The Role of Body Image and Social Anxiety in Problematic Drinking Behavior

Kira Archibald
The Role of Body Image and Social Anxiety in Problematic Drinking Behavior

KIRA ARCHIBALD

The prevalence of problematic drinking behavior in college age students is an alarming 83% (NIAAA, 2008). Unfortunately problem alcohol use is not the only problem college students face today. College students, especially females, also have a high rate of body image problems and high rates of social anxiety. With all of these problems so prevalent in this population, it is necessary to examine how these variables interact with each other to affect an individual’s life. Many studies have paired these variables together to examine their connections and have found strong connections; however, no studies have examined the relationships among all three. Could these three variables coincide to exacerbate the effects each one has on an individual?

An individual’s expectancies about what alcohol will do for them have been shown to relate to quantity or frequency of a person’s drinking (Morris, Stewart, & Ham, 2005). Expectancies are a part of drinking behavior. Some common drinking expectancies individuals hold include believing that alcohol will make them more sociable, enhance their sexual performance, and increase their confidence level (Morris, Stewart & Ham, 2005). Research has suggested that alcohol expectancies act as moderators in the relationship between alcohol use and social anxiety (Morris, Stewart & Ham, 2005, Ruiz, Strain, & Langrod, 2007). The term moderator is used to describe a variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent variable (Barron & Kenny, 1986). Thus, the relationship between social anxiety and alcohol use changes depending on the presence of alcohol expectancies.

Many college students struggle with problematic drinking behavior, however, their struggles do not end there. Many college age students struggle with body image concerns as well. Body image is defined as a complex, multidimensional construct that includes self-perceptions and attitudes (i.e., thoughts, feeling, and behaviors) with regard to the body (Avalos et al., 2005). Although most research has been in relation to body image and eating disorders, some research has implicated its connection to other risky health behaviors including problematic drinking (Striegel-Moore & Huydic, 1993). One study found drinking to be moderately correlated with the behaviors seen in eating disorders, especially body image concerns (Striegel-Moore & Huydic, 1993). Other studies have found that body image concerns may be a risk factor for developing alcohol abuse problems and alcoholism (Franko et al.,
A connection between frequency of drinking and an adolescent’s dissatisfaction with his/her body when comparing themselves with media figures was established in another study (Palmqvist & Santavirta, 2005). The result above sheds light on the connection between social comparisons, body image concerns, and alcohol use, which may point to the role of social anxiety in body image’s relationship to drinking behavior.

Although some research supports the claim that body image and drinking behavior are connected, other studies have reported no relationship. A study conducted to measure the prevalence of problem eating and drinking behaviors in female collegiate athletes as compared to that of controls found no relationship between problem eating behaviors and drinking in either sample (Gutgesell, Moreau, & Thompson, 2003). The lack of a relationship may have been due to the small percentage of evident eating disorders. Another limitation of this study was not measuring problematic eating behaviors on a continuum.

Many studies have shown a connection between body image dissatisfaction and high social anxiety (e.g., Cash, Therriault, & Annis, 2004; Streigel-Moore, Silberstein, & Rodin, 1993). Social anxiety can be devastating for a college student who is constantly surrounded by unfamiliar people. Not only are they meeting new people within their school but in social events outside the classroom as well. The Diagnostic Statistical Manual (DSM-IV-TR) defines social anxiety as “a persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others” (APA, 2000). Continued investigation into the relationship between body image and social anxiety is warranted to create a more complete picture of the explanatory mechanisms responsible for this connection.

Body image has been connected to other risky health behaviors, such as eating disorders (Slade & Brodie, 1994), smoking (Granner, Black, & Abood, 2002), and unhealthy exercise patterns (Hausenblas & Fallon, 2001). It has been suggested that the reason for this connection may be to control one’s weight, which is often a concern for those with a negative body image (Slade & Brodie, 1994). Behaviors such as restricting intake of food, binging, purging, and excessive exercise are some of the more obvious problems seen in weight control and are the hallmark of disorders, such as Bulimia Nervosa and Anorexia Nervosa. Smoking has also been implicated in body image issues, weight concern, and weight control (King, Matacin, Marcus, Bock, & Tripolone, 2000; McKee, Nhean, Hinson, & Mase, 2006). It is suggested that people, especially females, use cigarettes to control the urge to eat. Smoking may also exacerbate body image problems due to the image and smell that smoking cigarettes brings upon the smoker (King, et al., 2000). However, problematic drinking behavior is different from these other behaviors in that its use is in no way connected to weight control. In fact, alcohol, which is high in calories, can cause weight gain thus its connection to body image is likely due to factors other than weight control, such as anxiety.

