THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF COUNSELING EDUCATION, COUNSELING PSYCHOLOGY,
AND REHABILITATION SERVICES

SOCIAL ANXIETY, BINGE DRINKING, AND SOCIAL SUPPORT ON COLLEGE
CAMPUSES

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Reviewed and approved* by the following:

Jeff Hayes
Professor of Education and Psychology
Thesis Supervisor

Brandon Hunt
Professor of Education
Honors Adviser

* Signatures are on file in the Schreyer Honors College.
ABSTRACT

This research examined the role that social support plays in mediating the relationship between social anxiety and binge drinking among college students. Participants ($N = 30,227$) completed measures of social anxiety, binge drinking frequency, and social support. Previous research was supported in that there was a strong positive relationship found between social anxiety and binge drinking frequency. A weak, negative relationship was found between social anxiety and social support. No relationship was found between social support and binge drinking. The present study extends the current body of research by looking at these variables in a large college population. Results suggest that many variables are involved in the social anxiety and binge drinking relationship. Simply building up social support networks as an intervention for students who are socially anxious is not enough to curb the immense college drinking problem.

Keywords: social anxiety, social support, binge drinking, relationships
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Chapter 1

Introduction

Social anxiety is characterized by a marked fear of evaluation, a strong desire to make a favorable impression on others, and a perceived inability to do so (Purdon, et al, 2001). People with social anxiety often feel undesirable and fear social rejection (Arkin, 1981; Miller 1995; Kashdan & Steger, 2006). These feelings can impede positive social functioning in a college population because college is a time generally marked by frequent, novel social experiences (Purdon et al., 2001; O’Grady, Cullum, Armeli, & Tennen, 2011). Most college students experience anxiety in social situations from time to time (Purdon, Anthony, Monteiro, & Swinson, 2001). One study estimated that 40% of all college students experience social anxiety, and 10% experience clinically significant levels of social anxiety (Bryant & Trower, 1974). Other studies have observed self-reported subclinical anxiety in 50% to 61% of people at one time or another (Stein, Walker, & Forde, 1994; Hofmann & Roth, 1996). The prevalence of social anxiety is cause for concern and has gone largely unexamined in the college student population.

In addition to experiencing many novel social situations with some level of social anxiety, college students often have ready access to alcohol, and alcohol consumption is both accepted and promoted (Ham & Hope, 2003). Alcohol-related problems can range from mild (e.g., hangover) to severe (e.g., death) and often result when a pattern of binge drinking is observed (Ichiyama & Kruse, 1998; Wechsler, Lee, Kuo, & Lee, 2000). The National Institute of Alcohol Abuse and Alcoholism defines binge drinking as the consumption of 5 or more drinks by males, and 4 or more drinks by females, in 2 hours (NIAAA, 2007). According to this definition,
approximately 40% of the college student population engages in binge drinking more than once every two weeks according to data on more than 60,000 college students (CCMH, 2011; Wechsler et al., 2000). Consequences of such drinking behaviors result in an estimated 1,825 accidental deaths among college students each year (Hingson, Edwards, Heeren, & Rosenbloom, 2009). Also in a given year, an estimated 599,000 students are injured under the influence of alcohol (Hingson et al., 2009).

Substantial research has explored the relationship between social anxiety and drinking. Still, findings appear to be mixed with some correlational studies finding a positive relationship while others have observed either a negative relationship or no association at all (Morris, Stewart, & Ham, 2005). Two studies found greater social anxiety among problem drinkers than non-problem drinkers (Buckner, Schmidt, & Eggleston, 2006; Lewis & O’Neill, 2000). According to the National Epidemiological Survey on Alcohol Related Conditions, 48% of individuals with a diagnosis of social anxiety disorder (SAD) also meet the criteria for alcohol use disorder (AUD) (Grant, Hasin, Blanco, Stinson, Chou, Goldstein, & Huang, 2005). In a longitudinal study that assessed alcohol abuse 13 years after social anxiety information was collected, Crum and Pratt (2001) reported that individuals with subclinical social anxiety were at a higher risk for alcohol-related problems than individuals with minimal social anxiety. Similar findings have been replicated by several studies (Buckner & Heimberg, 2010; Buckner et al., 2006; Gilles Turk & Fresco, 2006; Lewis & O’Neill, 2000).

