Characteristics and Quality of Personal Relationships in Generalized Social Phobia

by

Carrie A. Lionberg

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Abstract

Social phobia is one of the most prevalent of the anxiety disorders. A major feature of this disorder is the impact on interpersonal functioning. Not only are the educational and career aspirations of many people with social phobia severely affected by the distress that they experience in routine social interaction, individuals with social phobia are also more likely to have low levels of social support, which has adverse implications for mental and physical health. Although friendship and close personal relationships are fundamental to the development of social support systems and satisfying social interaction, very little is understood about what differentiates the intimate relationships experienced by people who have social phobia. This study explored characteristics and quality of personal relationships in individuals with generalized social phobia, including a focus on interpersonal functioning and the kinds of interpersonal problems that may be particularly distressing for them. *Study One* explored various aspects of interpersonal functioning among social phobia, healthy control, and panic disorder groups. Measures included the *Emotionality, Activity, Sociability Scale*, the *Revised Adult Attachment Scale*, the *Risk in Intimacy Inventory*, the *Fear of Intimacy Scale - Friend*, and the *Inventory of Interpersonal Problems*. As predicted, the social phobia participants differed significantly on subscales of (a) temperamental distress, fearfulness, and sociability, (b) attachment functioning in romantic relationships, (c) perceptions of risk in intimacy, (d) fear of intimacy, and (e) interpersonal problems with being assertive, sociable, and intimate. The social phobia participants also reported significantly fewer friendships, lower levels of satisfaction in their relationships, less confidence in and support from relationship partners, and less personal disclosure to their closest friends. Males with social phobia frequently reported the most distress in these areas. The analyses of the anxiety disorder and healthy control groups indicated that persons with panic disorder were similar to those with social phobia in several aspects of their interpersonal functioning, but in other areas were more comparable to the healthy control respondents. In *Study Two*, individuals

with social phobia who participated in group treatment programs were compared with individuals in waiting list and self-study conditions. The impact of a 13 session group cognitive-behavioral treatment program was evaluated with respect to change in the measures of interpersonal characteristics. Changes due to treatment were found only on measures of close attachment functioning and problems with being sociable. Clinical implications regarding effective intervention for impaired interpersonal functioning in social phobia and areas of future research are discussed.

Characteristics and Quality of Personal Relationships in Generalized Social Phobia

Most people are nervous and self-conscious to some degree in their interactions in various interpersonal situations. Such occasional anxiety is often considered a natural aspect of human experience and is part of a continuum of normal social anxiety (Ballenger, 1995; Markway, Carmin, Pollard & Flynn, 1992; Hazen & Stein, 1995; Mendlowicz & Stein, 2002; Uhde, 1995). Within the past two decades, however, mental health professionals recognized that for some people, self-consciousness and concern about how others may be evaluating them may be quite extreme. These individuals may experience debilitating fears and anxiety in many aspects of routine daily functioning. The distress they experience may lead to the avoidance of circumstances that involve the scrutiny and possible negative evaluation of others.

Social anxiety that is more intensely troubling may involve audience, speech, or performance anxiety, communication apprehension, and difficulties in close personal relationships, including dating and friendship (Leary, 1983; Markway et al., 1992). For many people, the discomfort becomes so severe that their ability to function across a range of feared interpersonal situations is seriously affected or impaired, a distinguishing characteristic of a condition now known as *generalized social phobia* (Hazen & Stein, 1995; Herbert, Hope, & Bellack, 1992; Hope & Heimberg, 1993; Markway et al., 1992). The impairment in interpersonal functioning in generalized social phobia may not only involve limitations due to a greater number of anxiety provoking or avoided situations (Brown, Heimberg, & Juster, 1995; Herbert et al., 1992; Holt, Heimberg, & Holt, 1992), but for some individuals, the impaired interpersonal functioning may also involve social skill deficits (Heimberg, Holt, Schneier, Spitzer, & Liebowitz, 1993; Turner, Beidel, Wolff, Spaudling, & Jacob, 1996).

Little is known about the nature of close personal relationship functioning in generalized social phobia, whether in terms of how such relationships may be affected by, or may be involved

in the maintenance of, the anxiety and avoidance behavior that are typically experienced by people who have social phobia (Jackson & Wenzel, 2002; Kachin, Newman, & Pincus, 2001; Stravynski, Arbel, Lachance, & Todorov, 2001; Wenzel, 2002). Still, close personal relationships are cited by most people to be among the most important sources of personal meaning and happiness in life (Bartholomew & Horowitz, 1991). Given that close personal relationships in social phobia may be particularly vulnerable to the negative impact of anxiety (Jackson & Wenzel, 2002), and that interpersonal effectiveness is essential to most areas of daily experience (Quilty, Van Amerigan, Mancini, Oakman, & Farvolden, 2002), it is critical that we develop a better understanding of the impairment in interpersonal functioning that is characteristic of generalized social phobia.

Definitions and Diagnostic Criteria

Social Phobia

In the field of anxiety disorders, social phobia is a relatively new and somewhat "neglected" addition (Hazen & Stein, 1995; Liebowitz, Gorman, Fyer, & Klein, 1985). Early discussion about social phobia in the mid 1960s made reference to shyness, fears of blushing or eating in the presence of others, and being afraid to participate in social activities such as dances, parties, or dating (Marks & Gelder, 1966). The first official designation of social phobia as an anxiety disorder did not occur until 1980, when it was included in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-III*) (American Psychiatric Association, 1980). The criteria described a phobic reaction to a specific situation such as speaking, performing, or writing in the presence of others. However, this definition did not address the diagnosis of those who experienced a more generalized fear of social situations (Hazen & Stein, 1995; Brown et al., 1995; Liebowitz et al. 1985), nor did it acknowledge that social phobia might also involve individuals' distress about the possibility that others might notice symptoms of their anxiety such as shortness of breath, trembling, or sweating (Hazen & Stein, 1995). To accommodate these issues, changes in the diagnostic criteria for social phobia

were made in each of the two subsequent versions of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1987, 1994; Hazen & Stein, 1995).

Diagnostic Criteria

The definition of social phobia by the American Psychiatric Association (1994) in the current *Diagnostic and Statistical Manual of Mental Disorders* (4th. ed.) (*DSM-IV*) defines social phobia as (Criterion A):

> A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing.

Criterion A also stipulates that the diagnosis of social phobia in children requires that the child is capable of age-appropriate social interactions with familiar people and that, in addition to interaction with adults, the anxiety is experienced in peer settings. (p. 416)

There are seven additional criteria in the diagnosis of social anxiety (Criteria B-H, DSM-IV). The anxiety must be frequently provoked by exposure to a feared situation; it may also be experienced as a situationally bound or situationally predisposed panic attack. In children, the anxiety may be manifest in crying, tantrums, immobility, or withdrawal from unfamiliar people (Criterion B). Further, the individual must recognize that the fear is excessive or unwarranted, although some children may be unable to comprehend that their fears are irrational (Criterion C). The person either avoids the feared situation or is able to tolerate it with anxiety (Criterion D). The individual's normal routine, including occupational or academic functioning, social activities, or relationships must be impaired by the avoidance of, anticipatory anxiety related to, or distress while in, the feared situation. Beyond the discomfort related to the feared situation, the person may also experience marked distress about having social phobia (Criterion E).

If under the age of 18 years, the individual must have experienced the disorder for at least 6 months (Criterion F). The person's fear or avoidance must not be caused by the physiological effects of substance abuse or medications (Criterion G). Additionally, the fear described in

Criterion A may not be due to a general medical condition or better understood in terms of the criteria for other mental disorders (Criterion H). The final diagnostic consideration is that if social phobia occurs in most social situations it is to be specified as generalized type (American Psychiatric Association, 1994, pp.416-417).

