Social Anxiety, Attributional Style, and Contemporary Dating Practices

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Abstract
Social anxiety is a debilitating condition that affects a significant percentage of the U.S. population. It has been found to have a negative and persistent effect upon academic achievement, employment, mental health, physical health, and social relationships, whether platonic or romantic. Social relationships are of prime importance to young adults who are moving away from home for the first time and establishing their independence and autonomy. Concerns about dating and establishing romantic relationships are particularly salient to these young persons. Past research has established dating frequencies for college students (Klaus, Rersen, & Bellack, 1977), but no current figures are presently available. A poll of male and female students at a private northwest university found that students were dating on average at lower frequencies than was formerly true (M = .46 dates per month) and that their dating propositions were accepted on average approximately 81% of the time. This study also found that students preferred to initiate romantic relationships with others by proposing casual activities like hanging out, talking, or getting coffee. In addition, two main definitions of hooking up were endorsed by students: to engage in some sort of physical or sexual contact, or to date or be in an exclusive relationship. This study also investigated whether students who suffered from social anxiety were more or less likely to make romantic invitations or to garner acceptances to their invitations. Independent t-tests established that they were about as likely as students low in social anxiety to ask others out on dates and were accepted about as often. Past research established an association between social anxiety and global, stable, and internal attributions, as well as negative expectations about social events (Alfano, Joiner, & Perry, 1994; Ishiyama, 1984; Turner, Beidel, & Larkin, 1986). The present study confirmed these findings and also investigated the association between such attributions and students' ability to make and obtain acceptance to their dating invitations. No significant correlations were found between negative or positive attributions and students' ability to issue romantic invitations. Positive trends were observed, however, linking dating invitations and Composite Positive, Stable Positive, and Global Positive attributions. A negative trend linking dating invitations and Global Negative attributions was also found. In addition, significant associations were found between Composite Positive, Global Positive, and Internal Negative attributions and percentage of acceptance of dating invitations. The data also demonstrated nonsignificant trends linking Composite Negative, Stable Positive, and Internal Positive attributions and acceptance of dating invitations.

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SOCIAL ANXIETY, ATTRIBUTIONAL STYLE, AND
CONTEMPORARY DATING PRACTICES

A DISSERTATION
SUBMITTED TO THE FACULTY
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ABSTRACT

Social anxiety is a debilitating condition that affects a significant percentage of the U. S. population. It has been found to have a negative and persistent effect upon academic achievement, employment, mental health, physical health, and social relationships, whether platonic or romantic. Social relationships are of prime importance to young adults who are moving away from home for the first time and establishing their independence and autonomy. Concerns about dating and establishing romantic relationships are particularly salient to these young persons.

Past research has established dating frequencies for college students (Klaus, Hersen, & Bellack, 1977), but no current figures are presently available. A poll of male and female students at a private northwest university found that students were dating on average at lower frequencies than was formerly true (M = .46 dates per month) and that their dating propositions were accepted on average approximately 81% of the time. This study also found that students preferred to initiate romantic relationships with others by proposing casual activities like hanging out, talking, or getting coffee. In addition, two main definitions of hooking up were endorsed by students: to engage in some sort of physical or sexual contact, or to date or be in an exclusive relationship.

This study also investigated whether students who suffered from social anxiety were more or less likely to make romantic invitations or to garner acceptances to their
invitations. Independent t-tests established that they were about as likely as students low in social anxiety to ask others out on dates and were accepted about as often.

Past research established an association between social anxiety and global, stable, and internal attributions, as well as negative expectations about social events (Alfano, Joiner, & Perry, 1994; Ishiyama, 1984; Turner, Beidel, & Larkin, 1986). The present study confirmed these findings and also investigated the association between such attributions and students' ability to make and obtain acceptance to their dating invitations. No significant correlations were found between negative or positive attributions and students' ability to issue romantic invitations. Positive trends were observed, however, linking dating invitations and Composite Positive, Stable Positive, and Global Positive attributions. A negative trend linking dating invitations and Global Negative attributions was also found.

In addition, significant associations were found between Composite Positive, Global Positive, and Internal Negative attributions and percentage of acceptance of dating invitations. The data also demonstrated nonsignificant trends linking Composite Negative, Stable Positive, and Internal Positive attributions and acceptance of dating invitations.
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INTRODUCTION

Nearly everyone suffers occasional anxiety in unfamiliar social situations. But when social fears become so frequent and so intense that they significantly interfere with the normal conduct of an individual’s life, he or she may be said to be suffering from social phobia (American Psychiatric Association, 1994). Individuals with social phobia experience a “marked and persistent fear of social or performance situations in which embarrassment may occur” (American Psychiatric Association, 1994, p. 411). They fear situations in which they may be evaluated by others and in particular fear performing inadequately or betraying signs of anxiety. Public speaking, eating or drinking in public, using public restrooms, and attending parties or other gatherings in which they may be required to speak or interact with strangers, are highly feared by individuals with social phobia (Furmark, 2002).

Social phobia can be a devastating disorder that can affect nearly every aspect of an individual’s social, academic, occupational, and recreational functioning (Schmidt & Fox, 1995; Wittchen, Fuetsch, Sonntag, Muller, & Liebowitz, 2000). People who suffer from social phobia become so apprehensive in public situations that they may avoid future exposure to social events, becoming socially isolated (Curtis, Kimball, & Stroup, 2004). Social avoidance can become so pervasive that the individual becomes highly distressed when carrying out everyday activities like grocery shopping or talking on the telephone.
At one time social phobia was relatively ignored as a significant public health concern (Liebowitz, Gorman, Fyer, & Klein, 1985). Interest surged in this “neglected disorder” (Liebowitz et al.) with the advent of ambitious and rigorous national surveys like the National Comorbidity Survey (1994) that demonstrated a much higher incidence rate and level of severity for social phobia than had previously been recognized. Community surveys also revealed that the great majority of people with social anxiety do not seek treatment; some surveys found that as few as 20% have been treated for their symptoms (Magee, Eaton, Wittchen, McGonagle, & Kessler, 1996).

Some researchers identify two types of social phobia: specific social phobia and generalized social phobia. Specific social phobia applies to individuals who become anxious in performance situations such as speaking or writing before others or using a public restroom. Generalized social phobia applies to individuals who fear ordinary social situations such as initiating and carrying on a conversation or going to social events (Stemberger, Turner, Beidel, & Calhoun, 1995). The generalized form of social phobia is associated with higher levels of distress, comorbidity, and impairment (Heimberg, Stein, Hiripi, & Kessler, 2000).

Social phobia is the third most prevalent psychological disorder in the United States, affecting approximately 13.3% of people in the U. S. (Kessler et al., 1994). Only major depressive disorder and alcohol dependence affect greater numbers of individuals (Rettew, 2000). Furmark et al. (1999) found a lifetime prevalence of 15.6% in Sweden; a prevalence rate of 10% was found in Canada (Stein, Walker, & Forde, 1996). Dramatically different prevalence estimates found by individual researchers are explained
by Pollard and Henderson (1988) as being due to varying definitions of "significant distress" by researchers.

The average age of onset of social phobia in one sample of individuals was found to be 16.3 years (Ost, 1987). Younger individuals tend to experience somewhat more acute levels of social anxiety than do older individuals, which may suggest that community levels of social phobia are rising (Wittchen et al., 1999). Social phobia is also viewed as having a relatively chronic and stable course (Davidson, Hughes, George, & Blazer, 1993). This is perhaps due to the fact that it tends to go untreated; as noted above, Magee et al. (1996) found that less than 20% of individuals with social phobia seek professional help. Social anxiety is also highly comorbid with other psychological difficulties. Schneier, Johnson, Hornig, Liebowitz, and Weissman (1992) noted that roughly 60% of individuals with social phobia also suffer other disorders such as depression, obsessive-compulsive disorder, agoraphobia, and substance use. They are also at greater risk of experiencing suicidal ideation and suicide attempts (Davidson et al).

The following literature review will discuss researchers' conceptualization of social anxiety as representing a continuum encompassing social phobia, shyness, and avoidant personality disorder. It will also present previous research linking attributional styles and social anxiety and negative outcomes associated with social anxiety, including intraindividual functioning, educational and occupational deficits, and interpersonal functioning. It will conclude with a discussion on the research concerning the effect of social anxiety on individuals' ability to date and form intimate relationships.
A REVIEW OF THE LITERATURE ON SOCIAL ANXIETY

*Shyness, Social Phobia, and Avoidant Personality Disorder*

Shyness, social phobia, and avoidant personality disorder can be conceptualized as being consecutive points on a continuum of behaviors ranging from occasional feelings of inhibition and discomfort in some social situations, on the one hand, to acute and overwhelming discomfort in all social situations, on the other, resulting in nearly total isolation and severe depression (Rettew, 1987). Although these conditions are related, the boundaries between shyness, social phobia, and avoidant personality disorder are ill defined (Heiser, Turner, & Beidel, 2003). Researchers may refer to particular sets and intensities of symptoms as social anxiety, social phobia, or extreme or severe shyness.

*Shyness*

Carducci (1999) characterized shyness as “the discomfort and behavioral inhibition that occurs in the presence of others” (p. 5). It has physiological, behavioral, emotional, and cognitive features that are similar to generalized social phobia, but it is less debilitating. Shyness can be viewed as consisting of behavioral and affective manifestations of timidity, reticence, and reserve, as well as an accompanying attributional style that includes low self-esteem and an impaired sense of the controllability of social outcomes (Romney & Bynner, 1997).
Dispositional shyness has been found to be relatively common. Population estimates range between 20-48% (Carducci & Zimbardo, 1995; Henderson & Zimbardo, 1998; Lazarus, 1982; Zimbardo, 1977; Zimbardo, Pilkonis, & Norwood, 1975). Lazarus (1982) found that 66% of shy individuals indicated that shyness is a personal problem. Forty percent of the U.S. population reported that they had serious problems as a result of shyness (Zimbardo, Pilkonis, & Norwood, 1974).

It is important to note that some researchers distinguish shy people from introverts, who may or may not experience discomfort in social situations (e.g., Carducci, 1999). They note that introverts may simply prefer to be by themselves rather than with other people. In contrast, shy individuals, like those with social phobia and avoidant personality disorder, desire to be with others, but are inhibited or fearful when doing so. Other researchers (e.g. Heiser et al., 2003) did note a linkage between shyness and introversion; they found that shy people were significantly more likely to be introverted than were the non-shy.

Like its more severe cousins, shyness is associated with depression and dysfunctional patterns of thought (Romney & Bynner, 1997). Women may experience shyness and social phobia at slightly higher rates than do men, but men may find these conditions to be more debilitating and socially impairing, as these traits are viewed as less socially desirable in men (Bem, 1981). In a study that investigated attributions made about hypothetical shy men and women, raters judged shy males as less likeable than shy females (Gough & Thorne, 1986; Sigelman, Carr, & Begley, 1986).

Shyness and social phobia have been historically viewed by theorists as resulting from deficits in social skills (Dill & Anderson, 1999; Stravynski & Greenberg, 1989).
More recent research has found that shy and socially phobic individuals are not less socially skilled, but simply find social interaction stressful and anxiety-producing, judge themselves and their social performances more harshly, and rate themselves as less socially accomplished (Amico, Bruch, Haase, & Sturmer, 2004; Cheek & Buss, 1981).

**Avoidant Personality Disorder**

Avoidant personality disorder (APD), at the other extreme of the spectrum, is conceptualized as "a pervasive pattern of social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation" that leads to widespread avoidance and marked isolation (American Psychiatric Association, 1994, p. 718). Like shyness, APD is defined as an enduring or life-long trait that is expressed across time and situations. However, whereas shyness is considered an aspect of an individual's temperament, APD is considered an aspect of personality.

As noted previously, social phobia falls between shyness and APD on the social anxiety spectrum and is generally conceptualized as entailing greater intensity of distress than shyness, but less behavioral dysfunction than APD (Boone, et al., 1999; Rettew, 2000). Nevertheless, many researchers find that the great majority of individuals who meet criteria for APD also meet criteria for the generalized form of social phobia (Schneier, Spitzer, Gibbon, Fyer, & Liebowitz, 1991), leading to speculation that the two disorders are merely different levels of the same disorder (Boone, et al.). Supporting this contention are studies that find that individuals with both social phobia and APD improve after treatment with alprazolam (Reich, Noyes, & Yates, 1989) and after behavioral therapy (Hofman, Newman, Becker, Taylor, & Roth, 1995). This is significant in light of
the widely held belief that personality disorders like APD, by their very definition, are less amenable to change than are Axis I disorders like social phobia.

Researchers generally find considerable symptom overlap between the generalized type of social phobia and APD, and the two disorders are highly comorbid (Heimberg, 1996; Schneier, Spitzer, Gibbon, Fyer, & Liebowitz, 1991). Keller (2003) estimated that 36% of individuals diagnosed with social phobia also meet criteria for APD. Alnaes and Torgersen (1988) reported that 84% of a sample of outpatients with social phobia should have been diagnosed with comorbid APD. Because of the substantial overlap in criteria, McNeill (2001) suggested that social phobia and APD be collapsed into one disorder, with specific social phobia comprising conditions of least severity, generalized social phobia representing somewhat greater symptom intensity, and generalized social phobia with APD as the severest manifestation of the disorder.

Other researchers point out that these two disorders have differences in physiological response to exposure (Boone et al., 1999), age of onset (Stemberger, Turner, Beidel, & Calhoun, 1995), and attributions and cognitive aspects (Hofmann, Gerlach, Wender, & Roth, 1997), and therefore do not appear to be one disorder. In fact, as Manuzza et al. (1995) pointed out, these differences are representative of the social phobia subtypes (generalized and specific) as well; they noted, for instance, that specific social phobia is characterized by an earlier age of onset than is generalized. Hofmann & Barlow (2002) theorized that APD and generalized social phobia have characteristic anxiety reactions, whereas specific social phobia entails a fear response that is tied to specific situations. This distinction is subtle but significant.
Rettew (2000) distinguished between social phobia and avoidant personality disorder by noting that in social phobia individuals experience heightened symptoms of anxiety or even panic in social situations, whereas individuals with avoidant personality disorder are so hypersensitive to feared criticism that they tend more to avoidance and thus isolation. He pointed out that, whereas individuals with social phobia are afraid of acting in embarrassing ways, individuals with avoidant personality disorder expect to be rejected or disparaged regardless of their actions. Because of the substantial overlap in symptoms as well as the ill-defined boundaries and distinctions between severe shyness, social phobia, and avoidant personality disorder, these three conditions will be referred to collectively as social anxiety.