To the contrary, other studies have failed to find evidence that social anxiety alone is a risk factor for problem drinking (Ham, Bonin, & Hope, 2007; Ham & Hope, 2005). These studies have uncovered a negative relationship, or no association at all, between social anxiety and drinking (Ham et al., 2007; Ham & Hope, 2005). Despite these conflicting findings, a macro level view of the literature suggests that a positive relationship exists between social anxiety and binge drinking. Popular theories for this positive relationship are prominent in the literature.
Popular theories for the social anxiety-drinking relationship include tension reduction theory and the self-medication hypothesis (Carrigan & Randall, 2003; Conger, 1956). Plausible though they are, these theories do not account for the empirical findings that some socially anxious individuals drink less than people without social anxiety (Crum & Pratt, 2001; Ham & Hope, 2005). One explanation for variability in alcohol use among socially anxious individuals is the amount of social support they have. Epicurus once claimed, “Of all the means which are procured by wisdom to ensure happiness throughout the whole life, by far the most important is the acquisition of friends” (Epicurus, quoted in D. Gordon, 1999, p. 35). This quote illustrates the importance of relationships in achieving mental health. Cobb (1976) defines social support as the information leading a person to believe they are cared for, loved, and a valued member of a network of mutual obligations. While extensive research has not been conducted on the role of social support in relation to social anxiety and alcohol use, social support has been shown to protect people from alcoholism (Cobb, 1976). Another study that explored the relationship between social anxiety disorder and alcohol use disorder found that people with comorbid SAD and AUD experienced significantly less social support than people with only AUD (Thevos, Thomas, & Randall, 1999). Alternatively, experiencing social support may remove the need to abuse alcohol as a form of social facilitation or tension reduction. If a student feels they are cared for, loved, and a valued member of a group, they may feel no need to abuse alcohol to smooth social interaction or self-medicate. Based on these findings, the current study seeks to expand the literature by exploring social support as a mediating factor in the relationship between social anxiety and binge drinking.

Based on the preceding review of literature, the current study will examine support for the following four hypotheses: (a) there will be a positive correlation between social anxiety and binge drinking for students with at least moderate social anxiety, (b) there will be a negative correlation between social anxiety and social support for students with at least moderate social
anxiety, (c) there will be a negative correlation between social support and binge drinking for
students with at least moderate social anxiety. Finally, (d) social support will mediate the
relationship between social anxiety and binge drinking for students with at least moderate social
anxiety.
Chapter 2

Methods

Participants

The present study utilized data from undergraduate and graduate students from over 97 colleges and universities across the United States (N=30,227) (CMMH, 2011). Data was collected from students upon intake into university counseling centers. The sample was 64% male, 35.4% female, and .4% transgender. 73.2% of students identified as White; 7.0%, African-American; 6.1%, Asian; 6.2%, Hispanic; and 7.5% identified as other. The mean age was 22.66 years old.

Measures

The Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34) is a 34 item self-report questionnaire specifically designed to assess the mental health concerns of college students (Locke, Buzolitz, Boswell, McAleavey, Sevig, & Hayes, 2011). There are eight continuous subscales on the CCAPS-62; this study only utilized the Social Anxiety subscale which has 7 items on it (e.g., “I am shy around others”, “I make friends easily”). Each item is scored on a 5-point scale where 0 = Not at all like me and 4 = Extremely like me (CCMH, 2010). Internal consistency for the Social Anxiety subscale has been estimated at .84 to .85 (Locke et al., 2011; McAleavey et al., 2012). Among non-clinical college students, retest reliability was greater than .80 for both one week and two weeks. Evidence for the validity of the Social Anxiety subscale is strong. Scores on the Social Anxiety subscale correlate greater than .70 with scores on the Social Phobia Diagnostic Questionnaire (SPDQ; Newman, Kachin, Zuellig, Constantino, & Cashman-McGrath, 2003) in both clinical and non-clinical college student populations (Locke
et al., 2011; McAleavey et al., 2012). In addition, Social Anxiety scores are higher among college student clients diagnosed with social phobia than among student clients with other diagnoses (McAleavey et al., 2012). In terms of social desirability, Social Anxiety scores have been shown to correlate modestly with scores on the Marlowe-Crowne Social Desirability scale (McAleavey et al., 2012). The Standardized Data Set (SDS) was used to assess binge drinking frequency and social support. The SDS is designed to gather a broad range of information during routine intake services at university counseling centers, and it includes items regarding demographics, mental health history, and cultural characteristics (Locke, Crane, Chun-Kennedy, & Edens, 2009). One item on the SDS assesses binge drinking frequency (i.e., the number of instances of binge drinking within the previous two weeks). Responses range from 1 = Never to 6 = 10 or more times. A second item on the SDS was used to assess social support. This item reads I get the emotional help and support I need from my social network (e.g., friends, acquaintances) (CCMH, 2011). Students endorse this item via a 5-point scale where 0 = Strongly disagree and 4 = Strongly agree (CCMH, 2011).

