when separating the sample into three groups (high, moderate and low anxiety groups) further analyses found a negative relationship between the low anxiety group and hazardous drinking. It was found that individuals with low social anxiety had higher levels of hazardous drinking than middle and high social anxiety groups. Whereas, individuals with high social anxiety had higher levels of hazardous drinking than the moderate social anxiety group.
- Results also suggest that individuals with high social anxiety may drink more often to cope even though they have lower levels of hazardous drinking. In other words, though they drink more often to cope, these individuals may not necessarily be drinking to cope with social situations as they may not be in the situations as much due to their social anxiety. On the contrary, those with low social anxiety are drinking less often to cope even though they have high levels of hazardous drinking, which may be indicative of the experimentation with alcohol use seen among college students. However, those with low social anxiety may drink more often to cope than those with moderate social anxiety.
- Given that drinking among college students primarily occurs in social situations (e.g., a party), it is possible that individuals with high social anxiety have less hazardous drinking because may be avoiding the social interaction found in these environments. On the other hand, those with low social anxiety are more likely to engage in social situations which have a greater chance of exposing them to environments that promote drinking. One possibility for this could be that they may worry less about the consequences of drinking, are outgoing, or impulsive. In either case, the fact that the majority of these individuals drink to cope with negative affect should be of great concern. Previous research has indicated that drinking to cope is associated with drinking problems. Therefore, all of these groups may be at risk of drinking problems in the future. The question is whether future studies should focus more on individuals with high social interaction anxiety (since this group drinks more often to cope with negative affect) or if they should focus on each group as a whole.
- Furthermore, based on findings, prevention and intervention strategies for social anxiety and possibly drinking problems may need to utilize coping motives.