Alcohol has a high co-morbidity rate with psychiatric disorders as well, especially anxiety disorders (Ruiz, Strain, & Langrod, 2007). Women are more likely than men to have both anxiety disorders and alcohol problems (Ruiz, Strain, & Langrod, 2007). In a study of 56 female subjects, alcohol outcome expectancies were found to be predictive of those who drink to cope with social anxiety (Carrigan, Ham, Thomas, & Randall, 2008). Subjects who reported using alcohol as a coping mechanism had higher levels of social anxiety than those who used other styles of coping (Carrigan, Ham, Thomas, & Randall, 2008).

The relationship between alcohol use and social anxiety is not clear-cut. A critical review of the literature did not reveal a relationship between problem drinking and social anxiety and further suggested that consuming a larger amount of alcohol was correlated with a lower level of social anxiety (Morris, Stewart & Ham, 2005). The authors suggested that one possible explanation for this finding was that individuals with social anxiety might find that avoiding social environments, including those where alcohol is available, is more effective in reducing anxiety than using alcohol. It was also suggested that a study previously conducted by the authors might be the key in understanding these findings (Morris, Stewart & Ham, 2005). In this study, social anxiety decreased as the number of drinks a subject had per week increased; however, social anxiety was positively correlated with alcohol use problems (Stewart, Morris, Mellings, & Komar, 2006). It is suggested that, while individuals with social anxiety may not drink more than the general population, they tend to drink for problematic reasons (Morris, Stewart, & Ham, 2005).

Gender differences also play an important role in this research since men and women may drink for different reasons. Previous research of gender differences in the relationship between social anxiety and alcohol consumption have yielded mixed results. In a study of 1,217 undergraduate psychology students, males reported slightly higher levels of social anxiety and alcohol use than females (Neighbors, 2007). Also in this study, social anxiety was examined as a moderating variable for the relationship between drinking and perceived social norms. The results showed a stronger connection between perceived norms and drinking when students had higher levels of social anxiety.
In summary, alcohol abuse has a devastating impact on the lives of college students. Reasons for drinking are apt to vary depending on the individual. For individuals with a negative body image and subsequent social anxiety, drinking may be used as a maladaptive coping strategy. There is some evidence for a connection between negative body image and unhealthy drinking habits, but this relationship is likely influenced by several factors, including but not limited to gender, drinking expectancies, and social anxiety. Social anxiety has been connected to both body image and alcohol use; however, very few studies have examined the three constructs together. The purpose of this study was to examine the relationship between social anxiety, body image concerns, and drinking behavior and expectancies. It was predicted that participants who reported higher social anxiety would also report more body image concerns. Also, those participants that reported higher social anxiety and more body image concerns would also report higher drinking levels and a greater expectancy for alcohol to increase their confidence and reduce their tension in social situations. These relationships were also predicted to be more evident in females then males.

**Methods:**

**Participants**
The participants in this study were 56 (38 females, 17 males) students from a southeastern Massachusetts college, recruited from introductory psychology classes. Participants were 75% Caucasian with a mean age of 20.23. The education level of these participants was well spread among the years of college education.

**Procedure**
Each participant was given a packet of questionnaires designed to measure body image, social anxiety, and drinking behavior respectively. Before completing the survey each participant read and signed an informed consent document. After completing this survey participants were given a debriefing sheet with contact information for questions or concerns. Participants received credit in introductory psychology classes for completing this survey. This study received IRB approval at Bridgewater State College before being implemented.

**Statistical analysis**
Descriptive statistics were conducted on the variables of interest. Independent t-tests were conducted to examine gender differences. To examine the relationships among social anxiety, body image, alcohol use, and drinking expectancies Pearson’s r correlations were conducted.