Social Anxiety and Attributional Styles

Glass, Merluzzi, Biever, & Larsen (1982) contended that dysfunctional and alarming cognitions may be the most important factor in shyness, and researchers have demonstrated equally strong associations between such cognitions and social anxiety (Beck & Emery, 1985). However, despite the demonstration of their significant contribution to the maintenance of anxiety, research has not demonstrated conclusively that dysfunctional cognitions play a causative role in the etiology of these disorders. And, at least where shyness is concerned, Romney and Bynner (1997) found that attributional style developed after the trait emerged.

In spite of this, cognitive processing models of social phobia (e.g., Beck & Emery, 1985; Clark & Wells, 1995) emphasize the importance of habitual styles of thought (information processing biases) in the causation and maintenance of social anxiety. Specifically, researchers have focused on cognitive processing biases in attention
(Hope, Rapee, Heimberg, & Dombeck, 1990), memory (Lundh & Ost, 1996), judgment (Lucock & Salkovskis, 1988) and interpretation (Clark & Wells, 1995; Coles, Turk, Heimberg, & Fresco, 2001; Johnson, Aikman, Danner, & Elling, 1995). According to Beck and Emory, these information-processing biases result from anxiety-related schema that are activated when processing potentially threatening information.

Attention

Researchers have found that anxious individuals pay particular attention to threatening stimuli (MacLeod, Mathews, & Tata, 1986). For example, Mathews, Richard, and Eysenck (1989) found that anxious individuals in general responded more acutely to threatening words than to words with a neutral meaning. This bias toward generally threatening words has not been found to be characteristic of individuals with social phobia (Hope, Rapee, Heimberg, & Dombeck, 1990). Instead, individuals with social phobia are particularly aware of words that evoke expectation of social threat, like “foolish” or “boring.”

Similarly, Lundh and Sperling (2002) found that social anxiety was highly correlated specifically with being negatively evaluated by others as compared to generally alarming or distressing social events. Galassi and Galassi (1979) demonstrated that highly socially anxious individuals tended to selectively attend to negative social experiences. They also generally interpreted situations in a less favorable light and expected to be evaluated more negatively than did non-anxious individuals. Johansson and Ost (1982) found that, like individuals with panic disorder, individuals with social anxiety were excessively aware of interoceptive stimuli such as heart rate. This internal
attention is believed to interfere with their ability to process aspects of a social situation (Hope, Heimberg, & Klein, 1990).

**Memory**

Although evidence is somewhat mixed, some researchers have theorized that individuals with different anxiety disorders show selective biases in memory tasks specific to their perception of threat (Lundh & Ost, 1996). For example, individuals with panic disorder more clearly remember threatening, as opposed to non-threatening, words (Cloitre & Liebowitz, 1991; Cloitre, Shear, Cancienne & Zeitlin, 1994), but this bias has not been demonstrated with individuals with generalized anxiety disorder (Mathews, Mogg, May, & Eysenck, 1989) or social anxiety disorder (Rapee, McCallum, Melville, Ravenscroft, & Rodney, 1994). In contrast, Lundh and Ost (1996) showed that individuals with social phobia were more apt to recognize critical faces than non-critical faces. The critical faces presumably evoked the fear of negative evaluation. The enhanced memory for critical faces was not mirrored by non-socially anxious individuals.

**Judgment**

As noted above, individuals with anxiety display a bias toward exaggerating the threat in situations or events (Amin, Foa, & Coles, 1998). For individuals with social anxiety, this bias is generally specific to social situations (Lucock & Salkovskis, 1988). For example, socially anxious individuals tend to place great importance on what others think of them and often endorse the belief that others are likely to be critical of them (Taylor & Wald, 2003). Turner, Beidel, & Larkin (1986) found that individuals with social anxiety are apt to expect negative evaluation by others. They expect that they will make a more negative impression than others expect of them (Leary, Kowalski, &
They also tend to downplay their ability to make a favorable impression on others (Wells & Papageorgiou, 1999).

Researchers have also noted that socially phobic individuals tend to view themselves as if from an outside or observer perspective in highly anxious social situations, but not in less anxious situations (Coles et al., 2001; Wells, Clark, & Ahmad, 1998; Wells and Papageorgiou, 1998). They thus see themselves as they imagine others see them and are “locked in a loop of self-generated negative information” (Wells & Papageorgiou, 1999, p. 654). This observer focus prevents them from gaining more realistic appraisals of the situation and their performance, thus short circuiting the possibility of obtaining disconfirming evidence of their fears (Clark & Wells, 1995).

**Interpretation**

Williams et al. (1997) theorized that particular styles of information processing are associated with anxiety and depression disorders in general. Specifically, in explaining or interpreting events, anxious and depressed individuals are said to use attributions that are internal (i.e., due to the individual rather than external forces), stable (i.e., the cause will always apply rather than vary with circumstances), and global (i.e., the cause will also apply to other circumstances rather than just to the specific circumstances of the event in question). In contrast, individuals who are less likely to suffer from anxiety or depression are more apt to use attributions that are external and specific. Anxious individuals’ use of internal, global, and stable attributions has been shown to become more pronounced as anxiety increases (Coles et al., 2001). Thus as anxiety increases, anxious individuals increasingly tend to ascribe the alarming circumstances to internal, stable, and global causes, and non-anxious individuals are more
likely to view the cause of alarming circumstances as more specific, variable, and external to themselves.

Researchers have found that these attributional styles pertain to socially anxious individuals as well. For example, a number of researchers have found significant correlations between cognitive style and level of social anxiety. Coles et al. (2001) reported that individuals with social phobia adopted ever more internal, stable, and global attributions for social events as their level of anxiety increased. The opposite was true for non-socially anxious individuals, who adopted a “self serving bias” in high anxiety situations, in which they viewed the situation as increasingly due to external, unstable, and specific causes. Johnson et al. (1995) demonstrated that shy individuals tended to credit positive romantic experiences as due to others, whereas they gave the credit for negative romantic experiences to themselves. Thus, they endorsed external, unstable, and non-global attributions when considering positive romantic experiences. On the other hand, when considering negative romantic situations, shy individuals endorsed internal and global causative factors.

Some researchers have investigated whether the attributions of individuals with social phobia can be distinguished from those of individuals with other mental health disorders. For example, Taylor and Wald (2003) demonstrated that the attributions characterizing social anxiety differ somewhat from those associated with panic, posttraumatic stress, and generalized anxiety disorders as well as depression. They found that positive and negative attributions for social events (including global, stable, and internal attributions) were strongly correlated with social anxiety. This was not true of attributions related to nonsocial events. The researchers found that individuals with social
anxiety had greater expectations for negative social events and lower expectations for positive social events. They also found greater concordance between stable and global attributions and social anxiety as compared with panic, PTSD, or generalized anxiety disorders.

Similarly, Amin, Foa, and Coles (1998) provided evidence that individuals with generalized social phobia displayed a bias for negative interpretation of ambiguous social, but not nonsocial, events in spite of the presentation of a possible positive interpretation. This effect was found when the individual considered scenarios involving the self, but was not found when the participants were asked to visualize a “typical person” (p. 948). Teglasi and Fagin (1984) also showed that individuals high in social anxiety had greater expectancies for negative social events and attributed them more to internal causes. When considering others’ experiences, however, they had greater expectancies for positive social events.

*After-the-Fact Information Processing*

Researchers have also theorized that, as important as in-the-moment processing is in social anxiety, after-the-fact processing may be equally important. For example, Ishiyama (1984) speculated that the primary difference in the social functioning of shy and nonshy individuals relates to dysfunctional cognitions that take place after-the-fact in social situations. Along similar lines, Clark and Wells (1995) theorized that individuals with social anxiety are apt to conduct post-event processing of alarming social events. Rachman, Gruter-Andrew, and Shafran (2000) showed that this distressing post-event processing tended to be persistent and intrusive and interfered with the individual’s ability to concentrate. The research of Lundh and Sperling (2002) demonstrated that the
Negative Outcomes Associated with Social Anxiety

In large part due to the negative filter through which they view themselves as well as their tendency to avoid uncomfortable situations, individuals with social anxiety tend to experience more negative outcomes than do their less shy counterparts. The negative outcomes associated with social anxiety fall into several categories: intraindividual functioning, educational functioning, occupational functioning, and interpersonal functioning.

Intraindividual Functioning

Social anxiety can cause a variety of psychosomatic deficits in individuals’ lives. Brown, Campbell, Lehman, Grisham, & Mancill (2001) reported that 46% of people with social phobia had an additional Axis I disorder. Of these, 29% had a mood disorder, and 28% had an anxiety disorder. Nearly half (44%) of socially phobic individuals experienced a mood disorder over the course of their lifetimes (Brown et al.). Keller (2003) reported that 70-80% of individuals with social phobia have at least one other diagnosis. Severely shy individuals are also more likely to be depressed and lonely (Bech & Angst, 1996; Jackson, Soderlind, & Weiss, 2000). They are also more likely to endorse neuroticism, fearfulness, psychosomatic problems, allergies, gastrointestinal difficulties, and low self-esteem (Schmidt & Fox, 1995).

Social evaluative anxiety has been recognized as an important component of other disorders, such as agoraphobia and panic disorder (Pollard & Cox, 1988). Some researchers (e.g., Belzer & Schneier, 2004; Lipsitz & Schneier, 2000) consider it a risk
factor for the development of other psychiatric disorders or psychopathology. It is also associated with traumatic brain injury (Trower, Gilbert, & Sherling, 1990). Wittchen, Stein, and Kessler (1999) found that social phobia frequently precedes the development of other disorders in an individual's life. Its role in the etiology of these other disorders has yet to be researched, but some believe it is an important risk factor in the development of mood and substance use disorders. As noted earlier, Romney and Bynner (1997) found that it also precedes attributional styles that are associated with depression.

Self-esteem and social anxiety. Cheek and Buss (1990) conceptualized shyness (or its opposite, social self-confidence) as one of six dimensions of self-esteem. They found that shyness correlated negatively ($r = -.40$) with each of the other dimensions (self-regard, self-confidence about academic ability, physical appearance, physical ability, and vocational certainty). Their findings seemed to illuminate an important association between shyness/social anxiety and impaired self-esteem across a variety of domains. Thus, Ishiyama (1984) found that introverted teenagers considered their shyness to be embarrassing and shameful. He demonstrated that, although both shy and nonshy teenagers experienced the same physiological and behavioral correlates of anxiety in social situations, the shy teenagers attended to the feelings more and were more self-critical and angry about their reactions.

Other researchers (e.g., Alfano, Joiner, & Perry, 1994; Turner, Beidel, & Larkin, 1986) found that socially anxious individuals were likely to view themselves critically, to ascribe to themselves more negative internal characteristics, and were more likely to engage in self-deprecating and threatening cognitions than were non-anxious people. They also expected others to view them in an equally critical fashion. These cognitions
can be specific to their social functioning, but they can also comprise more global or universal attributions about the individual's character and abilities (Anderson & Arnoult, 1985). Correspondingly, Jones, Briggs, and Smith (1986) discovered that shy college students rated themselves as being lower in adjustment, likeability, and ambition than others.

Clark and Arkowitz (1975) found that shy males hold more rigorous and harsh standards for themselves than do nonshy males. Shy males also remembered more negative and fewer positive facts about themselves than did others. Lake and Arkin (1985) found that people high in social anxiety viewed feedback favorable to themselves as less accurate and rated favorable evaluators as less perceptive than did people low in social anxiety. On the other hand, when given unfavorable feedback, they responded more strongly and negatively than did people lower in social anxiety.

Norton and Hope (2001) found that individuals with social phobia rated themselves as higher in anxiety and lower in social skills than others. This self-assessment was supported by observers, who also viewed the individuals with social anxiety as performing more poorly in social situations than did nonclinical individuals or individuals with dysthymia. This result was in keeping with the research of Alden and Wallace (1995), but in contrast to other research (e.g., Rapee & Lim, 1992) that failed to find differences in self and observer ratings of social performance.

Major depression and suicide. Romney and Byner (1997) conducted a path analysis to determine which of three variables - shyness, attributional style, or depression - preceded the other two in a sample of shy individuals. They determined that the model that depicted shyness as temporally preceding both attributional style and depression best
fit the data. This result also accounts for widespread observations of shyness in very young children (Rothbart & Mauro, 1990) at ages that predate the development of attributional styles.

Schneier, Johnson, Hornig, Liebowitz, & Weissman (1992) reported that individuals with comorbid social phobia and major depression were more likely to attempt suicide; individuals with social phobia alone were more likely to endorse suicidal ideation but did not attempt suicide at significantly greater rates.

**Concurrent anxiety disorders.** Social phobia has been associated with other anxiety disorders, most notably agoraphobia with or without panic attacks, panic disorder, and generalized anxiety disorder (Wittchen, Fuetsch, Sonntag, Muller, & Liebowitz, 2000). In a nonclinical Munich sample, Wittchen et al. found that 39.2% of individuals with social phobia had comorbid agoraphobia, 35.3% had comorbid panic, and 17.6% met criteria for generalized anxiety disorder. Specific phobia and obsessive-compulsive disorder have also been found to co-occur with social phobia with some frequency (Lipsitz & Schneier, 2000).

**Substance use disorders.** The use of alcohol to help blunt the effects of anxiety is a well-established phenomenon (Kushner, Sher, & Erickson, 1999; Marshall, 1994). There is, however, conflicting evidence for the comorbidity of substance use and social phobia. Kushner, Sher, & Erickson (1999) found a reciprocal influence between alcohol use disorders and social phobia. They reported that if either an anxiety or alcohol use disorder were present, the odds of having the other condition were two to five times greater. Similarly, Page and Andrews (1996) noted that individuals with social phobia endorsed high rates of alcohol use at roughly three times the population norm. And in the
Epidemiological Catchment Area study, individuals with social phobia were twice as likely to endorse alcohol abuse (Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992). When an association between social phobia and alcohol is supported, it is generally found that social phobia predates the abuse of alcohol (Lipsitz & Schneier, 2000).

Other researchers have not duplicated these findings. Schuckit and Hesselbrock (1994) and Crum and Pratt (2001) found that rates of alcohol abuse or dependence were similar for individuals with and without social phobia. Crum and Pratt did find, however, that individuals with subclinical social phobia were twice as likely to drink heavily and become alcohol dependent than were those without social anxiety. They hypothesized that this difference was due to the avoidance strategies of people with social phobia (thus reducing the need for alcohol), whereas those with subclinical social phobia were more likely to find themselves in social situations and thus drink to cope. Alternatively, they noted that individuals with social phobia might be more likely to enter treatment, and thus address concurrent alcohol use.