In summary, social phobia is a relatively new anxiety disorder for which the diagnostic criteria have been revised several times within its short history (Hazen & Stein, 1995; Hope & Heimberg, 1993; Markway et al., 1992). As such, our knowledge of social phobia is evolving and is increasingly a focus of psychological research (Ballenger, 1995; Hazen & Stein, 1995; Jackson & Wenzel, 2002; Leary, 1983). In addition to diagnostic clarification, to date, social phobia research has largely emphasized the physiological, behavioral, and cognitive aspects of the anxiety, often to the exclusion of the examination of impairment in social functioning (Kachin et al., 2001; Mendlowicz & Stein, 2000; Stravynski et al., 2001). Nonetheless, acknowledging the complexity of the bodily, cognitive, and behavioral symptomatology of this disorder may provide a foundation for our understanding of the impaired interpersonal functioning that is a major distinguishing characteristic of social phobia (Heimberg, Juster, Hope, & Mattia, 1995; Leary, 1983; Markway et al., 1992).

Symptoms of Social Phobia

The symptoms of social phobia include autonomic arousal and cognitive-affective reactions related to the person's appraisals about the likelihood of negative outcomes in a feared situation. Many, though not all, individuals with social phobia may also manifest reticent, hesitant, awkward, or avoidant behaviors in response to their distress (Jones & Carpenter, 1986; Leary, 1983). As opposed to a general, more pervasive presentation, social phobia may involve only one or two discrete feared situations, such as speaking in public, using a public toilet, or writing while being observed by others. In such cases, the social phobia is referred to as *non-generalized*, or *circumscribed*, or *specific*, or *limited-interaction* in type (Brown et al., 1995;

Hazen & Stein, 1995; Kachin et al., 2001; Markway et al., 1992; Schneier et al., 1994; Turner et al., 1996; Uhde, Tancer, & Gurguis, 1990). Further, some individuals with social phobia may experience fears of performing a range of activities in public which otherwise do not elicit anxiety and can be executed well if they believe that they are not being scrutinized by others, and this type is referred to as *performance* social phobia (Hazen & Stein, 1995; Markway et al., 1992).

Research conducted to verify the diagnostic utility of the distinct typing of circumscribed, limited interactional, and performance social phobia, however, has not as yet justified the application of these terms as official sub-designations (Heimberg, Holt, Schneier, Spitzer, & Liebowitz, 1993; Kachin et al., 2001). As such, according to the DSM-IV, the current reference to the sub-type of social phobia is restricted to *generalized* social phobia (American Psychiatric Association, 1994). Regardless of the terms used to describe it, social phobia may be construed as a continuum of interrelated bodily, cognitive, and behavioral symptoms which interfere with the ability to function across a range of activities (American Psychiatric Association, 1994).

Bodily Symptoms

Physiological arousal in phobic social situations may include one or more of the following bodily reactions: increased heart rate or palpitations, tremors, shortness of breath, sweating, blushing, abdominal distress, nausea, or dizziness (Butler, 1989; Hazen & Stein, 1995; Hope & Heimberg, 1993; Leary, 1983; Levin, Schneier, & Liebowitz, 1989; Markway et al., 1992; Uhde et al., 1990). Chronic tension may develop in those who are hypervigilant of others' reactions in social situations, which potentially may induce stress-related symptoms such as headaches, muscle pain, and fatigue (Schneier et al., 1994; Tancer, Lewis, & Stein, 1995).

In exploration of physiological reactions to stressful situations, a study that compared social phobia and healthy control groups participating in an assigned public speaking task revealed no differences between the groups for heart rate and stress hormone responses (Levin, Saoud, & Strauman, 1993, cited in Tancer et al., 1995). However, differences in the heart rate responses

within the social phobia group were evident when participants with generalized versus discrete social phobia were compared. Of additional note, many of the participants with social phobia reported that the public speaking challenge in the experiment did not elicit their typical phobic symptoms because the situation took place in an unnatural environment.

In another study that compared heart rate between generalized and discrete social phobia groups, it was found that fear-specific challenges (e.g., a participant who feared interactions with the opposite sex was asked to engage in a role play situation with an opposite-sex confederate) elicited greater increase in heart rate in participants diagnosed with a discrete social phobia versus those diagnosed with generalized social phobia. As these studies illustrate, although differences in physiological response between people with social phobia versus healthy control samples are not commonly found, it is likely that there are differences in the biological aspects of those diagnosed with generalized as opposed to discrete social phobia (for a review, see Tancer et al., 1995).

Cognitive Symptoms

Social phobia is exceptional among phobias in that it is defined in large part by distinctive cognitive symptoms (Butler, 1989). The fears and perception of danger involved in social phobia are related to individuals' belief that when subjected to observation or scrutiny by others, they will be negatively evaluated, will embarrass themselves, or will be in some way humiliated. Individuals with social phobia tend to hold firmly to a negative bias in which they view themselves as socially inept and unlikeable; as a result, they frequently anticipate criticism or disapproval from others (Alden & Bieling, 1998; Alden & Wallace, 1995). They are also prone to judge their interactions in social situations harshly (Alden & Bieling, 1998; Alden & Wallace, 1995). Due to their negative biases and self-appraisals, those with social phobia may also exaggerate their perceptions of the severity and visibility of the bodily symptoms that they experience (Butler, 1989; Hazen & Stein, 1995; Hope & Heimberg, 1993; Markway et al., 1992). Further, the negative beliefs and the harsh self-criticism often seen in persons with social phobia may exacerbate their worry and

anxious anticipation about future social situations (Alden & Wallace, 1995; Hazen & Stein, 1995; Markway et al., 1992). As such, the cognitive symptoms are both a defining attribute and a contributing factor in the maintenance of the fears and distress in social phobia (American Psychiatric Association, 1994).

Behavioral Symptoms

Social phobia is also defined in terms of behavioral symptoms that are often coping responses to the intense anxiety and negative appraisals of the feared situation (Butler, 1989; Hazen & Stein, 1995; Hope & Heimberg, 1993; Markway et al., 1992). Perceptions of danger in the situation may elicit a defense reaction of immobility and *anxiety mediated inhibition* (Alden & Bieling, 1998), which inhibits voluntary activities and impairs the ability to speak, move, or concentrate (Hope & Heimberg, 1993; Markway et al., 1992). Although this reaction is often of limited duration, for many people with social phobia it promotes other behavioral symptoms such as conspicuous escape or avoidance responses (Butler, 1989; Hope & Heimberg, 1993; Jones & Carpenter, 1986; Markway et al., 1992). In an avoidance scenario, the person often leaves the situation at first opportunity, this response being a basic form of escape behavior. Declining opportunities for academic, social, or occupational activities, making excuses, and procrastination, though not limited to social phobia, are also indirect forms of avoidance (Butler, 1989). However, an individual may be unable or unwilling to avoid a feared situation and may instead have to tolerate intense anxiety, which may interfere with functioning (American Psychiatric Association, 1994; Butler, 1989; Hazen & Stein, 1995; Hope & Heimberg, 1993; Leary, 1983; Markway et al., 1992).

Individuals with social phobia may also use covert forms of avoidance such as distraction or disengagement while in the feared situation, involving respectively, an outward or inward shift of focus that diminishes the person's awareness of his or her immediate surroundings and thereby reduces anxiety. Such distraction and disengagement may hamper the person's ability to attend to

what is happening in the immediate social environment and he or she may then be further disadvantaged by not being able to respond appropriately in the situation. Additional behavioral aspects of this may include decreased eye contact, limited personal disclosure, brief or "safe" utterances, cognitive rehearsal before speaking, negative gestures and pauses, and disruption in turn-taking behavior, etc. (Segrin, 2000).