Procedure

First, the sample was filtered to include only people with a cut score at or above 1.64 on the social anxiety subscale to remain in line with the hypothesis that relationships between binge drinking and social support will be found only with students who report at least moderate levels of social anxiety. Only intake data was considered to eliminate the variable effects of experiencing treatment. After errors in the data were eliminated, three Pearson correlations were calculated to describe the relationship between social anxiety, binge drinking, and social support.
Chapter 3
Results

There was no correlation found between social anxiety and binge drinking \( r = -.03, n = 30,227, p = .00 \). There was no correlation found between social support and binge drinking \( r = .01, n = 30,227, p = .05 \). The only correlation that was discovered was a weak negative relationship between social anxiety and social support, \( r = -.19, n = 30,227, p = .00 \). Correlations were identical in magnitude and direction when the sample was delimited only to those 13,509 clients who responded to provided data for each of the variables used to examine the three hypotheses. According to Baron and Kenny (1986), for the mediator hypothesis to be true (i.e., social support mediates the social anxiety-binge drinking relationship), each of the correlations in the first three hypotheses must be significant. This was not the case, so there was no reason to pursue a mediation model.

Of these three correlations, it seems particularly relevant that no significant relationship was found between social anxiety and binge drinking. Significant, while controversial, evidence for at least a weak relationship exists within the literature. This relationship may have gone undetected because of the specific measure (i.e., SDS) used to capture binge drinking only utilized one item.

Of the three correlations, it was expected that social support and binge drinking would be the weakest. It was not predicted; however, that no significant correlation would be detected at all. The correlation between the constructs of social anxiety and binge drinking was calculated using two items: one capturing social support on a Likert scale and one capturing binge drinking on a Likert scale. It would be curious to explore this relationship with more comprehensive
measures. However, it is important to note that even with such a large sample size no significance was discovered. Normally, it can be expected that such a large sample will produce at least a weak correlation.

Lastly, the one significant correlation was found between social anxiety and social support. As expected, the correlation was negative meaning that as social anxiety increases, social support decreases. A Pearson correlation would also suggest that the opposite could be true: as social support decreases, social anxiety increases. Anecdotally, in a college population, this may look like a person becoming highly socially anxious due to a lack of social support by peers.
Chapter 4
Discussion

Findings of the present study expand understanding of the relationship between social anxiety, binge drinking, and social support in the college student population. However, these findings add to the complexity of the current understanding. In this section, each of the three relationships and major findings will be discussed and future directions will be given. As stated in the introduction, mixed results have been found among correlations of social anxiety and binge drinking.

Many reasons exist that may explain why no significant correlation was found in the present study. First, only students with a cut score that represented moderate levels of social anxiety were included in the sample. The motivation for excluding students with very low levels of social anxiety was to eliminate the ceiling effect that often occurs when measuring college student drinking. College is a time where a majority of students explore and experiment with drugs and alcohol, and the present study was designed to measure the drinking behaviors only of people who experience social anxiety. To understand more about how people may cope with social anxiety, only students with social anxiety must be measured. Prominent theories for the social anxiety-drinking relationship include tension reduction theory and the self-medication hypothesis (Carrigan & Randall, 2003; Conger, 1956). Having based the first hypothesis on these theories, it was surprising to find that social anxiety did not correlate positively with binge drinking. One explanation for this is that a linear model was used to uncover a Pearson correlation between the two variables of interest.
In order to examine the correlation between social anxiety and binge drinking more precisely, a curvilinear model could be used. A curvilinear hypothesis would suggest that as social anxiety increases, binge drinking will also increase – to a certain point. After some high level of social anxiety, binge drinking would decrease. Anecdotally, this hypothesis suggests that students with extreme social anxiety do not engage with novel social situations where alcohol may be present (e.g., parties); therefore they will contribute to a strong, negative correlation between social anxiety and binge drinking. The current study used only one item to capture this behavior, so moving forward, it may be wise to use a more comprehensive measure of alcohol use such as the AUDIT. The discussion will now explore the connection between social support and social anxiety.

The original hypothesis that as social anxiety increased, social support would decrease was supported in the findings. This significant relationship can inform treatment of students experiencing subclinical levels of social anxiety. Social support has been shown to be an incredible buffer against many mental health issues (Walsh, 2011). On an individual basis, taking this information into account may encourage a clinician to urge their social anxious client to take positive social risks with the intention of connecting with people around them who may be able to support them. Social support may come in the form of information leading a person to believe they are cared for, loved, and a valued member of a network (Cobb, 1976). That said, results suggest that many variables are involved in the social anxiety and binge drinking relationship, and simply building up social support networks as an intervention for students who are socially anxious is not be enough to curb the immense college drinking problem.