Social phobia has also been associated with the heavy use of cigarettes (Sonntag, Wittchen, Hopler, Kessler, & Stein, 2000). Wittchen, Fuetsch et al. (2000) found that 40% of individuals with “pure” social phobia (without comorbid diagnoses) were dependent upon smoking. Roughly equal numbers of individuals in their sample with comorbid diagnoses (47.1%) and subthreshold social phobia (44.1%) were also nicotine dependent.

Social phobia has also been associated with the use of drugs, though at a lower level than is true for nicotine and alcohol (Sonntag et al.; Wittchen et al., 2000).
Wittchen, et al. discovered that 4.6% of pure social phobics and 9.8% of those with comorbid diagnoses abused drugs or were dependent upon them. Only 2.9% of individuals with subthreshold social phobia abused drugs. Zimmermann et al. (2004) determined that 42.6% of individuals with nongeneralized social phobia and 20% of those with generalized social phobia were dependent upon drugs.

Educational and Occupational Deficits and Social Anxiety

Social phobia has been found to be associated with poor academic and occupational performance, school dropout, higher rates of unemployment, increased financial dependency, and lower quality of life (Wittchen et al., 1999; Mogotsi, Kaminer, & Stein, 2000). Stein, Kean, Chartier, & Walker (1999) found that people with social phobia were more likely to have failed a grade, to leave school early, to suffer disability, and to be dissatisfied with their social relationships, free time pursuits, and wages. Schneier et al. (1992) found that individuals with social phobia were more likely to receive disability or welfare assistance. Lipsitz and Schneier (2000) demonstrated that individuals with social phobia were more likely to be truant from school and to repeat a grade. They were also less likely to graduate from college; the researchers reported that for every 10-point increase on the Liebowitz Social Anxiety Scale (Liebowitz, 1987) the odds that the individual would graduate college decreased by 1.8%.

The Epidemiological Catchment Area Survey revealed that individuals with social phobia who had comorbid diagnoses (and thus more severe symptoms) were twice as likely to be on welfare or disability and were more likely to be late to work, to be absent from work, and to be fired repeatedly (Schneier et al., 1992). The National Comorbidity Survey found similar results (Kessler, et al., 1994). Wittchen and Beloch (1996) reported
that 23.3% of a German sample endorsed substantial impairment in their work performance as a result of social phobia; 8% endorsed missing work due to the same cause.

**Interpersonal Functioning: Platonic and Romantic Relationships**

Of the many deficits in an individual's functioning caused by social anxiety - academic, occupational, and interpersonal - perhaps the most distressing is its impact upon socially anxious individuals' social relationships. For example, Bech and Angst (1996) compared individuals suffering from social phobia with those with other anxiety or mood disorders and found that individuals with social phobia experienced significantly greater dissatisfaction in terms of friends, partners, and childhood memories and experiences. Turner, Beidel, Dancu, & Keys (1986) found that 70% of individuals with social phobia endorsed problems in social relationships.

Asendorpf and Wilpers (1998) followed university students for 18 months and found that shyness significantly and negatively impacted the number and quality of students' relationships. They found, for example, that shy students had half as many friends as did students low in shyness, and had fallen in love half as often. They also noted that these effects appeared to be enduring; that is, they did not change significantly over the course of the 18-month study. Schneier et al. (1992) found that individuals with social phobia were less likely than others to marry.

Lake and Arkin (1985) reported that poor self-esteem and self-doubt about social competence can significantly impact a shy individual's likeliness of socially interacting with others as well as the skillfulness of his or her performance when induced to do so.
For example, they found that shy individuals are apt to attend more to internal distress and fear of negative evaluation than to the demands of the social situation.

Whereas several researchers have found that socially anxious individuals are deficient in social skills (i.e., Baker & Edelmann, 2002; Curran, 1977; Turner, Beidel, Cooley, & Woody, 1994; Walters & Hope, 1998), other researchers found no such differences (Rapee & Lim, 1992; Woody, 1996). The majority of research supports the social-skills deficits theory. For example, Arkowitz, Lichtenstein, McGovern, and Hines (1975) found that independent judges rated individuals with social anxiety as being less skilled socially and more anxious than others. These results have been duplicated by other researchers (e.g., Fydrich, Chambless, Perry, Buergener, & Beazley, 1998; Stopa & Clark, 1993) using both trained and untrained observers as well as situations involving both role-playing and true-life interactions.

Researchers investigating specific social skills have also found mixed results. For example, Baker and Edelman (2002) found that individuals with social phobia were rated as deficient in eye contact while talking and also were viewed as using significantly more gestures while talking. Otherwise, few differences were seen with regard to the duration or content of conversation, silence, smiling, or use of eye contact while listening. In contrast, Galassi and Galassi (1979) found that individuals with social anxiety talked less in the interactions they had.

Whatever the level of their social competence, shy individuals have been demonstrated to avoid social interactions (Galassi & Galassi, 1979; La Greca, Dandes, Wick, Shaw, & Stone, 1988). This has a quelling effect upon their social networks. This
avoidance happens in spite of the fact that they perceive intimacy and social relationships as both salient and vital (Santiago-Rivera, Gard, & Bernstein, 1999).

La Greca and Lopez (1998) and Roehrle and Sommer (1994) linked social deficits and fear of negative evaluation with reduced social support. La Greca and Lopez reported that socially anxious teenagers endorsed fewer friendships than did their nonshy counterparts. Shy teens also experienced a reduced sense of intimacy, companionship, and support in the friendships they did experience. Wittchen, Fuetsch, Sonntag, Muller, and Liebowitz (2000) reported that individuals with social anxiety (both subthreshold and diagnosed social phobia) had fewer friends than others and were dissatisfied with the number of friends they had.

Shyness and reduced social support are significantly correlated with loneliness and subsequent depression (Anderson & Harvey, 1988). Jones, Rose, & Russell (1990) reported, for example, that loneliness and shyness correlated between .40 and .51. Cheek and Buss (1981) demonstrated a causal relationship between shyness and loneliness. They found that shy college students at Time 1 were significantly lonelier at Time 2. Joiner (1997) provided evidence that shy college students with low social support were more likely to suffer depression.

Dill and Anderson (1999) theorized that shyness is a causal factor in the development of loneliness and depression. They pointed out that shy or socially anxious individuals often have difficulty in establishing strong social relationships due to their tendencies to avoid interactions with unfamiliar people as well as relatively poorer social skills when forcing themselves to interact.
Dating. Martinson and Zerface (1970) demonstrated that issues surrounding dating represented the most frequent reason for visiting a college counseling center. This fact demonstrates the supraordinate importance college students place upon intimate relationships (Santiago-Rivera et al., 1999). Thus, learning how to meet and relate to prospective love interests is of primary importance to many individuals (Martinson & Zerface). Unfortunately, a substantial minority finds the prospect of doing so highly anxiety provoking (Borkovec, Stone, O’Brien, & Kaloupek, 1974).

Asendorpf and Wilpers (1998) provided evidence that shy individuals accumulated friends much more slowly than did their nonshy counterparts and were much less likely to fall in love. They demonstrated, for example, that shy students were 63% less likely to fall in love in 18 months, whereas only 27% of students low in shyness did not do so.

Wittchen et al. (2000) reported that individuals with social anxiety endorsed “clear impairment in dating activities and marital problems” (p. 56). Maroldo (1982) reported that shyness was a “barrier to congeniality and physical attraction, which are aspects of love, as well as to love itself... Shyness did not appear to inhibit dating” (p. 823). In spite of the fact that he found that shyness was not an impediment to dating, Maroldo reported that shyness did prevent individuals from more long-term relationships like friendship and love.

Shmurak (1973) demonstrated that roughly one-half of individuals had difficulty in dating. Similarly, Arkowitz, Hinton, Perl, and Himadi (1978) provided evidence that approximately one-third of a sample of undergraduates experienced anxiety related to dating. Leary (1986) reported that shy people “are less likely to date and get to know
people of the other sex well, they are more reluctant to initiate and respond to sexual overtures" (p. 34). Similarly, Himadi, Arkowitz, Hinton, & Perl (1980) found that individuals scoring higher in social anxiety dated less often than did those scoring lower. These individuals also rated themselves as being less socially skilled, had fewer interactions with others, and had greater anxiety during the interactions they did have. Dodge, Heimberg, Nyman, and O'Brien (1987) reported similar results.

Prisbell (1997) reported that undergraduate students who scored high on the Social Avoidance and Distress Scale (Watson & Friend, 1969) reported fewer skills in dating and considered themselves to be less physically attractive than did people who scored low. They also endorsed dislike of initiating conversations with others and reported that they found it difficult to find things to say. They consequently reported greater apprehension about dating and described feeling cautious about future dating.

Klaus, Hersen, and Bellack (1977) demonstrated that finding dates was one of the most difficult tasks for college students. As noted previously, Wittchen et al. (2000) and Asendorph and Wilpers (1998) found significant deficits in dating in people with social phobia. Wittchen et al. also found problems in marital relationships. Arkowitz et al. (1978) speculated that social anxiety and consequent avoidance might hinder the development of romantic relationships. Such hindrances, researchers believe, may lead in turn to depression, loneliness, academic problems, sexual dysfunction, and substance abuse (Arkowitz, 1977; Pilkonis & Zimbardo, 1979).

A recent national survey found that modern undergraduate students no longer date as did their predecessors (Glenn & Marquardt, 2001). These researchers led a qualitative study carried out by the Institute for American Values that interviewed 1,000
undergraduate, single, heterosexual women. They found that approximately 50% of female college seniors were asked out on six or more dates since beginning college; 33% were asked out on fewer than two. Rather than dating, the researchers reported, students tend more toward “hanging out” or “hooking up”.

According to their study, 40% of the women they surveyed had hooked up with someone at least once; 10% had hooked up more than 6 times. A majority of students in this survey (75%) defined hooking up as “when a girl and a guy get together for a physical encounter and don’t necessarily expect anything further” (p. 4). The researchers noted that a physical encounter might encompass anything between kissing and sexual intercourse. “Hanging out” was defined as males and females spending time together “without making their interest in one another explicit, unless they hook up.” (p. 5). The researchers also reported that 48% of the women in their national study had a boyfriend at the time of survey.

The results of this survey are consonant with anecdotal reports by current college students, but have not been duplicated by a mixed-sex study or by a study not explicitly choosing a heterosexual participant sample. If this trend is borne out by additional research, it may represent good news for individuals suffering from social anxiety, as it may make it easier for them to get to know prospective dates before making a social invitation, thus lessening the perceived threat in taking such a risk. This hypothesis is in need of corroboration, however.

Current Study

In summary, social anxiety has been associated with numerous deficits and significantly impaired quality of life. Individuals with social anxiety suffer appreciably
greater depression and general anxiety symptoms than do individuals without social
anxiety. They experience more frequent suicidal ideation and may attempt suicide in
greater numbers than does the general population. They abuse alcohol, drugs, and
cigarettes in higher numbers than do others. They endorse problems with academic
achievement, employment, finances, physical health, self-esteem, and sense of well being
more frequently than do non-socially anxious people. And they suffer significant
impairment in social relationships, endorsing fewer platonic and intimate relationships, a
lower probability of marriage, and higher rates of divorce than do members of the general
population. These deficits may stem from characteristic modes of thought that are overly
focused on perceived self-deficits and negative and threatening interpretations and
expectations of social events.

In 1977 Klaus, Hersen, and Bellack reported that male and female college
students had approximately 5.49 and 5.65 dates respectively per month (5.58 overall). A
review of the literature failed to locate more recent dating frequencies. In light of reports
that college students no longer date in substantial numbers, obtaining more up-to-date
frequencies on dating is needed. Further research is also needed on patterns of dating as it
is practiced today. Researchers have theorized that individuals with social anxiety are less
likely to form intimate relationships due to their patterns of avoidance and possibly to
deficits in social skills. However, this hypothesis has yet to be tested in the changed
cultural landscape of today. Do socially anxious individuals avoid close contact with
others that may lead to the development of intimate relationships? In particular, do they
ask others out on dates less frequently than do those who are less socially anxious?
Because of the substantial post-event processing and negative internal attributions in which socially anxious individuals engage, it would also be helpful to obtain some idea of the proportion of acceptances to the overall number of social invitations, and whether this proportion is equal for individuals with and without social anxiety. Such a figure might help place a refusal to a social invitation in perspective and remind individuals with social anxiety that more socially accomplished individuals also experience rejection. Finally, determining the kinds of attributions that college students, and by extension, other individuals make when their social invitations are refused may help to identify the types of cognitions that enable resilient students to continue making such invitations. This information may suggest cognitive interventions that may help socially anxious individuals reduce their levels of anxiety relative to this important aspect of social functioning.

This study investigated the following questions: 1) Do current college undergraduate students continue to date at levels equivalent to past years? 2) What are current students’ preferred methods of dating? 3) What are students’ definitions of hanging out? 4) What are students’ definitions of hooking up? 5) How often are students’ invitations to date accepted? 6) Is there a difference in frequency of invitations made relative to the level of social anxiety? 7) What is the proportion of acceptances to the total number of invitations made relative to level of social anxiety? In other words, are the invitations of socially anxious individuals accepted with the same frequency as are those of less socially anxious individuals? 8) Given the kinds of attributions an individual endorses (e.g., positive and negative internal, stable, and global), is there a significant difference in level of social anxiety? 9) Is there a correlation between kinds of
attributions made and frequency of making romantic invitations? 10) Is there a
correlation between the kinds of attributions made and the acceptance of one’s romantic
invitations?
METHODS

Subjects

Participants were 102 female and male undergraduate students (72 female, 30 male) at Pacific University. The mean age of the participants was 19.82 with a range of 18-29 years old. Two students inadvertently participated twice and their second set of questionnaires was discarded. Most participants were recruited through in-person or emailed presentations made to their introductory psychology classes and were given credit for participating. Other participants were recruited in the University Center where the measures were completed. Informed consent was discussed with each student, and they were assured their participation was entirely voluntary (see Appendix A for a copy of the informed consent form). Each was offered a copy of the informed consent, and they were given lottery tickets and candy bars for participating. No students chose to discontinue their participation, but were advised of their right to do so.

After signing the informed consent form and providing brief demographic information, each student filled out the Social Phobia Scale (Mattick & Clarke, 1998), the Social Interaction Anxiety Scale (Mattick & Clarke, 1998), the Attributional Style Questionnaire (Peterson, Semme, von Baeyer, Abramson, Metalsky, & Seligman, 1982), and a brief questionnaire inquiring about the number of dates they proposed in the previous year, the number of dates that were accepted, the student’s preferred style of asking someone out, and the student’s definitions of “hanging out” and “hooking up.”
For analyses including dating frequency, only the data from students not currently in romantic relationships were used.