Multiple Contributory Factors to the Development and Maintenance of Social Phobia

There is no singular contributing factor in the development of social phobia; rather, ongoing research points to a convergence of influential biological, environmental, cognitive, and behavioral components (Eng, Heimberg, Hart, Schneier, & Liebowitz, 2001; Markway et al., 1992; Stein & Walker, 2001). Biological factors may include biochemical irregularities and genetic predispositions (Tancer et al., 1995; Schmidt & Fox, 1999), temperament (Buss, 1986; Buss & Plomin, 1984), and evolutionary processes involving fear or sensitivities to disapproval (Bruch, Giordano, & Pearl, 1986). Among environmental influences, misinformation, negative social experiences, the family context, or other types of social learning may be critical components in the development of social phobia (Markway et al., 1992; Stein & Walker, 2001). Misperceptions of threat and related cognitive processes such as basing beliefs on erroneous information or exaggerating the probability and severity of danger in the feared situation also contribute to the development and maintenance of social phobia, as do maladaptive behaviors such as avoidance, worry, and self-preoccupation (Alden & Wallace, 1995; Markway et al., 1992).

It should be noted, however, that having one or more of the various factors believed to be related to social phobia does not necessarily lead to a given person eventually developing this disorder (Eng et al., 2001; Stein & Walker, 2001). For instance, some individuals with biological factors and/or genetic predispositions may not experience certain environmental or social learning influences which otherwise increase the likelihood of emerging social phobia. Nevertheless, the

manner in which social phobia develops and is maintained is well represented by a model that reflects the interplay between the biological, environmental, cognitive, and behavioral factors that many researchers believe contribute to the fear of disapproval by others, which is a central feature of this disorder.

Markaway et al. (1992) conceptualized social phobia in a way that acknowledges the range of possible biological and environmental contributing influences, as well as the behavioral and cognitive symptomatology which serve to maintain it. In this model, *Causes* are *Biological* and/or *Environmental*, each of which may contribute to the *Fear of Disapproval*. Fear of Disapproval, the pivotal tenant of the model, in turn both engenders and is further fueled by *Maintenance* factors of *Misperceptions of Threat* and *Maladaptive Behavior* (See Figure 1).

Figure 1.

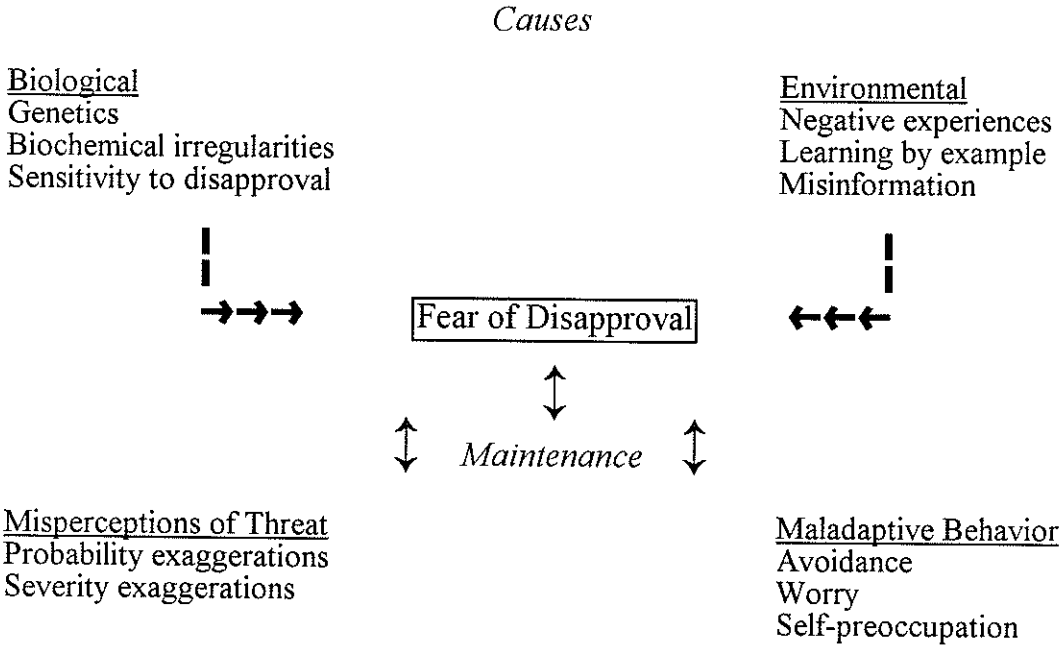

Figure 1. Multi-factor model of fear of disapproval in social phobia (Markway et al., 1992).

As an example, a socially anxious person may have biological factors such as an anxious temperament or a tendency toward shyness, and may have early environmental factors such as an inconsistently available primary care giver or a cruelly teasing peer group. Any one or combination of these factors may cause the development of a fear of disapproval. The fear of disapproval then induces the person to construe the prospect of social interaction as a threatening venture in which worst case scenarios are likely to happen. In response to these feelings of threat and danger, the person engages in safety and defense behaviors, such as avoidance, worry, or self-preoccupation. The misperceptions of threat and the maladaptive defense behaviors may then feed back to the person's fear of disapproval. In some instances, another individual may sense the socially phobic person's mistrust, or may interpret the person's safety behavior as aloofness or disinterest. This may compromise the potential for interaction between the two people, diminishing the opportunity for so much as a casual acquaintanceship.

Prevalence and Onset of Social Phobia

Among the most common of the anxiety disorders, epidemiological and community-based studies have reported a lifetime prevalence for social phobia ranging from 3%-13% (American Psychiatric Association, 1994; Kessler, McGonagle, & Zhao et al., 1994, cited in Walker & Stein, 1995; Wittchen, Stein, & Kessler, 1990). Prevalence rates in various studies fluctuate within this range depending on the threshold for what is regarded as *caseness* (a designated criteria for social phobia) depending on severity, level of distress, extent of impairment (American Psychiatric Association, 1994; Walker & Stein, 1995), and whether information is gathered regarding the range and number of phobic social situations (American Psychiatric Association, 1994; Kachin et al., 2001; Leary, 1983; Hope & Heimberg, 1993). The National Institute of Mental Health epidemiological catchment area (ECA) studies revealed a 6-month prevalence of social phobia for men at 0.9%-1.7% and 1.5%-2.6% for women (Myers et al., 1984). However, Hope and Heimberg (1993) suggested that because the ECA studies were based on DSM-III criteria and

included only specific performance anxiety, current rates are likely higher in light of the DSM-IV inclusion of generalized social phobia. In addition, more recent survey results indicate that women are affected by social phobia to a significantly greater extent than are men (Davidson, Hughes, George, & Blazer, 1994; Kessler et al., 1994; Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992; Hazen & Stein, 1995; Walker & Stein, 1995). Early ECA data suggested that 91% of those with social phobia reported onset prior to the age of 25, with a median age of onset of 12 years old; however if respondents who stated that they experienced social phobia for their "whole life" were considered, the average age of onset would likely be younger than 12 years (Bourdon et al., 1988). Consistent with this, later ECA studies reported an average age of onset between 11 and 15 years (Schneier et al., 1992; Walker & Stein, 1995).