**Measures**
Several different scales were used to measure body image concern. The Multidimensional Body-Self Relations Questionnaires-Appearance Subscales (MBSRQ-AS; Cash et al., 1986) consists of the subscales Body Areas Satisfaction (BAS) and Appearance Evaluation (AE), which measure body satisfaction. Overweight Preoccupation (OWP) measures concern about body weight and Self-Classified Weight (SCW) measures the participant’s perception of his/her own weight (Cash et al., 2000). The Physical Appearance State and Trait Anxiety Scale: Trait Version (PASTAS; Reed, et al., 1991) was also used to measure body image. Specifically it assesses which body parts cause the participant concern or anxiety. The Drive For Muscularity Scale (McCreary & Sasse, 2000) and the Male Body Attitudes Scale (MBAS) were added to increase the items in the survey measuring body image concerns that are more typical of males. The Leibowitz Social Anxiety Scale (LSAS; Leibowitz, 1987) was used as a basic measure of social anxiety. This scale can be divided into avoid and anxiety subscales or a total score can be used. The Social Appearance Anxiety Scale (SAAS; Hart, et al., 2008) is a 16-item survey that was used to calculate how a participant’s social self-image is altered due to the amount of anxiety they feel in social situations. The Alcohol Use Disorders Identification Test (AUDIT; WHO, 2001) was used to measure the extent of a participant’s risky drinking or how heavy a participant drinks. The revised Drinking Expectancy Questionnaire (DEQ-R; Lee et al., 2003)) was used to measure the expectancies each participant has about what drinking will do for them. The DEQ-R is composed of five subscales: Increased Confidence, Tension Reduction, Increased Sexual Interest, Cognitive Enhancement, and Negative Consequences.

**Results**
On the Physical Appearance Trait and State (PASTAS) the female participants’ mean score was significantly higher than that of the male participants suggesting that females have more dissatisfaction in specific body areas than males, t(55) = 3.19, p = .002. Males scored significantly lower on the Male Body Attitudes Scale (MBAS) than the females suggesting that females have higher body dissatisfaction, t(31.705) = 2.11, p = .043. Females scored significantly higher than males on the Drive for Muscularity Scale suggesting males have a higher drive for muscularity, t(17,902) = -3.07, p = .007. All other mean differences between the genders were nonsignificant (see Table 1).

As predicted, in females, significant negative correlations were seen between the MBSRQ Appearance Evaluation and Body Areas Satisfaction subscales and the LSAS total score, suggesting that a female’s level of social anxiety is correlated with her body
image dissatisfaction. However, contrary to the predictions of this study, in females there were no significant correlations emerged between social anxiety and drinking behavior as measured by the AUDIT. Although neither the body image measures nor the social anxiety scales were correlated with the drinking measure, they were significantly correlated with drinking expectancies. The MBSRQ BAS and AE subscales were significantly negatively correlated with the DEQ Increased Confidence subscale in females, suggesting that women who are less satisfied with their appearance have a stronger expectancy for alcohol to increase their confidence. The LSAS total score was significantly positively correlated with the DEQ Increased Confidence subscale suggesting that females with higher levels of social anxiety have stronger expectancies that alcohol will increase their confidence (see Table 2).

For males, body image was measured using the MBAS. The MBAS was significantly positively correlated with the LSAS total score suggesting that males with more body image concerns also report more anxiety. However, identical to the females, male body image did not correlate with the level of alcohol consumed by the participant. Also, the AUDIT was not correlated with the LSAS in males suggesting that the level of social anxiety of a participant was not connected to their drinking habits. The MBAS was significantly positively correlated with the DEQ Increased Confidence subscale. Males matched the pattern of females in the correlation between

Table 1. Mean Scale Scores as a Function of Gender

<table>
<thead>
<tr>
<th>Scales</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Image</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBSRQ- AE</td>
<td>3.52</td>
<td>3.15</td>
</tr>
<tr>
<td>MBSRQ- BAS</td>
<td>3.39</td>
<td>3.32</td>
</tr>
<tr>
<td>Drive for Muscularity</td>
<td>4.55**</td>
<td>5.43**</td>
</tr>
<tr>
<td>MBAS</td>
<td>62.35*</td>
<td>72.8*</td>
</tr>
<tr>
<td>PASTAS</td>
<td>11.59**</td>
<td>21.85**</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAAS</td>
<td>1.81</td>
<td>2.23</td>
</tr>
<tr>
<td>LSAS</td>
<td>22.47</td>
<td>26.05</td>
</tr>
<tr>
<td>Drinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDIT</td>
<td>6.53</td>
<td>5.28</td>
</tr>
<tr>
<td>DEQ- TR</td>
<td>9.69</td>
<td>9.51</td>
</tr>
<tr>
<td>DEQ- IC</td>
<td>38.13</td>
<td>36.54</td>
</tr>
</tbody>
</table>

Note. The lower the score on MBSRQ subscale scores the more body image concerns. The lower the score on the Drive for Muscularity scale the higher the drive to change ones muscle tone.