**Measures**

*Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998).* The SIAS is a 20-item measure that is purported to measure cognitive, affective, and behavioral reactions to interpersonal and interactional situations. It employs a Likert scale ranging from 0 (not at all characteristic of me) to 4 (extremely characteristic of me). The SIAS has been demonstrated to have good-to-excellent internal consistency. Heimberg et al. (1992), Mattick and Clarke (1998), and Osman, Gutiérrez, Barrios, Kopper, and Chiros (1998) all reported Cronbach's alphas for the SIAS that ranged from .86 to .94 in a series of clinical, community, and student samples. Test-retest reliability was also found to be good-to-excellent. Heimberg et al. and Mattick and Clarke reported alphas that ranged from .86 to .92.

Mattick and Clarke (1998) subjected the SIAS to a factor analysis procedure and reported finding one factor identified as social interactional fear. Brown et al. (1997) compared the SIAS performance of people with social phobia with that of people with other anxiety disorders and without anxiety. They found that individuals diagnosed with social phobia scored significantly higher than did the others. Researchers have also found support for the convergent validity of the SIAS. They found correlations between .66 and .81 between the SIAS and other measures of social anxiety (Cox et al., 1998; Habke et al., 1997; Heimberg et al., 1992; Mattick & Clarke, 1998; Ries et al., 1998). Heimberg et al. (1992) was able to correctly identify 82% of people with social phobia using the SIAS in a community sample.
Heimberg, Mueller, Holt, Hope, and Liebowitz (1992) reported that people with social phobia obtained mean scores of 49.0 ($SD = 15.6$) on the SIAS; a community sample obtained mean scores of 19.9 ($SD = 14.2$). The researchers suggested a cut-off score of 34, which they reported correctly classified 82% of a social phobia group. In the present study, after reverse scoring items 5, 9, and 11, the scores for each participant were summed and the mean score for the group was determined to be 23.63 ($SD = 12.92$), slightly higher than the community sample investigated by Heimberg et al. In addition, the SIAS showed very good internal consistency in the present sample (Cronbach’s alpha = .90).

*Social Phobia Scale (SPS; Mattick & Clarke, 1998).* The SPS is a 20-item self-report measure that was used to assess each participant’s level of social anxiety. The SPS was constructed to assess concern about being scrutinized by others, specific social fears, and fear of being viewed as ill or losing control in front of others. Like the SIAS, the SPS uses a Likert scale ranging from 0 (not at all characteristic of me) to 4 (extremely characteristic of me). It has been demonstrated to have high internal consistency (.87 to .94; Heimberg et al., 1992; Marrick & Clarke, 1998; Osman et al., 1998) in a variety of clinical and nonclinical samples. Test-retest reliability has also been found to be acceptable to excellent (.66 to .93; Heimberg et al., Mattick & Clarke).

Heimberg et al. (1992) and Mattick and Clarke (1998) reported that the SPS was able to differentiate between people with social phobia and those without social phobia, thus demonstrating some criterion validity. Convergent validity was demonstrated by Cox et al. (1998), Habke et al. (1997), Heimberg et al. (1992), Mattick & Clarke (1998), and Ries et al. (1998): Other measures of social phobia were significantly associated with
the SPS (.64-.75). Heimberg et al. also reported that the SPS was able to discriminate between a group with social phobia and a group of community participants using the SPS; the SPS correctly identified 73% of the individuals with social phobia.

Heimberg, Mueller, Holt, Hope, and Liebowitz (1992) reported that people with social phobia obtained mean scores of 32.8 ($SD = 14.9$) on the SPS, and they recommended a cut-off score of 24 in order to correctly diagnose 73% of individuals with social phobia. Heimberg et al. reported that a community sample obtained mean scores of 12.5 ($SD = 11.5$) on the SPS. In the present study the mean score for the SPS was 23.63 ($SD = 12.92$), considerably higher than the community sample investigated by Heimberg et al. The SPS showed good internal consistency in the present sample (Cronbach’s alpha = .91).

*Attributional Style Questionnaire* (ASQ; Peterson, Semme, von Baeyer, Abramson, Metalsky, & Seligman, 1982). The ASQ is a self-report measure that was used to assess the attributional styles of participants. It is composed of 6 positive hypothetical scenarios and 6 negative hypothetical scenarios. The participant is asked to imagine each situation and then answer four questions about it that incorporate a 7-point Likert scale. For situations involving good events, a score of 1 represents the worst possible score, and 7 represents the best. The opposite is true for bad events: a score of 1 is the best possible score, and a score of 7 is the worst. The ASQ yields six scores that represent the extent to which the participant makes global, internal, and stable attributions for positive and negative events. In addition, it provides scores for the participant’s composite negative attributional style, composite positive attributional style, composite positive minus composite negative, hopelessness, and hopefulness.
The ASQ has been demonstrated to have good reliability (coefficient alpha = .75 for the positive items and .72 for the negative items). Test-retest reliability was also acceptable (.70 and .64 respectively). Reivich (1995) and Gladstone and Kaslow (1995) provided support for the construct validity. In the present study, after summing each participant’s scores for the individual scales (internal negative, internal positive, stable negative, and so forth), the composite scale scores were summed separately. The reliability for the ASQ in this study was found to be acceptable and comparable to that reported in 1982 by Peterson et al. (Cronbach’s alpha for the positive items = .73, for the negative items = .71).

Data Analysis and Hypotheses

Several research questions were investigated:

1. How often do students currently date? Based on research by Glenn and Marquardt (2001) and anecdotal reports of current students, it was hypothesized that students currently date at lower rates than they did in the past. Previous dating frequency was provided by a study of college students by Klaus, Hersen, and Bellack (1977), which reported an overall mean of 5.58 dates per month. The data were analyzed using a one-sample t-test.
   - The dependent variable: the mean number of invitations for dates made by the individuals investigated in each month.

2. What are students’ preferred methods of making dating invitations? Following the research of Glenn and Marquardt (2001), it was expected that students would more often prefer to ask others to hang out rather than extend a formal invitation for a date.
After reading the students’ responses through twice, the primary researcher began placing similar replies together into categories. Eventually, six categories were named to reflect the content of the students’ replies. After the primary researcher had placed each of the replies into the six categories, an independent coder was given the original replies and the six categories. He then placed the replies into the six categories. One response was placed into two separate categories by both coders in order to more accurately reflect the student’s reply (“I usually just say hang out - go out in a group of friends”). The percentage of agreement between the two coders was calculated; 94% of the time the coders agreed on the categories chosen. See Appendix C for a more detailed description of the coding procedure.

3. What are students’ definitions of hanging out? Consonant with Glenn and Marquardt’s (2001) research, it was expected that students’ definition of this term would vary somewhat, but would largely center on the notion of spending time together either alone or in a group in a casual manner or setting. Students’ responses were read through twice and then grouped with similar replies. These groups of responses were then named to reflect as closely as possible the content of the students’ replies. As was true of Research Questions 2 and 4, the responses were not forced into only one group, but were allowed to fit into more than one group, if necessary, to capture the meaning of the response. After the initial categories were formed, those that were judged to be similar were combined, until only six categories remained.

An independent coder was then given these six categories along with the original measures containing the students’ replies. This individual then independently placed the students’ responses into the six categories, and the percentage of agreement was
calculated. Both coders agreed on the category chosen 96% of the time. See Appendix D for a more detailed explanation of the coding procedures as well as examples of responses included in each category.

4. What are students’ definitions of “hooking up?” In keeping with the research of Glenn and Marquardt (2001), it was expected that students would have widely varying definitions of this term, but would primarily involve some physical contact. The responses were analyzed in a manner similar to that used to analyze their definitions of hanging out, noted above. Interrater agreement for this research objective was 91%. See Appendix D for a more detailed description of the procedure.

5. How often are dating invitations accepted? Each participant not currently in a romantic relationship was asked how many times he or she had proposed a date in the past year and how often these invitations were accepted. The proportion of acceptances to the total number of invitations made was derived from the data.

6. Do individuals with SA ask others out on dates with the same frequency as do non SA individuals? Based on research by Galassi & Galassi, 1979, La Greca et al. (1988) and Leary (1986), who reported that shy individuals tend to avoid social interactions, it was expected that SA individuals would ask others out fewer times than did non SA individuals. The participant sample was split into two groups using cut-off scores and an independent t-test was conducted. In addition, because social anxiety is viewed as comprising a continuum from shyness through social phobia to avoidant personality disorder, Pearson correlations were also used.

- The independent variables:

  1) Degrees of SA (as measured by the SPS, SIAS).
2) Social Phobia and non-Social Phobia groups.

- The dependent variable: number of dates proposed.

7. Are the dating invitations of SA individuals accepted with the same frequency as are those of non SA individuals? Previous research has reported conflicting results with respect to the social skills of socially anxious individuals. However, based on research reporting that individuals with SA were deficient in social skills (i.e., Curran, 1977; Turner et al., 1994; Walters & Hope, 1998), it was expected that the dating invitations of SA individuals would be accepted fewer times than were those of non SA individuals. The data were analyzed using Pearson correlation.

- The independent variable: the degree of SA (SPS, SIAS).
- The dependent variable: the percentage of dates accepted.

8. Is there a link between social anxiety and types of attributions endorsed (e.g., positive and/or negative internal, stable, global)? Consonant with research by Anderson and Arnoult (1985), which found that individuals with SA tend to have more negative attributions about themselves, it was expected that level of social anxiety would be correlated to negative attributions. The data were analyzed via Pearson correlation.

- The independent variables: endorsement of positive and negative attributions (composite negative attribution, composite positive attribution, CPCN, internal negative, internal positive, stable negative, stable positive, global negative, global positive from the ASQ).
- The dependent variable: level of social anxiety (SPS, SIAS).

9. Is there a difference in the frequency of dating invitations made based on the kinds of attributions endorsed (i.e., internal, stable, global, and so forth)? It was expected
that greater endorsement of negative attributions would be associated with lower
frequency of dating invitations. Pearson correlations were used to analyze the
associations between individual attributions and frequency of making invitations.

- The independent variables: endorsement of categories of attributions
  (ASQ).
- The dependent variable: frequency of making invitations.

10. Is there an association between an individual’s endorsement of attributions
and the frequency of acceptance of his or her dating invitations? It was expected that
individuals who endorsed negative internal, stable, and global attributions would obtain
fewer acceptances of dating invitations. Pearson’s product-moment correlations were
used to analyze the associations between students’ endorsement of categories of
attributions and percentage of date invitation acceptance.

- The independent variables: endorsement of categories of attributions
  (ASQ).
- The dependent variable: frequency of having one’s invitations accepted.
RESULTS

Preliminary Analyses

Table 1 presents the demographic data for the participant sample as well as the mean group scores for the SPS, SIAS, and ASQ composites and individual dimensions.
Table 1

**Demographic Data**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
<th>Range</th>
<th>M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>100</td>
<td>18-29</td>
<td>19.82(1.2)</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>71</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ethnicity: Caucasian</td>
<td>82</td>
<td>82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>17</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In Relationship</td>
<td>58</td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Date Invitations (year)</td>
<td>40</td>
<td>0-50</td>
<td>5.55(8.52)</td>
<td></td>
</tr>
<tr>
<td>Number of Date Acceptances (year)</td>
<td>40</td>
<td>0-47</td>
<td>7.85(4.24)</td>
<td></td>
</tr>
<tr>
<td>Proportion of Acceptance to Invitation</td>
<td>34</td>
<td></td>
<td>0.81(0.29)</td>
<td></td>
</tr>
<tr>
<td>SPS</td>
<td>96</td>
<td>1.00-49.00</td>
<td>19.07(11.72)</td>
<td></td>
</tr>
<tr>
<td>SIAS</td>
<td>94</td>
<td>1.00-60.00</td>
<td>23.63(12.92)</td>
<td></td>
</tr>
<tr>
<td>ASQ Composite Positive</td>
<td>94</td>
<td>8.17-19.50</td>
<td>15.15(2.04)</td>
<td></td>
</tr>
<tr>
<td>ASQ Composite Negative</td>
<td>94</td>
<td>7.67-18.67</td>
<td>12.81(1.99)</td>
<td></td>
</tr>
<tr>
<td>ASQ CPCN</td>
<td>91</td>
<td>-7.50-9.17</td>
<td>2.38(2.98)</td>
<td></td>
</tr>
<tr>
<td>ASQ Global Positive</td>
<td>96</td>
<td>1.50-6.83</td>
<td>4.85(1.00)</td>
<td></td>
</tr>
<tr>
<td>ASQ Stable Positive</td>
<td>96</td>
<td>2.67-7.00</td>
<td>5.15(0.78)</td>
<td></td>
</tr>
<tr>
<td>ASQ Internal Positive</td>
<td>94</td>
<td>1.67-6.83</td>
<td>5.15(0.82)</td>
<td></td>
</tr>
<tr>
<td>ASQ Global Negative</td>
<td>94</td>
<td>1.00-7.00</td>
<td>3.87(1.04)</td>
<td></td>
</tr>
<tr>
<td>ASQ Stable Negative</td>
<td>94</td>
<td>1.00-5.67</td>
<td>3.78(0.77)</td>
<td></td>
</tr>
<tr>
<td>ASQ Internal Negative</td>
<td>95</td>
<td>1.17-5.50</td>
<td>3.53(0.90)</td>
<td></td>
</tr>
</tbody>
</table>

*Composite Positive Minus Composite Negative*
An independent t-test was conducted to compare the SPS and SIAS scores of those in and not in relationships to determine whether there were differences between the groups. No significant differences on these measures were found between the groups. The results are presented in Table 2.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Relationship</th>
<th>No Relationship</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS(^\text{b})</td>
<td>19.29(11.25)</td>
<td>18.74(12.55)</td>
<td>.23</td>
<td>.82</td>
</tr>
<tr>
<td>SIAS(^\text{b})</td>
<td>23.82(12.47)</td>
<td>23.34(13.72)</td>
<td>.18</td>
<td>.86</td>
</tr>
</tbody>
</table>

\(^\text{a}\) Social Phobia Scale \(^\text{b}\) Social Interaction Anxiety Scale

Research Objective 1: Current Dating Frequency

It was expected that students were currently dating at lower frequencies than in 1977. To test this hypothesis, a one-sample t-test was conducted comparing current monthly dating frequencies ($M = .46$ dates) with 1977 data ($M = 5.58$ dates). As was true of all analyses using dating frequencies (dates proposed, dates accepted, proportion of acceptances to invitations), only data from students not currently in a relationship were used. The results of the one-sample t-test indicated a statistically significant difference between the mean dating frequencies of 1977 and 2006 [$t(33) = -43.42, p = .000$].