Comorbidity in Social Phobia

Based on epidemiological evidence, social phobia is the third ranking psychiatric disorder, eclipsed only by depression and substance abuse (Ballenger, 1995). Among those who have social phobia, over 30% are seriously impaired by the disorder (Ballenger, 1995; Walker & Stein, 1995). Further, of all requests for services in anxiety disorders clinics, 18% are due to social phobia related concerns (Sanderson, DiNardo, Rapee, & Barlow, 1990). Given findings that suggest that individuals with social phobia do not typically seek help unless they are in severe distress due to problems such as depression or suicidal ideation, it is likely that this figure does not accurately represent the number of additional people with social phobia who would benefit from mental health services (Hazen & Stein, 1995; Wittchen et al., 1999). Moreover, a recent epidemiological study suggests that younger males with social phobia may be at heightened risk of the impact of social phobia, since being male and younger in age are characteristics associated with lower mental health utilization rates (Chartier, Kjernisted, & Walker, 2002). Nonetheless, of those who do seek treatment for social phobia, comorbid diagnostic issues are frequently

identified (Chartier, Kjernisted, & Walker, 2002; Hazen & Stein, 1995; Hope & Heimberg, 1993; Turner, Beidel, Borden, Stanley, & Jacob, 1991).

Social Phobia and Avoidant Personality Disorder

Avoidant Personality Disorder (*APD*) is conceptually similar to generalized social phobia, especially at more extreme symptomatic levels (Brown et al., 1995; Holt et al., 1992). With onset by early adulthood and evident in a variety of social contexts, individuals with APD tend to exhibit a pervasive pattern of social inhibition, and to frequently report feelings of inadequacy and hypersensitivity to negative evaluation (American Psychiatric Association, 1994). Compared to generalized social phobia, APD is marked by greater inflexibility (i.e., the person with APD is likely to have fewer, if any, areas of relatively unimpaired interpersonal functioning), and it tends to be more stable over time. APD is also characterized by relatively greater social inhibition, feelings of inadequacy, and an increased likelihood of social skill deficits (Brown et al., 1995). Research indicates that individuals with this disorder tend to be overly submissive and may be easily coerced and controlled by others (Alden & Capreol, 1993). Moreover, studies have shown that APD may be a comorbid feature of generalized social anxiety, and that persons who have both disorders tend to have less belief in their ability to control events (Brown et al., 1995). Nonetheless, whether the features of APD are diagnosed as a comorbid personality disorder rather than as an extreme variant of generalized social phobia, the clinical presentation involves poorer global functioning, treatment outcome is less hopeful, and functional status is likely to remain more impaired following intervention, relative to generalized social phobia of less extreme severity (Brown et al., 1995; Turner et al., 1996).

Social Phobia and Panic Disorder

Panic disorder is a frequent comorbid factor in social phobia (Barlow, DiNardo, Vermilyea, & Blanchard, 1986; Hazen & Stein, 1995; Quilty et al., 2002; Sanderson et al., 1990; Stein, Shea, & Uhde, 1989). Rates of comorbidity ranged between 17%-49.1% in studies of

clinical samples (Sanderson et al., 1990; Stein et al., 1989), and similar rates were reported in ECA studies of the general population (Schneier et al., 1992; Hazen & Stein, 1995). Comorbidity in social phobia and panic disorder is complicated by clinical characteristics that are common to both disorders, and the diagnostic process must involve careful exploration of somatic symptoms, the occurrence of panic attacks, and phobic avoidance (Hazen & Stein, 1995). As noted in the DSM-IV(American Psychiatric Association, 1994), the panic attacks in social phobia are situationally bound or predisposed, and the avoidance is due to fear in the social situation. In contrast, in uncomplicated panic disorder the panic attacks may occur outside of social situations, must have occurred spontaneously on at least one occasion, and the avoidance response is due to fear of having a panic attack.

In consideration of the overlapping clinical features of the two disorders, people with comorbid social phobia and panic disorder are especially likely to experience extreme distress and fears that pervade a wide range of situations and have the potential to severely interfere with their ability to function in essential daily activities (Mendlowicz & Stein, 2000; Quilty et al., 2002). Moreover, it is reported that even subthreshold forms of comorbid social phobia and panic disorder markedly compromise quality of life and psychosocial functioning. However, although research has shown that the impact of anxiety in panic disorder on interpersonal functioning is significantly limiting, little is understood about the impairment in interpersonal functioning in cases of comorbid social phobia and panic disorder (Jackson & Wenzel, 2002).

Social Phobia and Depression

Major depression is also a frequent comorbid factor in social phobia (Eng et al., 2001; Heimberg, Hart, Schneier, & Liebowitz, 2001; Hazen & Stein, 1995; Hope & Heimberg, 1993; Kachin et al., 2001; Sanderson et al., 1990; Stein, Tancer, Gelernter, Vittone, & Uhde, 1990), as is substance abuse (Chambless, Cherney, Caputo, & Rheinstein, 1987; Schneier, Martin, Liebowitz, Gorman & Fyer, 1989). ECA evidence indicates that 17% of persons with social

phobia have experienced at least one episode of major depression (Schneier et al., 1992; Hazen & Stein, 1995). Among clinical samples of those with social phobia, lifetime rates of major depression are reported to range between 21%-80% (Sanderson et al., 1990; Stein et al., 1990). However, in a study that compared individuals with social phobia to a healthy control comparison group, while those with social phobia reported having more problems due to being unassertive and engaging in avoidance behavior, they did not differ from the healthy participants in terms of symptoms of depression (Alden & Phillips, 1990). Still, a study by Dilsaver, Qamar and Del Medico (1992) proposed that many people with major depression may develop a constellation of symptoms that are similar to social phobia during the course of the depression, which raises questions regarding the juncture of clinical features that constitute comorbidity (cited in Hazen & Stein, 1995). Further, more recent research suggests that social phobia may be an antecedent to depression (Eng et al., 2001), due in part to the impact that social anxiety may have on people's capacity to pursue rewarding social experiences, their tendency to make negative attributions about the self and others in relation to stressful events, and the frequent anxious interpersonal style in which others are viewed as untrustworthy or undependable. Eng et al. (2001) suggest that any and all of these factors may contribute to a sense of hopelessness and an increased potential for depression.

Social Phobia and Alcohol Abuse

Studies have shown a very high incidence of alcohol abuse in individuals with social phobia, and it is suggested that these people may be drinking as a means of coping with their anxiety and distress (Chambless et al., 1987; Schneier et al., 1989). Further, because the age at onset of social phobia is frequently lower than that for comorbid disorders of alcohol abuse, depression, and panic disorder, social phobia may be a risk factor for these disorders (Dadds, Spence, Holland, Barrette, & Laurens, 1997; Schneier et al., 1992; Magee, Eaton, Wittchen, McGonagle, & Kessler, 1996; Walker & Stein, 1995; Wittchen, Stein, & Kessler, 1999). If so, an

increased understanding of the development and course of social phobia may guide strategies to prevent or reduce the severity of comorbid disorders such as these (Barrette, Duffy, & Dadds, 2001; Eng et al., 2002; Simms, 2000; Wenzel, 2002).

Interpersonal Functioning and The Impact of Social Phobia

It is clear that social phobia is a serious mental health concern that warrants continued research and development of treatment strategies sensitive to the complexity of symptoms of this disorder (Ballenger, 1995; Eng et al., 2002; Mendlowicz & Stein, 2000; Quilty et al., 2002; Schneier et al., 1994; Walker & Stein, 1995). When compared to control subjects who did not have social phobia, epidemiological findings revealed that individuals with social phobia reported more impairment across a greater number of areas in routine daily living (Brown et al., 1995; Herbert et al., 1992; Hope & Heimberg, 1993; Kachin et al., 2001; Schneier et al., 1992; Walker & Stein, 1995). Community sample studies have reported that people with generalized social phobia were less likely to be married, were more likely to be separated or divorced, and had both lower income and less education (Heimberg, Hope, Dodge, & Becker, 1990; Hope & Heimberg, 1993; Kachin et al., 2001; Schneier et al., 1992; Walker & Stein, 1995). Moreover, clinical research has shown that individuals with social phobia who are single tend to have greater levels of symptomatology and comorbid depression than people with social phobia who are married (Hart, Turk, Heimberg, & Liebowitz, 1999). Finally, community samples of persons with social phobia report greater rates of financial dependency, suicidal ideation, lower income and education levels, lower social support and lower general satisfaction relative to those who do not have mental health problems (Mendlowicz & Stein, 2000; Quilty et al., 2002).