Lastly, the relationship between social support and binge drinking must be discussed. This correlation was expected to be weak because of the large variety in sources of social support. For example, one group of college students may feel socially supported by peers in their classes through forming study groups. On the other hand, students may also feel socially supported by
roommates who bond over drinking 3-4 times per week. In order to be accepted into some college groups, binge drinking may be central to forming interpersonal relationships.

Moving forward, future researchers must uncover ways to isolate drinking motivations as to remove the many confounding variables that exist within a college population. When taking all three variables of this study into account (i.e., social anxiety, social support, and binge drinking) future research must capture each with more precision. Despite the massive sample in the present study, too many confounding variables were affecting the results.
Chapter 5

Conclusion

It has been estimated that 40% of all college students experience social anxiety, and 10% experience clinically significant levels of social anxiety (Bryant & Trower, 1974). Binge drinking results in an estimated 1,825 accidental deaths and 599,000 injuries among college students each year (Hingson, Edwards, Heeren, & Rosenbloom, 2009). These facts considered the relationship between binge drinking and social anxiety is extremely important to understand so institutions can foster positive mental and physical health.

Ample research has explored the relationship between social anxiety and drinking, yet findings appear to be mixed with some correlational studies finding a positive relationship while others have observed either a negative relationship or no association at all (Morris, Stewart, & Ham, 2005). The current study expands the literature by exploring how social support may be connected to social anxiety and social support. Past research has focused largely on smaller samples and discovered inconsistent results. The large, multisite, and nationwide dataset used in this study points to overarching trends among college students in relation to their experience of social anxiety, social support, and binge drinking behavior. Based on this sample, the social support of college students who experience at least moderate levels of social anxiety may decrease as social anxiety increases. This is of significant concern because social support is critical to fostering positive mental health (Walsh, 2011).

In addition, the present study found no relationship between binge drinking and social anxiety in a large, college student sample. This adds to the mixed findings that exist within the literature. Finding no relationship between social anxiety and binge drinking means that some
serious work must be done to reduce the immense drinking problem on college campuses. The fact that no relationship was found between social support and binge drinking may hint at a suggestion to reduce the drinking problem: learn more about college student social support networks.

Discovering how and from where college students receive social support will allow higher education institutions to distinguish the groups where binge drinking is involved with social support and promote networks that do not. Experiencing novel social situations is a part of the college experience. Exploring alcohol use can also be a part of many students’ college experience. Continuing to research and understand how binge drinking, social anxiety, and social support impact each other will uphold a healthier, more connected, and more productive college student population.
REFERENCES


ACADEMIC VITA

Chad Littlefield

351 WEST NITTANY AVE • STATE COLLEGE, PA 16801 • (508) 717-9465

ChadLittlefield1@gmail.com

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EDUCATION

Penn State University, University Park, PA Expected May 2013
BACHELOR OF SCIENCE: REHABILITATION AND HUMAN SERVICES
BACHELOR OF ARTS: PSYCHOLOGY
• Schreyer Honors College Scholar
• Masters level course in Medical Aspects of Disability and Criminal Counseling

HONORS AND AWARDS

Student Leader Scholarship, Pennsylvania State University Fall 2010, 2011, and 2012

PROFESSIONAL EXPERIENCE

World in Conversation, University Park, PA AUG 2011 - Present
FACILITATOR / GLOBAL DIALOGUE COORDINATOR
• Gain rapport with group of strangers to effectively engage in dialogue about social issues (e.g., race, gender, well-being)
• Facilitate five or more one-hour scheduled conversations per week with 6-20 participants
• Coordinate all global dialogues with China, Pakistan, Iran, Gaza and Taiwan

Center for Collegiate Mental Health, University Park, PA AUG 2010 - Present
RESEARCH ASSISTANT
• CCMH is a practice-research network of over 140 college counseling centers
• Personal focus on the effects of social anxiety in college student population
• Roles include literature reviews, research proposals, participation in weekly meetings, research presentation, mental health data analysis for a population of over 70,000 help-seeking college students

Clearfield County Jail, Clearfield, PA MAR 2010 – APR 2011
JUVENILE INMATE COUNSELOR / APPRENTICESHIP
• Offer individual guidance and support during weekly three-hour sessions, specifically for emotional and social difficulty
• Identify and challenge distorted beliefs of inmates, helping them to establish functional ones
• Creatively address extreme predicaments and provide realistic, positive action plans leading to lower recidivism
RESEARCH INTERESTS
My broad interests include social anxiety, collaborative learning, and social learning. Specifically, I am fascinated to understand how we learn from each other and how social anxiety can act as a barrier to that learning.

PROFESSIONAL PRESENTATIONS