Students in the current study were dating at lower frequencies than in 1977.

Research Objective 2: Preferred Methods of Dating

The students were asked about their preferred method of asking someone on a date. It appeared, from the variety of responses given, that students used a number of
strategies to initiate an engagement with someone in whom they are romantically interested. The preferred method, endorsed by a majority of students, was to ask the other to “hang out”. Some coupled this offer with specific suggestions that shaded the offer toward a more formal request for a date (i.e., “Would you like to hang out and go get some drinks or coffee?”). Other students reported that they would ask another person out, but would put in a qualifier that lent enough vagueness to allow them to gauge the extent of the other’s interest before deciding to take the next step (i.e., “Would you like to go out sometime?” or “Would you like to go to a movie sometime? No pressure; just casual”). A fourth group reported that they would ask a person in whom they were interested to hang out with a group of friends. Table 3 presents the results of this question.

Table 3

*Preferred Method of Asking Someone on a Date*

<table>
<thead>
<tr>
<th>Preferred Style</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hang Out</td>
<td>54</td>
</tr>
<tr>
<td>Formal Request</td>
<td>17</td>
</tr>
<tr>
<td>Use Both Methods: Hang Out or Formal Request</td>
<td>10</td>
</tr>
<tr>
<td>Never Ask Anyone Out</td>
<td>8</td>
</tr>
<tr>
<td>Hang Out in Group</td>
<td>4</td>
</tr>
<tr>
<td>Formal Request to Go Out with a Group</td>
<td>2</td>
</tr>
<tr>
<td>NA</td>
<td>3</td>
</tr>
</tbody>
</table>

*Note. The students’ replies were not forced into only one group; one reply met criteria for two groups.*
Research Objective 3: Students’ Definitions of “Hang Out”

The students were asked to provide their definition of the term hang out. The great majority mentioned that hanging out with another involved casual time spent together, whether just talking, watching TV or a movie, or going to get coffee together. In this respect, most students mentioned that hanging out with another allowed them to get to know each other in order to see if they were compatible or if something would develop. Beyond this definition, there was some variation in the nuances of what hanging out meant or could mean. For example, seven students stated that it meant a date, whereas two others reported that hanging out was “like a date, but without the label.” In contrast, one student specified that hanging out meant to spend time as friends, and two students stipulated that it meant no physical contact would take place. Table 4 presents the major classifications of students’ definitions for this term.

Research Objective 4: Students’ Definitions of “Hook up.”

Students’ definitions of the term hook up varied widely. For a substantial percentage, to hook up means to have some physical contact that could range from merely kissing to sexual intercourse. Several students chose a particular point on this continuum: “Make out; some kind of sexual contact,” “To kiss, make out, or in some cases just hang out.” Others recognized that it encompassed a wide range of behavior: “Can be anything from kissing to having sex. The term is very versatile.” A proportion of this first class of responses stipulated that the physical contact/sex was casual or meaningless: “A one-night stand;” “Nothing substantial, pure physical, no attachment;” “To have sexual contact without emotional attachment.”
Another substantial category encompassed the concept that hooking up meant that two individuals were in a relationship of some kind, which could range from a date to "not yet boyfriend/girlfriend" to exclusive dating. Some examples of these responses are: "To start dating," "To go out and be considered boyfriend and girlfriend," "To go on a date or get into a relationship."

A small percentage of the students indicated that hooking up meant that two individuals were more than friends. Some examples of such responses are: "To grow closer than friends to the point where we prefer each other's company more than anyone else," "Period after the first date that allows you to know if you are dating," "To fool around with them and become more than friends." Table 4 presents the major classifications of students' definitions for this term.
Table 4

*Students' Definitions for “Hanging Out” and “Hooking Up”*

<table>
<thead>
<tr>
<th>Definitions</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanging Out</td>
<td></td>
</tr>
<tr>
<td>Casual Time/Getting to Know Each Other (movie, talk, coffee)</td>
<td>89</td>
</tr>
<tr>
<td>“Like a Date But Without the Label”</td>
<td>9</td>
</tr>
<tr>
<td>Casual Time with a Group</td>
<td>7</td>
</tr>
<tr>
<td>Date</td>
<td>2</td>
</tr>
<tr>
<td>No Physical Contact Stipulated</td>
<td>2</td>
</tr>
<tr>
<td>Friends or “Friends Mostly”</td>
<td>2</td>
</tr>
<tr>
<td>Hooking Up</td>
<td></td>
</tr>
<tr>
<td>Continuum of Physical Contact from Kissing to Sex</td>
<td>53</td>
</tr>
<tr>
<td>Specified “Meaningless Sex” or “Casual Sex”</td>
<td>5</td>
</tr>
<tr>
<td>“Friends With Benefits”</td>
<td>1</td>
</tr>
<tr>
<td>To Date or to Have an Exclusive Relationship</td>
<td>40</td>
</tr>
<tr>
<td>“More Than Friends” (“Anything Normal Friends Don’t Do”)</td>
<td>8</td>
</tr>
<tr>
<td>Getting Together But Not Yet Boyfriend/Girlfriend</td>
<td>4</td>
</tr>
<tr>
<td>Spend Time Together (For Coffee, Lunch)</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note.* The students’ replies were not forced into only one group; some replies met criteria for more than one group.
Research Objective 5: Acceptance of Date Invitations

The proportion of acceptances of dating invitations to overall invitations made was calculated for the No Relationship group ($M = .81, SD = .29$). Current students’ date invitations were accepted on average 81% of the time.

Research Objective 6: Dating Invitations and Social Anxiety

It was expected that individuals with SA would ask others out on dates less frequently than did individuals without SA. To test this hypothesis, an independent t-test was conducted comparing the number of dating invitations of participants who scored at or above the cutoff for social anxiety on the SPS (cutoff = 24, $M = 4.30, N = 10$) and the SIAS (cutoff = 34, $M = 5.00, N = 10$) with the number of date invitations of those who scored below the cutoff for the SPS ($M = 5.78, N = 27$) and the SIAS ($M = 6.15, N = 27$) respectively. Levene’s test for Equality of Variances indicated that equal variances could be assumed. The results of the independent sample t-test indicated that there was not a statistically significant difference between the groups with respect to their scores on the SPS [$t(35) = .46, p = .61$] or the SIAS [$t(35) = .35, p = .73$]. Individuals with SA asked others out as frequently as did individuals without SA.

Because social anxiety was conceptualized as comprising a continuum of severity ranging from shyness at one end to avoidant personality disorder on the other, Pearson correlations were also used. Although not significant, a weak trend was revealed linking number of invitations made with scores on the SPS ($r = -.25, p = .14$) and the SIAS ($r = -.21, p = .21$), suggesting individuals with social anxiety asked others out somewhat less often than did those with lower levels of social anxiety. The results are presented in Table 5.
Research Objective 7: Acceptance of Dating Invitations and Social Anxiety

It was expected that the dating invitations of individuals with social anxiety would not be accepted with the same frequency as were the invitations of those lower in social anxiety. An independent t-test comparing the percentage of acceptances of the dating invitations of individuals scoring above \((M = 3.70, N = 10)\) and below \((M = 4.89, N = 27)\) the cutoff on SPS did not reveal significant differences between the groups \([t(35) = .40, p = .70]\). Levene’s Test for Equality of Variances was not significant. An independent t-test comparing the number of acceptances of the dating invitations of individuals scoring above \((M = 4.30, N = 10)\) and below \((M = 5.11, N = 27)\) the cutoff on SIAS also did not reveal significant differences between the groups \([t(35) = .27, p = .79]\).

Pearson correlation between participants’ SPS scores and the proportion of acceptances to invitations was not significant \((r = -.05, p = .81)\). However, there was a trend linking acceptance of invitations with level of social anxiety as measured by the SIAS \((r = -.23, p = .23)\). The results are presented in Table 5.

Table 5

| Correlations Between Dating Invitations, Acceptance, and Social Anxiety |
|-------------------------------------------------|-------|-------|
| Number of date invitations                       | 38    | -.25  |
| Number of date acceptances                       | 37    | -.23  |
| Proportion of acceptances to invitations          | 28    | -.05  |
|                                                 |       | -.23  |
Research Objective 8: Social Anxiety and Attributional Style

It was expected that level of social anxiety would be positively correlated with endorsement of negative attributions. Conversely, social anxiety was expected to negatively correlate with endorsement of positive attributions. Pearson correlations were positive and significant between levels of social anxiety and Composite Negative, Internal Negative, Stable Negative, and Global Negative Attributions. Significant negative correlations were found between levels of social anxiety and Composite Positive, Composite Positive Minus Composite Negative, Internal Positive, Stable Positive, and Global Positive Attributions. Thus, higher levels of social anxiety were associated with endorsement of personal responsibility for negative outcomes, beliefs that these negative outcomes would always occur, and expectations of negative outcomes in other areas of life. They tended not to take responsibility for positive outcomes or to expect future positive outcomes. The results are presented in Table 6.

A relatively stronger correlation was found between social anxiety as measured by the SPS and SIAS and the Composite Positive Minus Composite Negative index score, which is intended to assess the individual’s overall tendency toward positive or negative attributions. Other correlations that were significant at the .01 level were found between social anxiety (SPS) and the Composite Negative and Global Negative scores and between social interaction anxiety (SIAS) and the Composite Positive and Internal Positive scores. Thus, those who take personal responsibility for positive events are relatively less likely to experience social interaction anxiety. Similarly, those who believe that negative outcomes are always going to occur are relatively more likely to experience social anxiety.
The lack of correlation between the Composite Negative and Composite Positive scores suggests that no association exists between the utilization of positive or negative attributions. Thus, individuals could tend to use one or both or neither. No significant correlations were found between the individual dimension scores (i.e., Global Positive, Stable Positive, and so forth) and the opposite composite score (i.e., Composite Negative) with the exception of the negative correlation found between the Composite Negative and Internal Positive scores. Thus, individuals who tended toward the use of negative attributions overall were less likely to endorse personal responsibility for positive events.
Table 6

*Correlations between Social Anxiety and Attributional Styles*

<table>
<thead>
<tr>
<th></th>
<th>CoNeg&lt;sup&gt;a&lt;/sup&gt;</th>
<th>CoPos&lt;sup&gt;b&lt;/sup&gt;</th>
<th>CPCN&lt;sup&gt;c&lt;/sup&gt;</th>
<th>IntPos&lt;sup&gt;d&lt;/sup&gt;</th>
<th>StaPos&lt;sup&gt;e&lt;/sup&gt;</th>
<th>GloPos&lt;sup&gt;f&lt;/sup&gt;</th>
<th>IntNeg&lt;sup&gt;g&lt;/sup&gt;</th>
<th>StaNeg&lt;sup&gt;h&lt;/sup&gt;</th>
<th>GloNeg&lt;sup&gt;i&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPS&lt;sup&gt;j&lt;/sup&gt;</td>
<td>.34**</td>
<td>-.24*</td>
<td>-.41**</td>
<td>-.23*</td>
<td>-.19</td>
<td>-.16</td>
<td>.22*</td>
<td>.23*</td>
<td>.30**</td>
</tr>
<tr>
<td>SIAS&lt;sup&gt;k&lt;/sup&gt;</td>
<td>.27*</td>
<td>-.34**</td>
<td>-.41**</td>
<td>-.34**</td>
<td>-.21*</td>
<td>-.25*</td>
<td>.15</td>
<td>.26*</td>
<td>.20</td>
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<tr>
<td>CoNeg</td>
<td>-.09</td>
<td>-.73**</td>
<td>-.23*</td>
<td>-.01</td>
<td>-.03</td>
<td>.71**</td>
<td>.72**</td>
<td>.76**</td>
<td></td>
</tr>
<tr>
<td>CoPos</td>
<td>.75**</td>
<td>.78**</td>
<td>.74**</td>
<td>.81**</td>
<td>-.15</td>
<td>-.12</td>
<td>-.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPCN</td>
<td>.69**</td>
<td>.53**</td>
<td>.55**</td>
<td>-.58**</td>
<td>-.56**</td>
<td>-.48**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IntPos</td>
<td>.43**</td>
<td>.43**</td>
<td>-.16</td>
<td>-.23*</td>
<td>-.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>StaPos</td>
<td>.37**</td>
<td>-.07</td>
<td>-.14</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GloPos</td>
<td>-.11</td>
<td>-.14</td>
<td>-.25*</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IntNeg</td>
<td>.34*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>StaNeg</td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>* p <.05 (2-tailed)  ** p <.01 (2-tailed)</sup>

<sup>aComposite Negative Attributions. bComposite Positive Attributions. cComposite Positive Minus Negative Attributions. dInternal Positive Attributions. eStable Positive Attributions. fGlobal Positive Attributions. gInternal Negative Attributions. hStable Negative Attributions. iGlobal Negative Attributions. jSocial Phobia Scale. kSocial Interaction Anxiety Scale.

*Research Objective 9: Dating Invitations and Attributional Style*

It was expected that greater endorsement of negative attributions would be associated with lower frequency of dating invitations. Pearson correlation was used to analyze the data and no significant correlations were found. Results are presented in Table 7.
Research Objective 10: Acceptance of Dating Invitations and Attributional Style

It was expected that individuals who endorsed negative attributions would obtain a lower percentage of acceptance of their dating invitations. Conversely, individuals who endorsed positive attributions were expected to garner relatively more acceptances of their date invitations. Pearson’s product-moment correlation was used to analyze the data. The analysis revealed significant positive correlations between Composite Positive and Global Positive Attributions and percentage of invitation acceptance. A negative correlation was also found between Internal Negative Attributions and percentage of invitation acceptance. Thus, individuals’ tendencies to blame themselves for negative outcomes were associated with lower percentages of acceptance. Individuals who endorsed more positive expectations overall received relatively higher rates of acceptance of their invitations. The strongest correlation, accounting for approximately 30% of the variance, was found between Global Positive attributions and rate of date acceptance. Thus, the date invitations of those who generally expect positive outcomes are accepted relatively more frequently than are others’ invitations.