Social Support. Prospective research within the general population revealed that aspects of interpersonal motivation such as the need for intimacy have been shown to predict psychosocial adjustment nearly two decades later (McAdams & Vaillant, 1982, cited in Descutner & Thelen, 1991; Oliker, 1989). This is an important issue, given findings that the level of a person's social

support is strongly related to physical health and psychological adjustment (Cohen, 1988; Descutner & Thelen, 1991; Hope & Heimberg, 1993; Rhodes, 2000; Sarason, Pierce, & Sarason, 1990; Segrin, 2000; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Still, little is understood in general about the underlying psychological mechanisms of social support (Rhodes, 2000), although research has shown that there is a strong association between social support and social intimacy (Doi & Thelen, 1993).

It has been reported that the severity of overall impairment in social phobia among community dwelling individuals is inversely correlated with the level of perceived social support (Magee, Eaton, Wittchen, McGonagle, & Kessler, 1996). Based on clinical observation that suggested poor social support among those with generalized social phobia who attended a community based treatment program for anxiety disorders, Torgrud, Walker, Murray, and Chartier (1997) developed preliminary research which indicated that people with social phobia have lower levels of social support relative to comparison samples of healthy individuals and persons with other kinds of anxiety problems. More recent clinical research has suggested that the social networks of individuals with social phobia are "notoriously impoverished" and need to be studied with respect to specific areas of problematic social functioning (Segrin, 2000). Further, studies have revealed that even people with subthreshold levels of social phobia experience lower levels of social support and substantial difficulties in many aspects of daily living (Mendlowicz & Stein, 2000). It is also reported that the lack of a close friend is a measure of perceived social support which serves as a reliable indicator of subthreshold social phobia (Davidson, Hughes, George, & Blazer, 1994). Finally, the relationship partners and the family systems of individuals with anxiety disorders are increasingly being considered important areas of research regarding the impact of anxiety disorders on social support and daily living; but, rather than social phobia, panic disorder has been the most frequent type of anxiety disorder being studied in this manner to date (Jackson & Wenzel, 2002).

Interpersonal Functioning. Beattie and Stevenson (1984; as cited in Stravynski et al., 2001) defined *Social functioning* as "...the manner of participating in social life, assuming roles and fitting in..." Although the concept of social functioning *per se* has not been included as diagnostic nomenclature for social phobia, the preceding may be an appropriate description of *interpersonal functioning* for the purpose of understanding social phobia more fully. Further, it has been suggested that the DSM-IV criteria for social phobia do not account for the full range of maladaptive responses used to cope with the variety of social fears (e.g., lack of emotion, trying too hard, being too controlling, etc.) that are often typical of persons who have social phobia (Kachin et al., 2001). Moreover, it has been proposed that healthy psychological functioning encompasses more than the mere absence of psychological problems, but also involves interpersonal flexibility (Sheffield et al., 1995).

Developing the ability to interact successfully with others is especially relevant for individuals who struggle with pervasive social fears (i.e., those with social phobia), yet little is known about the impact of social phobia on various aspects of interpersonal functioning and daily living. Unfortunately, much of what has been studied regarding impairment of interpersonal functioning in social phobia has been based on undergraduate samples rather than clinical or community based comparisons (Alden & Beiling, 1998; Alden & Phillips, 1990; Kachin et al., 2001). Nonetheless, there are some studies of interpersonal functioning in social phobia that may serve as a basis from which the purpose of the present study may be understood.

It has been suggested that those with generalized social phobia may manifest social skill deficits which severely interfere with the ability to function across a range of social and work conditions (American Psychiatric Association, 1994; Butler, 1989; Hazen & Stein, 1995; Heimberg et al., 1993; Hope & Heimberg, 1993; Johnson, Turner, Beidel, & Lydiard, 1995; Mattick, Page, & Lampe, 1995; Schneier et al., 1994). For example, research has indicated that relative to healthy individuals, interpersonal functioning for people with social fears is more likely

to be strained due to problems regarding poor conflict resolution (Pilkington & Richardson, 1988), or due to interpersonal mistrust and poor assertiveness skills (Alden & Capreol, 1993; Kachin et al., 2001).

However, although some individuals with more pervasive social phobia may have greater problems due to poor social skills, it is questionable whether such difficulties necessarily reflect poor skill development or rather reflect inhibition of adequately developed social skills because of anxiety (Alden & Bieling, 1998; Herbert et al., 1992). Further, studies have shown that many persons with social phobia are flexible in their use of social skills, choosing to select safe behaviors and social roles based on their expectations that a given interpersonal situation is likely to result in a negative outcome of disapproval or criticism (Alden & Beiling, 1998). In contrast, individuals with more severe social phobia and/or comorbid APD have been shown to have a less flexible range of social skills and are more likely to benefit substantially from social skills training as part of their therapeutic intervention (Alden & Capreol, 1998). Moreover, studies have revealed that skill deficits may be specific to one kind of relationship (Alden & Philips, 1990), may vary with respect to the nature of the social context (Stravynski et al., 2001), and that instead of a continuum effect, specific skill deficits may constitute subtypes of generalized social phobia (Kachin et al., 2001). The latter research is similar to earlier work which found that one descriptive category of study participants with social phobia was marked by tendencies to be overly friendly and submissive, versus another descriptive category of participants with social phobia, which was characterized by mistrustful, hostile, and controlling behavior (Alden & Capreol, 1993; Bruch et al., 1986). The implication of these various studies is that each area of impairment, subtype, or descriptive category represents a particular set of interpersonal difficulties which require specific intervention strategies (Alden & Beiling, 1998; Alden & Phillips, 1990; Brown et al., 1997; Jackson & Wenzel, 2002; Kachin et al., 2001; Sheffield, Carey, Patenaude, & Lambert, 1995; Stravynski et al., 2001).

Close Relationships in Social Phobia

To date, we are only beginning to develop an understanding about the types of relationship difficulties experienced by people with social phobia (Alden & Phillips, 1990; Eng et al., 2001; Jackson & Wenzel, 2002; Wenzel, 2002). Despite the relatively limited research findings, it is nonetheless believed that symptoms of anxiety have negative impact on the maintenance and/or enhancement of close relationship functioning for persons who have anxiety disorders, especially social phobia. While it is generally accepted that social phobia is accompanied by disturbance in close relationships, it is not known whether social phobia is associated with unique relationship problems, or how those particular problems may contribute to relationship dissatisfaction for individuals with social phobia (Jackson & Wenzel, 2002). Although studies have reported that the romantic relationships of people with social phobia are likely to be significantly impaired (Schneier et al., 1994; Wittchen & Beloch, 1996), these findings have been based on clinician ratings and do not involve details about those relationships from the perspectives of persons with social phobia or their partners. Further, it is proposed that evolving research of interpersonal functioning in anxiety disorders should explore aspects of potential "relationship cultures" in which anxiety symptoms may be inadvertently reinforced by the interactions and motivations of close relationship partners (Jackson & Wenzel, 2002).