Table 2 Female Correlations

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LSAS Total Score</td>
<td>---</td>
<td>-.042</td>
<td>-.482*</td>
<td>-.407**</td>
<td>.393*</td>
</tr>
<tr>
<td>2. Total Score AUDIT</td>
<td>---</td>
<td>.010</td>
<td>.013</td>
<td>.361*</td>
<td></td>
</tr>
<tr>
<td>3. Body Areas Satisfaction MBSRQ</td>
<td>---</td>
<td></td>
<td>.807**</td>
<td>-.492**</td>
<td></td>
</tr>
<tr>
<td>4. Appearance Evaluation MBSRQ</td>
<td>---</td>
<td></td>
<td></td>
<td>-.350*</td>
<td></td>
</tr>
<tr>
<td>5. DEQ Increased Confidence</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, **p<.01

Table 3 Male Correlations

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LSAS Total Score</td>
<td>---</td>
<td>.262</td>
<td>-.520*</td>
<td>-.477</td>
<td>.689**</td>
</tr>
<tr>
<td>2. Total Score AUDIT</td>
<td>---</td>
<td>.326</td>
<td>-.451</td>
<td>.626*</td>
<td></td>
</tr>
<tr>
<td>3. MBAS Total</td>
<td>---</td>
<td></td>
<td>-.300*</td>
<td>.336*</td>
<td></td>
</tr>
<tr>
<td>4. Drive for Muscularity</td>
<td>---</td>
<td></td>
<td></td>
<td>-.170</td>
<td></td>
</tr>
<tr>
<td>5. DEQ Increased Confidence</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, **p<.01
level of social anxiety and expectation of alcohol to increase their confidence level. The LSAS total score for males was significantly positively correlated with the DEQ Increased Confidence subscale (see Table 3).

Discussion:
The purpose of this study was to examine the relationships among social anxiety, alcohol use, and body image. In addition, drinking expectancies were examined to determine their role in these relationships. Typical gender differences in body image concerns were found with females showing more concern than males. Females also reported higher social anxiety. Previous research has shown a connection between social anxiety and body image, consistent with the findings of this study (Cash, Therriault, & Annis, 2004; Streigel-Moore, Silberstein, & Rodin, 1993). This connection has rarely been studied in males, however in the current study this connection was found in both genders. This suggests that gender may not play a role in this connection so further investigation is warranted to make it clearer. Since females scored higher in both social anxiety and body image concerns, it can be assumed that social anxiety and body image concerns are more prevalent in females, even though they are also seen in males.

Similar to previous research, social anxiety’s connection with drinking was found to be complex (Morris, Stewart, & Ham, 2005). Contrary to the hypothesis of this study the quantity of drinking was not found to be connected with a participant’s level of social anxiety nor was it connected with body image concerns in either gender. However, expectancies of drinking did seem to be connected to social anxiety, especially the expectancy of increased confidence. This connection was seen in both males and females suggesting that participants with a higher level of social anxiety may expect alcohol to increase their confidence in social situations. Males seem to also show the same pattern as females in that males with a more negative body image expect alcohol to increase their confidence level more than males who are more satisfied with their body. Even though the frequency and quantity of drinking was not connected to social anxiety level, this study suggests that drinking is used as a tool to increase confidence in public situations. Also, since body image concerns were correlated with the expectancy for alcohol to increase the confidence of the drinker, a connection between social anxiety, body image concerns, and drinking expectancies may be found through further investigation. This connection may become more evident if future studies include more participants, especially more participants who drink. If this is true, a negative body image may cause a person to become more socially anxious, and possibly use alcohol to increase their confidence in a social situation.

It has been suggested that those with social anxiety avoid social situations to lower their chance of experiencing anxiety. As a result, frequency and quantity of drinking may be lower since alcohol consumption, especially in college age students, usually occurs in a social setting (Morris, Stewart, & Ham, 2005). Previous studies have shown a connection between drinking and body image concerns in females (Striegel-Moore, & Huydic, 1993; Franko, Dorer, Keel, Jackson, Manzo, & Herzog, 2005). Social anxiety may therefore be a more important factor in the connection between body image and drinking than gender. However, males did have lower levels of social anxiety and a more positive body image than females, which implies these problems may be more prevalent in females.

This study did have some limitations. First the sample size was small. A larger sample size including more males and more drinkers would increase the statistical power and thus allow more significant relationships to be revealed. In future studies more complex statistical work should be done as well to more accurately portray the connections that were revealed in this study between drinking expectancies, social anxiety and body image. In future work the focus should be more on expectancies than frequency and quantity of the participants’ drinking. The connections between social anxiety, body image, and drinking expectancies revealed suggest that additional research in this area is warranted to better understand why college students drink.

References