In general, findings were consistent with hypothesized directions. However, it is notable that Global Negative attributions were not correlated with percentage of date acceptance, nor was overall level of social anxiety (SPS). The presence of greater social anxiety and expectation of experiencing generally negative outcomes did not appear to impact one’s ability to get a date. There was, however, a trend toward lower rate of date invitations for those with higher levels of social interaction anxiety. The results are presented in Table 7.
Table 7

*Correlations between Dating Invitations, Acceptance, Social Anxiety, and Attributions*

<table>
<thead>
<tr>
<th></th>
<th>Number Asked</th>
<th>Number Accepted</th>
<th>Percentage of Acceptances/Invitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPS</td>
<td>-.25</td>
<td>-.23</td>
<td>-.05</td>
</tr>
<tr>
<td>SIAS</td>
<td>-.21</td>
<td>-.21</td>
<td>-.23</td>
</tr>
<tr>
<td>CoNeg</td>
<td>.08</td>
<td>.07</td>
<td>-.29</td>
</tr>
<tr>
<td>CoPos</td>
<td>.28</td>
<td>.24</td>
<td>.45*</td>
</tr>
<tr>
<td>CPCN</td>
<td>.10</td>
<td>.11</td>
<td>.14</td>
</tr>
<tr>
<td>IntNeg</td>
<td>.01</td>
<td>-.00</td>
<td>-.48**</td>
</tr>
<tr>
<td>StaNeg</td>
<td>.07</td>
<td>.09</td>
<td>-.10</td>
</tr>
<tr>
<td>GloNeg</td>
<td>-.22</td>
<td>-.21</td>
<td>.00</td>
</tr>
<tr>
<td>IntPos</td>
<td>.06</td>
<td>.09</td>
<td>.23</td>
</tr>
<tr>
<td>StaPos</td>
<td>.26</td>
<td>.25</td>
<td>.29</td>
</tr>
<tr>
<td>GloPos</td>
<td>.22</td>
<td>.23</td>
<td>.56**</td>
</tr>
</tbody>
</table>

*p<.05 (2-tailed)  **p<.01 (2-tailed)
DISCUSSION

Social anxiety has been found to have negative consequences in the lives of those who suffer its effects (Wittchen et al., 2000). Although results have been mixed, several researchers have found that individuals with social anxiety were less socially skilled and slower to develop platonic and romantic relationships (Asendorpf & Wilpers, 1998; Baker & Edelmann, 2002; Curran, 1977; Turner et al., 1994; Walters & Hope, 1998). Individuals with social anxiety also perceived the relationships they did have as less fulfilling (La Greca & Lopez, 1998). Theoreticians have speculated that a tendency to avoid social interactions may result in less frequent “practice” of social skills (Dodge et al., 1987; Galassi & Galassi, 1979). Social avoidance may also allow fewer opportunities to disprove negative expectations and interpretations of social events (Woody, 1996). This picture is complicated by the fact that a negative attributional style may color or skew a socially anxious individual’s experience of the social interactions he or she does have (Amin et al., 1998; Lake & Arkin, 1985).

The present study aimed to explore a segment of socially anxious individuals’ experience. It investigated the confluence between attributional style, social anxiety, and the frequency of initiation and acceptance of romantic invitations. To do so, 102 undergraduate students at a private university in the Pacific northwest were given the Social Phobia Scale (SPS), the Social Interaction Anxiety Scale (SIAS), the Attributional Style Questionnaire (ASQ), and a short questionnaire intended to determine frequency of
initiating invitations and obtaining acceptances of date invitations. Students' definitions of hanging out and hooking up were also requested. The participant sample was variously split into two groups, depending upon the hypothesis tested. For hypotheses involving dating statistics, only those individuals not in relationships were used in the correlational and independent t-test analyses. For some hypotheses involving attributional style and social anxiety, the group was split into those who scored above or below the cutoff scores on the SPS and SIAS, and independent t-tests were used to analyze the data. For other hypotheses exploring these variables, correlational analysis used the sample as a whole. Preliminary analysis established that no differences existed between those in and not in relationships in terms of level of social anxiety.

This study investigated the following research objectives: 1) Are current college undergraduate students dating at lower levels than in 1977, the last known year for which research has provided data? 2) What are current students' preferred methods of dating? 3) What are students' definitions of hanging out? 4) What are students' definitions of hooking up? 5) How often are students' dating invitations accepted? 6) Do individuals with social anxiety invite others on dates less than do non socially anxious individuals? 7) Are the invitations of socially anxious individuals accepted less often than are those without social anxiety? 8) Does social anxiety increase with greater use of negative attributions (e.g., positive and negative internal, stable, and global attributions)? 9) Is there a negative correlation between the use of negative attributions and frequency of making dating invitations? 10) Is there a negative correlation between the use of negative attributions and invitation acceptance?
Findings and Implications

Research Objective 1. In support of the first hypothesis, a one-sample t-test found a statistically significant difference between the mean dating frequencies of 1977 and 2006 and established that students were indeed dating at lower frequencies than in earlier periods. Glenn and Marquardt (2001) reported that approximately 50% of the female college students they interviewed reported six or more dates in the previous four years; 33% were asked out on fewer than two. Thus, although this was difficult to determine due to the lack of specific data, the dating frequency found in the present study may represent slightly higher rates of dating than did Glenn and Marquardt's study. However, it seems clear that both signify a substantial reduction in students' formal dating behavior.

One possible reason for the reduction in dating between the years of 1977 and 2006 may be found in contemporary students' greater use of hanging out as a means of getting to know those in whom they are interested romantically (see Research Objective 2). Somewhat more puzzling is the apparent difference in dating frequency between this study and the Glenn and Marquardt (2001) study. However, the present study canvassed both male and female students of unknown sexual orientation at a small private Northwest university. Glenn and Marquardt conducted a national survey that focused exclusively on female heterosexual students in large colleges and universities. Thus, the respective samples may represent quite different populations.

In addition, Glenn and Marquardt (2001) defined a "date" as "when the guy asked you, picked you up and paid for the date" (p. 81). In the present study, the definition of a date was left up to individual students to define. Students could therefore have considered
a date to be initiated by either a female or a male, paid for by one individual or both, and could have constituted a same-sex interaction. In addition, anecdotal reports indicate that it is not unusual for individuals to agree to meet somewhere for a date, rather than one party picking up the other. Women in particular may choose to not disclose their residence until they know the other individual better. Thus, possible variations in the conceptualization of a date may have resulted in the disparity in dating frequency levels found between this study and the Glenn and Marquardt study.

Research Objective 2. The results of the second research objective suggested that the current importance of formal dating as a means of initiating relationships appears to have been at least partially supplanted by methods that may be less formal and threatening in terms of requiring emotional risk. Fifty-six percent of the students in the current study endorsed preferring to hang out alone or in groups with another student in order to get to know the other better before taking the next step. This was compared with 19% who favored asking directly for a date. Though they did not report statistics, this result was consistent with the study by Glenn and Marquardt (2001), which reported that:

... dating is often synonymous with ‘hanging out,’ in which women and men spend loosely organized, undefined time together, without making their interest in one another explicit .... Young women and men more often ‘hang out’ rather than go on planned dates, and if they live in a coed dorm, their dorm is where they most often meet members of the opposite sex. They report that because they can hang out or hook up with a guy over a period of time and still not know if they are a couple, women often
initiate 'the talk' in which they ask, ‘Are we committed or not?’ When she asks, he decides. (p. 5)

Research Objective 3. Consistent with the Glenn and Marquardt (2001) results reported above, hanging out was defined by most students in the present study as involving casual time spent together with the primary goal of getting to know the other and seeing if something more intimate would develop. Minor differences were found, however, between the present study and the Glenn and Marquardt study. For example, a minority of the present sample (approximately 11%) endorsed the belief that to hang out meant more than simply casual time together. They reported that it meant to be more than friends or even to date. The ambiguity surrounding this term might enable students to flexibly interpret their time together as comprising either “friend time” or “date time,” depending on how things proceed.

One main advantage of such a system might be that students can get to know each other better and see if they are compatible and mutually attracted to each other before deciding to move on to a more explicit and exclusive relationship. Such a practice might be ideal for reducing the risk of hurt feelings or of having one’s explicit intentions rejected. It may also allow shy or socially anxious individuals time to “warm up” to the other before having to take risks. The detraction of such a situation is that the inherent ambiguity lends itself to misinterpretation or confusion on the part of one or both individuals, as attested by students in the Glenn and Marquardt (2001) survey in the quote above.

Research Objective 4. Whereas students’ definitions of hanging out varied somewhat, their definitions of hooking up were even more widely divergent. Thus,
consonant with Glenn and Marquardt (2001), the majority (54%) of students in this study defined hooking up as entailing some kind of physical contact, ranging from kissing to sex. However, unlike the students in the Glenn and Marquardt study, 46% of the present students did not mention physical contact; 40% mentioned that it meant that two people were either dating or in a exclusive relationship.

Many students recognized that the term could vary significantly according to the person using the term or, alternatively, according to context. As several students noted, when they refer to hooking up with someone, they may mean that they met another for a social engagement, that they kissed another, that they had sex with another, or that they were now in a recognized relationship with another. Physical contact involved in hooking up may be considered meaningless, or it may be highly meaningful. The ambiguity within the term may again provide some protection from the possibility of feeling rejected or ashamed if the other does not share the same feelings. On the other hand, as suggested by Glenn and Marquardt (2001), female students may prefer the vagueness of the term because they “are still wary of getting a bad reputation” (p. 5). Students may also be ambivalent about, or frankly not want, an established relationship.

**Research Objective 5.** One of the main goals of the present study was to determine the average rate of acceptance of dating invitations. Analysis of the number of times students’ invitations were accepted resulted in a mean rate of 0.81. A search of the literature failed to provide any other research providing such data, so the results could not be evaluated by comparison with other studies. Although the present result requires further corroboration, it is hoped that knowing that four out of five romantic invitations are accepted will provide some assurance to those contemplating asking another for a
date. Alternatively, knowing that approximately one out of five date invitations is turned down may help to place in perspective the times in which one's own invitation is not accepted.

This statistic must be evaluated in light of the findings that a majority of current students prefer to initiate relationships by hanging out with prospective dating partners. Because this method has the potential of reducing the chance of being rejected when proposing a date, use of another method may result in a different rate of acceptance.

**Research Objective 6.** No support was found for the hypothesis that socially anxious students would be less likely than nonanxious students to ask others out on dates. Analysis via independent t-test did not find a significant difference in this regard, though Pearson correlation did reveal a nonsignificant trend linking lower rates of invitation for individuals with social anxiety. Because the number of participants used in this analysis was low (37), it is possible that a greater number of participants would have increased statistical power and yielded a statistically significant result. On the other hand, even with greater numbers, it is probable that the amount of variance accounted for by the correlation would be low (approximately 4%), suggesting that social anxiety had a minor influence on students’ current dating behavior.

Although a search of the literature failed to find other studies investigating this hypothesis, this result was somewhat surprising in light of the research illustrating socially anxious individuals' propensities to avoid interactions with others. Of particular relevance is Prisbell’s (1997) study demonstrating that socially anxious individuals disliked initiating conversations with others and expressed heightened apprehension and caution about the prospect of dating. Prisbell’s research would thus seem to predict a
different result than that found in the current study. As noted above, it may be that the current student environment is more conducive to making social invitations than were past environments, but this possibility needs to be investigated by further study.

On the other hand, gender may have been a possible confounding factor in the results, as the majority of the present student sample was female, and 15% of the females reported that they believed it was the prospective dating partner’s job to ask them out, rather than the reverse. They thus reported that they never asked others out on dates. This could conceivably have resulted in lower date invitation frequencies in this sample than might have been the case in a sample composed more equally of men and women. It is thus possible that, without the influence of gender role constraints, even fewer significant results would be found. Thus, the good news for students suffering from social anxiety would seem to be that they are able to overcome their apprehension and ask others out about as often as do non anxious students, at least in the unique world of college life.

Research Objective 7. In a similar vein, the results of this study did not provide support for the hypothesis that individuals with social anxiety would be less likely than nonanxious individuals to garner acceptance to their dating invitations. Analysis by independent t-test failed to reveal a significant difference between the groups. However, Pearson correlation again revealed a weak trend linking higher levels of social anxiety with lower rates of acceptance. This finding, then, does not support past research that found that individuals with higher levels of social anxiety dated significantly less often than did nonanxious individuals (Himadi et al., 1980) and fell in love half as often (Asendorpf & Wilpers, 1998). Nor is it consistent with the results of Wittchen et al.
(2000), who reported that socially anxious individuals endorsed problems in both dating and marriage.

This result is also supported by the fact that preliminary analyses revealed no differences in level of social anxiety between students in and not in relationships. In fact, the mean scores on both the SPS and SIAS were slightly higher for those in relationships when compared to those not in relationships. Thus, it appeared that social anxiety was not a hindrance to forming relationships, at least in this college sample.

In addition, it is important to note that neither Himadi et al. (1980) nor Wittchen et al. (2000) used a college population for their studies. As noted above, rather than going on formal dates, the majority of current students endorsed hanging out as the first step toward beginning an intimate relationship, which may have enabled them to “test the waters” before making their interest explicit. This practice may enable socially anxious students to more easily initiate relationships with others, and thus may account somewhat for the lack of significant difference between the dating frequency of socially anxious and non anxious students. In addition, the Wittchen et al. and Asendorpf and Wilpers (1998) studies took place in Germany. It is possible that unknown factors in the respective populations may also account for differences in the results.

The current study is consistent with the results of Maroldo (1982), who reported that shyness did not impact students’ abilities to date, but did impact longer-term relationships like friendship and love. This may be the case in the present study as well. However, the finding that there were no differences in terms of level of social anxiety between those in and not in relationships seemed to argue for a different conclusion, as it
appeared that socially anxious students were as likely to be in significant relationships with others as were nonanxious students.

This result then, signified more good news for socially anxious individuals, for it appears that, at least in the distinctive world of contemporary college students, social anxiety is less of an impediment to forming significant romantic relationships than it was formerly. One possible explanation may be that students in the college environment are less able to avoid others. Being forced to interact with others on a daily basis may have a salutary effect upon their social relationships.

Research Objective 8. Support was found for the hypothesis that level of social anxiety would increase with greater endorsement of negative attributions. Conversely, positive attributions were negatively associated with social anxiety. This result is consistent with several studies linking attributional style and social anxiety (e.g., Coles et al., 2001; Johnson et al., 1995; Teglasi & Fagin, 1984.) Specifically, consistent with previous research, students scoring higher in social anxiety tended to attribute negative situations to themselves, to believe that these negative outcomes would always occur, and to expect negative outcomes in other areas of their lives as well.