Horowitz (1979) reported that relationship difficulties are commonly identified as major concerns by psychotherapy outpatients. He proposed that various problems in interpersonal functioning represent cognitive aspects and other psychological elements that form much of the symptomatic bases of various psychiatric disorders and poor psychological adjustment (Horowitz, Weckler, & Doren, 1983). In particular, the degree of overall problems in interpersonal functioning is strongly correlated with symptoms and level of impairment in social phobia (Gurtman, 1992; Kachin et al., 2001). While the development of basic friendships and close personal relationships is fundamental to social support and general sense of well being for most

people (Fehr, 1996), this kind of basic interpersonal functioning is often the most challenging area of daily living for individuals with generalized social phobia (Quilty et al., 2001).

Although the diagnostic criteria for social phobia do not stipulate aspects of social relations such as interpersonal trust or fear of intimacy (Kachin et al., 2001; Sherman & Thelen, 1996), understanding subtleties such as these may help to differentiate relationship functioning across various types of anxiety disorders and may indicate how to augment intervention specific to the interpersonal impairment experienced by those with social phobia (Kachin et al., 2001; Segrin, 2000; Stravynski et al., 2001). Further, it has been proposed that temperamental influences (Cloitre & Shear, 1995; Wenzel, 2002), attachment behavior (Eng et al., 2001; Wenzel, 2002) and perceptions of interpersonal threat (Alden & Bieling, 1998; Doi & Thelen, 1993; Pilkington & Richardson, 1998; Trower & Gilbert, 1989; Wenzel, 2002) influence how people with social phobia respond to social demands and regard the prospect of intimacy in close relationships. Given the relatively early onset of social phobia, information about aspects of interpersonal functioning such as these, which are acquired prior to young adulthood, may contribute to the development of more effective intervention to improve psychological adjustment and social functioning earlier in the life span (Barrette et al., 2001; Dadds et al., 1997; Wenzel, 2002).

Arousability and Appraisals in Relationships

Klein (1992) suggested that reactivity and a low threshold of physiological arousal mediates the way that a person perceives and responds to the environment. Buss and Plomin (1975) proposed that temperamental characteristics evident in childhood include tendencies for arousability and sociability, and that there is a relationship between these aspects of childhood temperament and later adult social behavior (Buss, 1986; Buss & Plomin, 1984). They suggested that fear is a common emotional experience in people who are easily aroused, and that shyness and social anxiety in many individuals may be due to high levels of temperamentally based

arousability and emotionality. In addition, although people who are socially anxious may be motivated to seek interaction with others, they may be inhibited by dispositional tendencies and strong fears which impede their social effectiveness (Alden & Cappe, 1986; Alden & Capreol, 1993; Descutner & Thelen, 1991).

As described earlier, it has been suggested that for many people with social phobia, the physiological symptoms of anxiety may interfere with the ability to move, speak, and concentrate in a feared social situation (Alden & Capreol, 1993; Leary, 1983; Markway et al., 1992). The results of research in which undergraduates evaluated subjects' performances on a social interaction task indicated that those subjects who rated themselves as shy, based on factors such as blushing and awkwardness in social situations, were judged by others to be less competent than not-shy subjects in terms of articulation, composure, wit, conversational performance and interaction management in their task-interactions (Prisbell, 1991). Studies have also shown that people with social phobia may be regarded as less appealing relationship partners (Jones & Carpenter, 1986) and may be rated as less desirable potential dates by their conversational partners (Johnson & Glass, 1989).

In other research, socially anxious and non-anxious persons participated in a getting acquainted task that was based on the construct of reciprocity self-disclosure (Alden & Bieling, 1998). The getting acquainted condition was manipulated so that the participants appraised the likelihood of the social outcome as either positive or negative, and the subjects' social goals and use of safety behaviors, as well as the study confederates' reactions to them, were measured. Compared to the non-anxious participants, the socially anxious subjects used more safety behaviors and elicited more negative behaviors and responses from others in the negative appraisal condition, but not in the positive appraisal condition. From this, it was determined that for some people with social phobia, social skills and the use of safety behavior may vary according to situational appraisals. The findings also indicated that visible signs of anxiety in persons with

social phobia may have an *emotional contagion* effect on others, making the others feel uncomfortable due to their awareness of the distress and difficulties experienced by those with social phobia. That is, because of the discomfort that they may engender in others, people with social phobia may inadvertently establish negative transactional cycles in their social interactions. As such, the hesitant, awkward, and/or avoidant interpersonal style, the negative appraisals, and the apparent anxiety that are often characteristic of the social interactions of people with social phobia may have a self-fulfilling effect which has the potential to influence not only how they regard themselves, but also how others perceive and respond to them (Alden & Bieling, 1998; Jackson & Wenzel, 2002; Segrin, 2000).

Studies have also shown that individuals with social phobia may not gauge the nonverbal quality of their own social behavior accurately. One study revealed that while people with social phobia have a tendency toward negative biases in their self-appraisals, they are prone to be positively biased in terms of how they appraise others (Alden & Wallace, 1995). Additionally, in research regarding peoples' ability to make effective social judgements, De Paulo and Tang (1994) reported that subjects with social anxiety were less able than subjects who were not socially anxious to discern truth from deception while viewing videotaped confederates who alternated telling the truth and telling lies. Based on studies such as these, it is suggested that people with social phobia may have difficulty assessing verbal and nonverbal aspects of not only their own, but also others' interpersonal behavior.

Approaching Relationships

The identification of central aspects of relationship functioning in adulthood was extrapolated from the seminal work of Bowlby (1979) and Ainsworth, Blehar, Waters, and Walls' (1978), who conceptualized interpersonal attachment in the infant-primary care giver relationship. It was proposed that individuals' early emotional bonding experiences influence *working models*, or the way people view themselves and others, including expectations regarding the accessibility

and responsivity of others to satisfy their needs for protection and close interpersonal connectedness. Hazen and Shaver (1987) applied the concept of early attachment to overall interpersonal functioning in adulthood, suggesting that individuals may be categorically classified in terms of secure, anxious/ambivalent, or avoidant styles of attachment. Collins and Read (1990) extended attachment theory to account specifically for adult romantic relationship functioning. They demonstrated that individuals' approach to and style of engaging in relationships may be based upon: (a) their comfort with closeness, which has bearing on feelings of security in close relationships; (b) their confidence in others' dependability, the extent of which may influence anxiety, interpersonal trust and perceptions of predictability regarding the availability and dependability of others in close relationships; and (c) their anxiety or fear of abandonment and rejection, which in addition to trust factors may contribute to defensive avoidance behavior in close relationships.

Collins and Read (1990) reported that lack of trust regarding others' motives in relationships was associated with both insecure and avoidant attachment styles. Their research indicated that for men, close attachment was a better predictor of relationship satisfaction than was attachment characterized by anxiety over abandonment, but that the opposite scenario was found for women (i.e., anxiety over abandonment was a better predictor of relationship satisfaction than close attachment). The findings also indicated that relationship satisfaction by both partners decreases when the male partner engages in avoidant attachment while the female partner engages in anxious attachment.

Other studies have shown that close adult attachment is positively correlated with sociability, and that anxiety attachment is positively correlated with apprehensiveness about intimacy (Doi & Thelen, 1993), marital dissatisfaction and submissiveness (Eng et al., 2001), and emotions of anxiety, sadness and anger (Bartholomew & Horowitz, 1991). Studies have also suggested that attachment styles marked by fears of being humiliated, negatively judged, or

rejected by others contribute to social timidity and avoidance in initiating relationships (Hirschfield, Shei, & Wiese, 1991; Doi & Thelen, 1993). Once relationships are established, anxious attachment and interpersonal fear may foster dependency rather than autonomy in the relationships (Trull, Widiger, & Francis, 1987; Doi & Thelen, 1993). Further, it is proposed that relationships in which one partner is regarded as unpredictable and untrustworthy may evoke avoidant attachment and self-protecting, self-isolating behavior in the other partner (Doi & Thelen, 1993). Of note, it is reported that attachment styles tend to be fairly stable, although up to 30% of self-ratings for attachment behavior are subject to instability over periods ranging from eight months to several years, which suggests that there may be significant variability in self-ratings, or that attachment style in some instances is subject to change (Baldwin & Fehr, 1995).

In general, it is postulated that disrupted relations between infants and their primary care givers is a strong contributing factor in the working models of individuals with anxiety disorders (Jackson & Wenzel, 2002). In this, it is believed that early experiences with unstable and disappointing care givers foster anxiety and fears regarding close relationships. Subsequently, in adulthood, individuals with anxiety disorders often fear interpersonal closeness, or, they may want but at the same time avoid intimate involvement with relationship partners. Further, it is believed that the anxiety in interpersonal functioning is maintained when negative working models of close relationships remain unchallenged.

Specific to social phobia, working models characterized by anxiety attachment have been shown to be directly associated with severity of impairment. However, some persons with social phobia may be similar to healthy persons with respect to secure attachment functioning (i.e., capable of feeling safe and comfortable in adult romantic relationships), and research has shown that such individuals with social phobia are likely to be less impaired by their social anxiety (Eng et al., 2001). It is also suggested that healthier, more secure attachment may potentially increase with the involvement in at least one rewarding close relationship (Mikulincer, 1998). Further, for

those individuals who are involved in a close relationship, it is possible that negative working models may be disconfirmed by reprocessing emotional experiences and structuring interpersonal tasks to shape corrective emotionally engaged interactions with their relationship partners (Johnson & Whiffen, 1999). As such, while attachment may be a central component in the development and maintenance of social phobia, it is likely that it is not the only contributing factor to it (Eng, 2001).

Perceptions of Risk in Relationships

Of important consideration in the impaired interpersonal functioning in social phobia, apprehension and avoidance of close relationships have been reported to be strongly correlated with low sociability (Pilkington & Richardson, 1988) and have been shown to be important factors in the development of poor psychosocial adjustment (Hatfield, 1984). Hazen and Shaver (1987) suggested that perceptions of risk in close relationships are related to negative early childhood experiences involving intimacy and the attachment process. Pilkington and Richardson (1988) demonstrated that individuals who perceived interpersonal relationships as risky and untrustworthy were more likely to have fewer close friends and were less likely to be involved in a romantic relationship compared to individuals who were not interpersonally fearful or mistrustful. Additionally, those who perceived risk in intimacy were shown to have less trust in people with whom they are close, and were likely to distance themselves from other people. Gurtman (1992) noted that, although the capacity for trust in others is purported to be indicative of good social adjustment, there have been few studies that establish the relationship between trust and interpersonal difficulties. He examined measures of interpersonal problems in individuals who had scored either high or low in interpersonal trust, and found that low interpersonal trust was positively correlated with problems in intimacy, and was negatively correlated with sociability. Further, the results indicated that those who were highly distrusting tended to also be highly controlling in their relationships. In addition, low trust was related to negative and unsatisfying

social interactions, to low rates of self-disclosure, and to the tendency to disclose personal issues to family members rather than to a friend.

Intimacy in Relationships

Intimacy has been referred to as a core element in the relationships with those with whom one feels especially attached (Davis, 1973). Intimacy is essential in close relationships involving both love and friendship (Fischer & Narus, 1981). Consistent with this, McAdams and Vaillant (1982, cited in Descutner & Thelen, 1991) reported that intimacy motivation is a predictor of future psychosocial adjustment, and that fear of intimacy may be a risk factor of other emotional difficulties. Further, studies have shown that individuals who are socially anxious often experience depression, loneliness, and less intimacy in their relationships (Cheek & Busch, 1981; Eng et al., 2001). Lack of intimacy has also been associated with alcoholism and job failure (Waltz, 1986; Duck, 1991; cited in Sherman & Thelen, 1996). Similarly, in his research of the kinds of problems in interpersonal functioning that are frequently described by psychotherapy patients, Horowitz (1979) reported that the patients' concerns frequently involved central issues of intimacy and trust.

Of particular relevance to social phobia, Sherman and Thelen (1996) suggested that avoidance of intimate relations is a maladaptive means of coping with anxiety regarding verbal and non-verbal communication. Further, Descutner & Thelen (1991) defined "fear of intimacy" as "...the inhibited capacity of an individual, because of anxiety, to exchange thoughts and feelings of personal significance with another individual who is highly valued" (p.219). They conducted a series of studies in their development and validation of a fear of intimacy scale and found that the mean scores for fear of intimacy in a clinical sample were consistently higher than those of an undergraduate sample. They suggested that intimacy in relationships is an important issue in understanding psychotherapy patients' difficulties in interpersonal functioning. Other research has demonstrated that individuals with a high fear of intimacy have fewer long-term relationships,

are lonely more often, and are less prone to self-disclosure than are those who are less fearful of being intimate (Descutner & Thelen, 1991; Doi & Thelen, 1993). In relation to attachment in relationships, Doi and Thelen (1993) reported findings in which fear of intimacy was positively correlated with anxiety and fear of abandonment, and negatively correlated with attachment styles of comfort with closeness and confidence in others' dependability.

In a study of friendships of adolescents, Sherman and Thelen (1996) reported that the number of dates the participants had within a two month period was not significantly correlated with fear of intimacy, but that the quality of relationships in the past, as well as the quality of those anticipated, were significantly correlated with intimacy fears. The authors proposed that, at least with adolescents, the quantity, if not the quality, of relationships may not differ across varying levels of fear of intimacy due to a generally universal need for intimacy. As these studies of fear of intimacy reveal, not only subjective distress regarding intimacy, but also indices such as satisfaction in close relationships (cognitive appraisal), frequency of personal disclosure (overt behavior), and the number of relationships an individual has had in the past, may contribute to a more comprehensive understanding of intimacy, trust, and general interpersonal functioning.

Problems in Interpersonal Functioning

As noted earlier, issues essential to the development of friendships and social support have also been identified by psychotherapy patients as central concerns in their difficulties with interpersonal functioning (Horowitz, 1979; Horowitz et al., 1983; Bartholomew & Horowitz, 1991). Horowitz et al. (1983) proposed that patients' complaints about interpersonal functioning reflect cognitive appraisals and other psychosocial components that are factors in psychological maladjustment and psychiatric disorders. Based on complaints that psychotherapy patients expressed about their interpersonal functioning, Horowitz, Rosenberg, Baer, Ureno, and Villasenor (1988) developed a standardized inventory of interpersonal problems as a way to explore whether there were particular interpersonal difficulties associated with particular

disorders. The conceptualization of the inventory was inspired by interpersonal theory, according to which it is postulated that interpersonal dynamics foster people's re-enactment of maladaptive interpersonal patterns as a way of maintaining a psychological connection to an earlier attachment figure, and that two interacting persons may influence each others' behavior in their interactions (Horowitz, 1996). The various problem statements in the Horowitz et al. (1988) inventory were classified according to themes of assertiveness, sociability, submissiveness, intimacy, responsibility, and being controlling in relationships. Certainly, the interpersonal factors discussed in previous sections that are believed to be important in the formation of close personal relationships (e.g., sociability, perceived risk and fears of intimacy, desire for interpersonal control, etc.) are consistent with the areas of interpersonal distress identified by Horowitz et al. (1988) in their work with psychotherapy patients.