In contrast, they tended not to view positive outcomes as being due to themselves or to expect future positive outcomes either in similar or different situations. The strongest correlation in this analysis, accounting for approximately 16% of the variance, was found between social anxiety and the Composite Positive Minus Composite Negative index (CPCN), which is intended to assess the overall direction of an individual's attributional style. Thus, if, on balance, an individual tends to make more negative
attributions (negative stable, global, and internal) than positive attributions, he or she is at increased risk of experiencing social anxiety.

The lack of correlation found in this analysis between the Composite Negative and Composite Positive scores suggests that little association exists between the utilization of positive or negative attributions. This implies that individuals do not habitually use only one of these general attributional styles; on the contrary, they may use one or the other, depending upon the situation. This possibility is consistent with the findings of Taylor and Wald (2003) and Amin et al. (1998), who found that individuals with social anxiety endorsed negative attributions for social situations, but not for nonsocial situations. It also supports research by Coles et al. (2001), who found that nonanxious individuals also tended to shift to a more “self-serving bias” (p. 662) when experiencing negative situations and viewed the cause as external and unstable. They were also less apt to generalize the aversive circumstances to other situations.

The only significant correlations found between the individual dimension scores of one polarity and the dimension scores of the opposite polarity (i.e., Global Positive or Stable Positive with Internal Negative or Global Negative) were the negative correlations between the Composite Negative and Internal Positive scores and the Global Positive and Global Negative scores. The Composite Negative and Internal Positive correlation suggests that individuals who tended to expect negative events in general and to take responsibility for them were less likely to endorse personal control over positive events. This result is consistent with research by Taylor and Wald (2003) and Teglasi and Fagin (1984), who found that socially anxious individuals had greater expectations for negative social events and lesser expectations for positive social events. Teglasi and Fagin also
reported that socially anxious individuals in their study viewed negative social events as being due to themselves rather than others.

A search of the literature did not reveal other studies reporting a correlation between Global Positive and Global Negative scores, though this result may make intuitive sense. The negative correlation found in this study signifies that individuals who expect positive events overall are less apt to expect negative events. And of course, the reverse is true as well: Individuals who generally expect negative events are unlikely to expect positive events.

**Research Objective 9.** The hypothesis that greater use of negative attributions would be associated with lower frequency of dating invitations was not supported by the present findings. The analysis did reveal, however, a trend toward an association between greater numbers of invitations and the Composite Positive score. Similarly, a trend was also found tying greater numbers of invitations with Global Positive and Stable Positive scores, but not, surprisingly, with Internal Positive scores. Thus, individuals who expected positive events in general were somewhat more likely to make social invitations, but this was not necessarily true of those who tended to endorse a greater sense of internal controllability over positive events. Although a search of the literature failed to find other studies investigating this question, this result was somewhat puzzling. It would seem to make intuitive sense that people with greater self-efficacy would possess greater social confidence and thus issue more social invitations.

The present analysis also revealed a trend linking Global Negative attributions with fewer invitations made. Such a finding would suggest a tendency for individuals who generally expect negative outcomes across situations to hesitate before asking others
out on dates. A search of the literature failed to reveal any study investigating this question, but again, the result makes intuitive sense. In spite of the fact that the results were not significant, the trend found in the data suggests that addressing one’s pattern of thought and, if desired, cultivating a more positive outlook may have a beneficial effect upon one’s social life.

*Research Objective 10.* In support of the final hypothesis, significant positive correlations were found between percentage of acceptance of dating invitations and Composite Positive and Global Positive attributions. These factors accounted for 20% and 31% of the variance, respectively. Thus, individuals who expected positive outcomes in general garnered significantly more acceptances to their invitations than did individuals who did not endorse such positive attributions. Although the correlations between Internal Positive and Stable Positive and date acceptance were not significant, the data displayed a trend in this direction. These results suggest that efforts to increase the use of positive attributions overall would have a beneficial effect upon the social life of socially anxious individuals.

In addition, a significant negative correlation, accounting for 23% of the variance, was found between Internal Negative attributions and lower likelihood of invitation acceptance. This result was consistent with past research that demonstrated that individuals with social anxiety were apt to view themselves as responsible for negative social outcomes (Amin et al., 1998; Johnson et al., 1995; Teglasi & Pagin, 1984) and may seek to avoid future interactions as a result (Leary, 1986).

These findings demonstrate the impact of self-deprecating cognitions upon one’s social life and are consistent with literature linking self-doubt, poorer social skills, and a
consequent dearth of social relationships (Arkin et al., 1986). Fortunately for anxious individuals, such cognitions are amenable to change through thought restructuring. In addition, adding social skills training to the therapeutic intervention may help reverse this outcome.

A trend toward significance between the Composite Negative factor and lower frequency in date acceptances was also found and is consistent with past research (e.g., Dodge et al., 1987; Himadi et al., 1980). However, this finding may result in part from the large significant association between Internal Negative attributions and date acceptance. In contrast, Stable Negative and Global Negative attributions were not correlated with acceptance of dating invitations, suggesting that expecting negative events in general is less important in terms of contributing to social anxiety than is attributing responsibility for negative events to oneself. This result is significant from a clinical viewpoint, as it illustrates the primary importance of addressing in therapy the negative self-views of socially anxious individuals, and in particular helping them to recognize that the responsibility for social outcomes does not lie exclusively with themselves. In addition, this result suggests that working with the social skills of socially anxious individuals – helping them to feel more comfortable with small talk and so forth – may have a beneficial effect upon their sense of social efficacy and, by reflection, their ability to initiate romantic relationships.

The lack of significant correlations between positive internal and stable attributions and date invitation acceptance was somewhat puzzling. There may be a number of explanations for the fact that individuals who endorse greater internal controllability over positive outcomes did not report obtaining significantly more
acceptances than others. One explanation may be the possibility that the credit taken for these positive outcomes may not be fully justified, and as a result, individuals fail to learn from past experiences.

Summary

In sum, the results of this study are consistent with previous research findings that demonstrated significant associations between social anxiety and negative attributions. Addressing such attributions may help individuals gain some measure of control over symptoms of anxiety. The welcome news in this study, however, was that students with social anxiety were about as likely to ask others out on dates and to garner acceptance for their invitations. This outcome may apply particularly to the contemporary college environment, in which most students endorsed preferring to hang out in informal one-on-one or group situations than asking each other on formal dates. Students who tended to use positive attributions were more likely to have their invitations accepted than others. In contrast, those who were apt to take personal responsibility for negative situations were less likely to have their invitations accepted.

As was noted above, the present findings are consistent with the weight of research that demonstrated the importance of attending to one’s thoughts in order to improve mood and outcome. Fortunately, cognitive therapy has demonstrated good results in enabling individuals to change, through dedicated practice, the tenor of their thoughts (Barlow, 2002; Beck, 1995). Cognitive theorists (e.g., Barlow; Beck) posit that attending to thoughts may enable individuals to engage others more in social circumstances, and changing patterns of avoidance may be helpful in increasing a sense of confidence and fostering social skills.
Limitations

One limitation of this study concerns the small number of students in the participant sample who were not in a relationship and whose responses could be used to compute the dating statistics. This small number likely reduced the power of the analyses to find relationships that may have existed. Another concern relates to a possible confound with social desirability. Although students were assured their responses were confidential, social desirability is a well-recognized phenomenon that can distort the results of self-report measures (e.g., Mitchell, 1973; Sieber, 1979). For example, students may have inflated the number of acceptances to their invitations or the number of times they dated during the past year.

In addition, the study took place at a small private Northwest university and included primarily Caucasian and Asian students. The lack of ethnic diversity in the participant sample overall as well as the relatively small proportion of male participants may have affected the results. In addition, the university from which the sample was taken contains a disproportionately large number (typically 20% of the student body) of students from the Pacific Islands, primarily Hawaii. These aspects of the student sample also likely limit somewhat the ability of the results to be generalized to other populations.

The fact that the present sample of students scored considerably higher on the SPS than previous community samples was surprising (Mattick & Clarke, 1998). The students' scores on the SIAS were also higher than in a previous community sample (Mattick & Clarke). This raises the concern that the results might be an artifact of this particular sample, thus limiting their ability to be generalized to other student populations. However, this pattern follows that found by Todd, Deane, and McKenna
(1997) who demonstrated that nonpatient undergraduates scored higher on the SCL-90-R than did adults. Todd et al. noted, "nonpatient college students were considerably more symptomatic than were the unscreened adult normative samples" (p. 298).

In order to compute dating frequency, the Invitation Acceptance figure was used. It was originally expected that more equal numbers of men and women would be surveyed for this study, and this figure would encompass both those who more traditionally propose dates as well as those who are the traditional recipients of such invitations. However, because the participant sample was predominantly female, this figure may not accurately reflect the true frequency of dates and instead may be an underestimate. In this regard, it is notable that 8% of the sample (all females) reported that they never ask others out on dates.

The current study found intriguing correlations between individual attributional dimensions (i.e., global positive, stable negative, and so forth) and social anxiety, individuals' ability to issue dating invitations, and individuals' ability to gain acceptances to them. It is, however, important to note that the authors of the ASQ (Peterson et al., 1982) reported that the composite scores of this instrument (composite positive, composite negative, and CPCN) are likely more reliable than the individual dimension scores. Thus, interpretations based upon individual dimension scores must be viewed with caution and corroborated by future research.

Finally, as can be seen in the methods section, a number of statistical tests were performed in this study. The large number of research objectives necessitated this large number of statistical analyses, which may, however, increase the possibility of Type I
error. Thus, the results should be interpreted with some caution, at least until further research has corroborated these results.

**Suggestions for Future Research**

As noted above, the small number of responses that could be used in analyzing the research objectives involving dating statistics likely reduced statistical power to find relationships that may have existed. Thus, further research with a larger sample population is needed to corroborate and extend the findings. Use of a more diverse sample that includes all major geographical regions of the U. S. would also be beneficial. Additionally, in order to gauge the impact of individuals’ tendencies to respond consistent to their needs for social approval, it would be helpful to combine use of the dating frequency measure with a measure of social desirability, such as the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960).

Future analysis comparing male and female definitions of hanging out and hooking up and pairing this with a questionnaire assessing gender role orientation may also provide interesting data. It may be helpful to know, for example, whether students who tend to think of hooking up as being involved in an exclusive relationship also endorse more or less traditional gender role orientations.

As no previous studies were found that explored attributions and dating frequency, no comparisons could be made with other research to verify these results. In particular, it would likely be helpful to investigate more specifically the associations between outcomes and attributions for social situations, given the fact that such situations are the particular concern of individuals with social anxiety (Amin et al., 1998; Taylor & Wald, 2003). It would also be useful to determine more closely what particular positive
attributions are helpful to persons who are anticipating making an invitation for a date. For example, would it be more advantageous for an individual to focus on past positive social experiences, to remind oneself of one's recent advances in conversation skills, or conversely, to tell oneself that a "no" response by the object of one's interest would not be such an earthshaking matter?

Alternatively, determining the kinds of thoughts or attributions that help individuals cope with having their invitations rejected would also be beneficial. For example, nonsocially anxious individuals tend to externalize responsibility for negative social outcomes. Is this tendency protective from a self-esteem standpoint? And how does this tendency affect nonanxious individuals' ability to learn from their mistakes?

Determining these kinds of specific cognitions and effects could be useful clinically in enabling therapists and clients to focus on specific constructive ways in which individuals with and without social anxiety can make invitations and cope with possible rejection of those invitations.

The clinical experience of the author suggests that cognitive restructuring is helpful in enabling individuals to gather the courage to ask others out on dates and to cope with rejection. It would be useful, however, to determine before-and-after rates of invitations made and accepted following cognitive restructuring to address negative modes of processing.

Additionally, investigating methods of initiating romantic engagements used outside of the college environment would be very helpful, as many individuals must make such engagements elsewhere. It would be advantageous to determine whether populations other than college students also favor a more informal approach to initiating
relationships and what such approaches might entail. For instance, how do high school students, so-called "blue collar" working individuals, or young professionals issue date invitations or initiate relationships? It might also be helpful to determine if there are differences in methods of making invitations and whether some are more effective than others. It might also be advantageous to discover if there are differences between the patterns of attributions of high school students and those in college and beyond. As the social environment in high school is so fraught with personal importance as well as uncertainty, obtaining answers to such questions could be of great benefit to adolescents. Further, parents of high school students may profit by knowing that their child’s use of the term hanging out, for example, may actually involve something like a date.

Because the Attributional Style Questionnaire (Peterson et al., 1982) has been investigated by several studies and its validity and reliability are well established, the decision was made to use this measure rather than the Attributional Style Questionnaire for Social Events (ASQSE; Taylor et al., 1997). The ASQSE has been used less than the ASQ in research, and its reliability and validity were less established. However, because it focuses exclusively upon social events, the particular concern of individuals with social anxiety, the use of this instrument in future studies may be of benefit.

It is possible that the present study’s use of the ASQ (Peterson et al., 1982), which includes both social and nonsocial scenarios, may have introduced a confounding factor. Past research has shown that individuals with social anxiety use internal attributions for negative social events but not for positive social events (Taylor & Wald, 2003). They also use internal attributions for negative social events that they themselves experience, but
not for negative events others experience (Teglasi & Fagin, 1984). Thus, the analyses as conducted may not have captured the distinctions between these two situations.

This study also found that individuals who expected positive events in general were somewhat more likely to make social invitations, but this was not necessarily true of those who tended to endorse a greater sense of internal controllability over positive events. As noted above, this finding was surprising. Further research with greater numbers of participants is needed to both corroborate this finding and to find explanations for it.

The present study's failure to find significant correlations between positive internal and stable attributions and date invitation acceptance was also somewhat puzzling. Since no studies were found that investigated similar questions, this result could not be evaluated. Further research is needed to corroborate this result and to explicate the reasons for global positive attributions being more significantly associated with invitation acceptance than were other positive attributions.

This study confirms previous research linking social anxiety and attributional style. Cognitive theorists and clinicians have found that an effective way to change mood is to change habitual behaviors and modes of thought (Barlow, 2002). The implication of this study is that changing one's attributional style may not only impact one's mood, but also one's ability to date and form romantic relationships. Future research is needed, however, to investigate and confirm this possibility.

In addition, the college lifestyle compels individuals to associate with others. This is particularly true for those living in dorms, sororities, fraternities, or other college group-living situations. It may be very helpful to explore this impact upon the behavior of
those with social anxiety. For example, does being forced to closely associate with others enable college students to more easily form relationships? What factors are responsible for the beneficial effect of these situations: the habituation response that is believed to follow exposure, the greater contact time that allows shy or anxious individuals more time to "warm up," or the ability to practice and thus increase social skills?

Finally, this study focused on the initiation of romantic relationships, which is a very important and anxiety-provoking part of young people's experience. However, the initiation and creation of platonic social relationships is also very important, as shy and socially anxious individuals also endorse experiencing less social support than they would like (Anderson & Harvey, 1988; Wittchen et al., 2000). Investigating attributions and behaviors that are helpful in creating platonic relationships would also help guide clinical interventions to enable socially anxious individuals to obtain the social support they desire.
REFERENCES


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APPENDIX A

Statement of Informed Consent

Title: Social Anxiety and the Initiation of Social Invitations in a College Population

Investigators: Cynthia Chyrelle Martin, MS (503-638-7734; mart5470@pacificu.edu) and Paula Truax, Ph.D (503-352-2627; truaxpe@pacificu.edu).

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You are invited to participate in a research study. This study will look at the relationships between social anxiety, social behaviors, and self-talk. This information may help us learn more about how college students can be successful in their social and academic experiences. Please read this form and ask any questions you may have before agreeing to take part in this study.

What You Will Be Asked to Do

Between March 1, 2005 and March 1, 2006, we are conducting a study at Pacific University. We are asking graduate and undergraduate students who are fluent in English to participate. Persons who are not fluent in English and those who do not voluntarily agree to participation will be excluded from the study. If you decide to take part, you will participate in about 30-40 minutes of completing questionnaires. Completion of questionnaires will take place in a group setting in a Pacific University room. These questionnaires will assess social anxiety, social behaviors, and internal self-talk. You are
asked to fully complete the questionnaires.

Risks and What Will Be Done to Reduce Risks

There are no significant risks to this study. Minor risks include possible distress, fatigue, or frustration while completing the questionnaires. To address these risks, you are free to take breaks from the testing or withdraw from the testing at any time. If you feel very distressed, you will be referred to a counselor at Pacific University's Student Health Clinic. You are not a patient, agent, or employee of Pacific University, and this study is not a substitute for regular medical care. As a voluntary participant in this study, you will be responsible for any medical care costs that result from your participation.

In addition, some students will participate in the study during regular class periods or time that extends beyond the regular class periods, and thus, there is a minor risk that study participation may detract from a small portion of students' educational experiences and/or extend the length of stay beyond the normal class period. To address these risks, professors will be contacted in advance to prearrange a time when students may be able to participate in the study while not detracting from necessary class tasks. Please remember that participation is entirely voluntary and that you may withdraw from the study at any time without penalty.

Also, students who participate in the study outside of regular class periods may incur additional costs (i.e., loss of wages or transportation costs). To reduce these risks, testing periods will be scheduled during convenient times and in Pacific University rooms.

Another possible risk is that someone who is not supposed to see personal information will see it. To address this risk, all data collection, use, and storage methods
will comply with HIPAA guidelines. We take the following steps to make sure your information is kept confidential:

1) All personal information given for this study will be kept confidential.

2) Only ID numbers will be attached to questionnaires. ID numbers and questionnaires will not be connected to participants' names or identifying information.

3) Everyone directly involved in this research has been trained to work with private information. The privacy of participants is very important to us.

Benefits to You For Your Participation

There are also benefits to you taking part in this study. Your participation will help us understand more about social anxiety, social behaviors, and internal self-talk in college students and others, which may help us learn more about how college students can be successful in their academic experiences. Students may receive credit for participation from the psychology department, which will be prearranged. All students receiving credit for participation will be notified in advance and provided a receipt of participation upon completion of the study. In addition, all participants will be given lottery tickets and candy bars.

Your Right to Withdraw

Your participation in this study is completely voluntary, and you may withdraw from the study at any time with no negative penalty. All information collected from you will be owned by the primary investigator whether you complete the study or drop out. If you have questions about this research, you can call or send an email or note to one of the investigators listed. If you have questions about your rights as a research participant, you
can also call Karl Citek, Ph.D, O.D. at (503) 352-2126. You will be given a copy of this form for you to keep.

If you sign below, it shows that you: (1) read and understand this form; (2) agree to take part in this study; (3) have been given an opportunity to ask questions; and (4) have received a copy of this form.

__________________________________________
Participant

__________________________________________
Investigator
APPENDIX B

1. Please provide an estimate of the number of times in the past year you asked someone you liked out on a date or to "hang out" ____________________ 

2. Please provide a estimate of the number of times these invitations were accepted in the past year ____________________________________________________________ 

3. What method do you typically use when asking out someone you are interested in; for example, do you formally ask the other person out on a date, do you ask them to "hang out", or do you use some other method? (If you use several methods, give an estimate of the number of times of each method) _______________________________________

4. What does it mean to “hang out” with someone you are interested in? ____________________ 

5. What does it mean to “hook up” with someone you are interested in? ____________________
APPENDIX C

Procedure for Coding Students’ Preferred Ways of Making a Date

Students were asked an open-ended question about their preferred method of asking another for a date (see Appendix B), and were given space to write their own response. After reading the students’ responses through twice, the primary researcher began placing similar replies together into categories. Eventually, six categories were named to reflect the content of the students’ replies. In one instance, a response was placed into two categories because it was unclear whether it should primarily be placed into only one (i.e., “I usually just say hang out - go out in a group of friends.”) See below for representative statements for each category.

After the initial sorting of students’ replies, the original copies of the questionnaires and the list of categories were given to an independent confederate of the primary researcher. This individual then coded the replies as well. The primary researcher then compared the two lists and computed the percent of agreement (94%).

Hang out

“I ask them to hang out; try new things that seem interesting to both people.”

“I ask them to ‘hang out’ and if things go well, and we are getting to know each other, I ask her out formally.”

“I ask if they would like to hang out – spend time with me… “study” maybe.”

“I usually ask if they want to hang out; nothing formal.”
“Hang out after we do something organized by something else (after dance class).”

**Formal Request**

“Typically just ask them out.”

“I ask them if they would like to go to a particular event with me – be it hiking, dinner out, or a movie, and I do it in a strat [sic] forward manner.”

“I’m usually specific [sic] (i.e., want to see this movie?)”

“I ask them if they want to go on a date with me.”

“Ask if they want to go to coffee/dessert/dinner.”

**Use Both Methods: Hang Out or Formal Request**

“I most often ask them to ‘hang out’; once in a while I ask for a formal date.”

“I usually just ask if they want to hang out with me. If it’s about going to a dance, I formally ask them out.”

“Depending on the situation, I use both the formal and ‘hang out’ methods of asking.”

“I ask my love to hang out with other friends at first until gradually the numbers dwindle until only the two of us meet. After several more hang out sessions, I ask her out on a date.”

“‘Hang out,’ ‘get drinks,’ ‘have lunch.’”

**Never Ask Anyone Out**

“I have never asked anyone out.”

“I don’t ask others out. If they like me, they will ask. I am to [sic] shy.”

“No – I think asking people out is the guys [sic] job – just flirt.”

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"I always wait for them to ask me."

"I don’t really ask them, they ask me…"

**Hang Out in a Group**

"Just hang out with them in social situations, I don’t date, try and have a conversation, see if I am truly [sic] compatible."

"Hang out in a group."

"I ask them to hang out with me and a few friends."

**Formal Request to Hang Out in a Group**

"'We’re going to do something. Do you want to join us?'"

"Ask them to come to a party or to a social gathering, so in a group of friends."
APPENDIX D

Procedure for Coding Students' Definitions of Hanging Out

Students were asked an open-ended question about their definitions of the term hanging out (see Appendix B). They were free to respond to this question as they chose. Their definitions were read through twice before the primary researcher placed them into categories. These categories were constructed to represent as closely as possible the statements themselves without being so specific that the list of categories became unwieldy.

After the initial construction of the categories, three were judged to be sufficiently alike that they were collapsed into one category. For example, the hanging out categories of “Spending Time,” “Getting to Know Each Other,” and “Spending Casual Time Together (Talking, Going to a Movie, Lunch, Doing Homework)” were collapsed into the “Casual Time” category. Part of the justification for this combination came from the fact that so many students combined these terms together in their responses: “Spend time with them, doing activities;” “It means talking, getting to know them, seeing a movie, getting a bite to eat.”

An original category, “Casual Time Together, But Could Become Physical” was also folded into the “Casual Time” category, as it seemed unnecessary to keep those responses separate.
As was true of students’ preferred methods of asking for dates, their replies were not forced into only one category if the response reflected more than one. This was the case more often for these research questions than was true of preferred methods of asking for dates. For example, one student provided the following definition for hanging out: “Go on a date maybe. More than likely just sitting around and talking.” Both coders judged that this response fell into two categories: category 1, “Casual Time/Getting to Know Each Other”, and category 3, “Date”.

After the primary researcher had placed each response into one or more categories, the original questionnaires and list of categories were then given to an independent confederate of the primary researcher who was unaware of the first coding choices. This individual then coded the students’ definitions according to his own judgment. The primary researcher then noted the number of times the two lists agreed and calculated the percent of agreement (96%).

The categories of students’ definitions of hanging out and representative examples of their respective responses are listed below:

*Casual Time/Getting to Know Each Other (Movie, Talk, Coffee)*

“To talk, watch movies, eat anything, where you are together.”

“Spending time with them, getting to know them. It’s important to know the person I want to go out with before I rush things.”

“To spend time with them and enjoy each other’s company.”

“Go to a movie, visit at each other’s houses, watch a sibling’s game, go for a walk, hike (outdoor activities), go to lunch, and talk.”
Casual Time with a Group

“Go watch a movie, go to a restaurant with a bigger group and eat dinner, maybe just chill in a big group at someone’s house.”

“Watch TV, go to an event/program together, other people present.”

“Spend time together getting to know each other, either with other people or by ourselves.” *(Also coded as Category 1)*

“Spend time with them in either one on one or in a group setting, conversation, having fun, getting to know them, enjoying each other’s company, laughing.” *(Also coded as Category 1)*

Date

“Get coffee, do homework, go on a date.” *(Also coded as Category 1)*

“Go on a date maybe. More than likely just sitting around and talking.” *(Also coded as Category 1)*

“Go out and do something.”

*Like a Date But Without the Label*

“Go on a date, but acting like it is not a date.”

“It typically means that this ‘hang out’ session is the preview of an actual date. In fact, it is very much like a date but without the stress of getting dressed up and having to go somewhere nice to eat.”

“Doing something you both like together, usually the same as a date but without the label.”

No Physical Contact Stipulated

“To chat, drink, have fun, no messing around.” *(Also coded as Category 1)*
"To talk, do something you both like, without any physical contact, flirting."

*(Also coded as Category 1)*

**Friends or "Friends Mostly"

"Just as friends, then maybe more later."

"To hang out as a friend and see where it goes from there."
APPENDIX E

Coding Procedures for Students' Definitions to Hooking Up

Students were asked an open-ended question about their definition of the term hooking up (see Appendix B). They were free to respond to this question as they chose. Their definitions were read through twice before the primary researcher placed them into categories. These categories were constructed to represent as closely as possible the statements themselves without being so specific that the list of categories became unwieldy.

As was true with students’ definitions for hanging out, after the initial construction of the categories, a few were judged to be sufficiently alike that they were collapsed into one category. Thus, the categories “Continuum of Physical Contact from Kissing to Sex” and “Sex” were collapsed into the “Continuum” category. These two categories had originally been considered distinct, as the “Continuum” category represented the responses that reflected the awareness of physical contact that could fall well shy of sexual intercourse, and responses that fell into the “Sex” category reported that it meant “to have sexual intercourse with them,” as one student phrased it. The categories were ultimately combined because so many of the “Continuum” responses included sex along with other physical or sexual behaviors. Thus, one student defined hooking up as a “Nebulous term that implies anything from foreplay to actual sex, allows enough ambiguity for both the boys and girls to maintain their reputations.”

Another justification for this combination of the two categories concerned the fact that the definition of sex seemed to vary among students. Some students seemed to define sex as exclusively sexual intercourse and differentiated this from other sexual behaviors.
like oral sex. Two such responses were: "To get together, watch a movie or get food, then make out and fool around – oral sex or real sex, however far you want to go or whatever you're in the mood for;" "It's different person to person. I think of it as having sex or oral sex."

As was true of students' definitions for hanging out, their replies were not forced into only one category if the response reflected more than one. For example, one student provided the following definition for hooking up: "It means to become more physical. 'Hook up' can mean to 'go out' or to have sex. But I think of it as starting to go out together." Both coders judged that this response fell into two categories: Category 1, "Continuum of Physical Contact from Kissing to Sex", and Category 4, "To Date or to Have an Exclusive Relationship". Another student responded to this question with the phrase, "To go out, perhaps physical contact," which was also judged to fit both Category 1 and Category 4.

After the primary researcher placed each response into one or more categories, the original questionnaires and list of categories were then given to an independent confederate of the primary researcher who was unaware of the first researcher's coding choices. This individual then coded the students' definitions according to his own judgment. The primary researcher then noted the number of times the two lists agreed and calculated the percentage of agreement (91%).

The categories of students' definitions of hooking up and representative examples of their respective responses are listed below:
Continuum of Physical Contact from Kissing to Sex

"Make out or have a physical relationship, not necessarily sex, but surely physical."

"I suppose it means to have sexual relations with someone, although not necessarily sex."

"Can be anything from kissing to having sex. The term is very versital [sic]."

"Any sexual contact, including kissing."

"Make out/have sex with them."

"Make out once or twice and that's it."

Specified "Meaningless Sex" or "Casual Sex"

"To have sexual contact without emotional attachment."

"To be together in a relationship and in some circumstances, hooking up can be a one night stand." (Also included in Category 4: To Date or to Have an Exclusive Relationship)

"Nothing substantial, purely physical. No attachment."

"Friends With Benefits"

"Depends on who's using the term. Usually implying a type of 'friends with benefits' type of relationship."

To Date or to Have an Exclusive Relationship

"Go on a date or get into a relationship."

"To go out and be considered 'boyfriend/girlfriend.'"

"Decide to be officially [sic] together."

"To start dating."
“Dating exclusively with one other person; to be dating/boyfriend/girlfriend.”

More than Friends ("Anything Normal Friends Don’t Do")

“To fool around with them and become more than friends.”

“Interact on a non friendship level.”

“Do anything normal friends don’t do.”

“To take things past friendship level. Kissing, fondling, etc.” (Also coded as Category 1)

Getting Together, but Not Yet Boyfriend/Girlfriend

“Be seeing each other. Not really girlfriend/boyfriend.”

“Period after the first date that allows you to know if you are dating.”

“Become more personal/intimate.” (Also coded as Category 1)

Spend Time Together (for Coffee, Lunch)

“Get together and just spend time with each other.”

“Get together for coffee or lunch and have a good time.”