Alden and Phillips (1990) extended the use of the Horowitz et al. (1988) inventory of interpersonal problems to integrate the framework of interpersonal theory with empirical observations of people with social phobia, depression, and healthy functioning. The results of the study indicated that the individuals with social phobia differed from the other participants based on areas of interpersonal functioning involving unassertiveness and social avoidance. More recently, social phobia subtypes (i.e., generalized and nongeneralized) have been studied according to a range of interpersonal problems to determine whether qualitative aspects of social functioning might be consistent with DSM-IV subtype classifications (Kachin et al., 2001). As with earlier studies based on the degree of symptom severity, the Kachin et al. (2001) findings suggested that the generalized vs. nongeneralized subtype of social phobia was characterized by greater extent of overall impairment in interpersonal functioning, although differences in the types of interpersonal problems were not found. However, when an analysis of types of interpersonal problems was based on a model of interpersonal theory, two groups were qualitatively differentiated with respect to areas of interpersonal problems. One group was characterized by

hostile, angry behavior, while another group was distinguished in terms of friendly-submissive behavior. It was suggested that although these groups were not significantly related to DSM-IV subtypes of social phobia, the qualitative information the findings provided might be used to augment assessment and treatment for social phobia regarding specific areas of problematic interpersonal functioning.

Summary of Close Relationships in Social Phobia

People who are effective in their approach to social interaction are more likely to form close personal relationships. Social skills and interpersonal ease are especially important during the early development of any relationship (Alden & Wallace, 1995; Cook, 1977; Fehr, 1996). However, individuals who are anxious in social situations initiate social interactions less frequently, are less responsive to their relationship partners, and their behavior is often marked by hesitancy in responding, difficulty in maintaining appropriate eye contact, smiling less, etc. (Jones & Carpenter, 1986; Segrin, 2000). Further, studies have shown that people with generalized social phobia do not interpret their own or others' nonverbal behavior as accurately as those who are not socially anxious. While they are overly critical of themselves when they make mistakes, they tend not to notice or to be less judgmental when others do the same (Alden & Wallace, 1995).

Although it has been proposed that subjective distress and an uneasy social style among those with more severe social phobia may be due to poorly developed social skills, it has also been suggested that their ineffective interactional behavior may be hindered less by skill deficits than by anxiety-related inhibition (Alden & Bieling, 1998; Herbert et al., 1992) or self-fulfilment of negative interpersonal dynamics (Kachin et al., 2001). Consistent with the worst fears and self-deprecatory assumptions common to many people with social phobia, studies have shown that socially anxious people may indeed be regarded by others negatively in terms of their personal warmth, and the degree to which they are viewed as socially skilled, likeable or fun (Alden &

Bieling, 1998; Fehr, 1996; Johnson & Glass, 1989; Prisbell, 1991). Further, it has been shown that people with social phobia engage in self-defensive behavior which has the potential to generate discomfort in others and may cause them to view those with social phobia negatively (Alden & Bieling, 1998; Segrin, 2000).

In summary, interpersonal functioning in generalized social phobia has been an understudied area of research (Eng et al., 2001; Kachin et al., 2001; Segrin, 2000; Stravynski et al., 2001, Wenzel, 2002). Although critical information has been gained through epidemiological studies regarding prevalence, comorbidity, and the impact of this disorder on educational and career achievement, much of our understanding has been based on sub-clinical samples (Eng et al., 2001; Alden & Bieling, 1998; Alden & Wallace, 1995). Given the early onset and substantial comorbidity in social phobia, and the negative implications that interpersonal impairment has for the development of social support and related physical and mental health, knowledge is needed regarding the social functioning specific to this debilitating disorder.

The Markway et al. (1992) model of social phobia presented earlier was not intended to be a representation of a unifying theory, but rather as an illustration of how various contributory factors and the maladaptive thinking and behaviors that are commonly seen in social phobia may be related to particular aspects of close, personal relationship functioning. These aspects of interpersonal functioning (i.e., perceptions of risk in relationships, problems in being intimate, etc.) in people with social phobia have implications regarding what may contribute to effective intervention to increase levels of social support and the number and quality of their close, personal relationships. (See Figure 2.)

Purpose of the Present Study

The present study is a component of a research project that was conducted by faculty of the University of Manitoba through the Anxiety Disorders Program at the St. Boniface General Hospital and the Anxiety Disorders Association of Manitoba, a self-help or mutual assistance association in the city of Winnipeg. The major goal of the research project was to evaluate the

Figure 2.

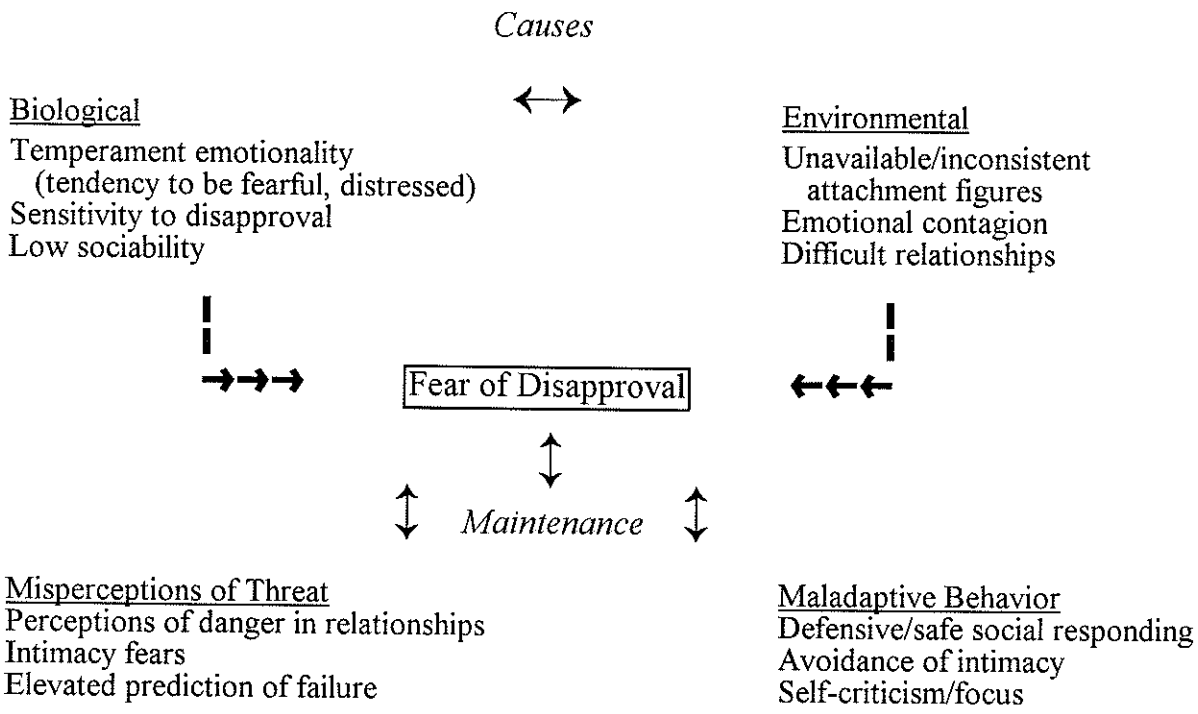

Figure 2. Aspects of interpersonal functioning applied to the multi-factor model of the fear of disapproval in social phobia (adapted from Markway et al., 1992).

effectiveness of: (a) a self-administered cognitive-behavioral treatment program for social phobia that used a self-help book (*Dying of Embarrassment*, Markway et al., 1992) and a workbook (*Workbook to Accompany "Dying of Embarrassment"*, Eldridge & Walker, 1991) in combination with a commercially available audiotape about various relaxation techniques (*Letting Go of Stress*, Miller & Halpern, 1980), compared with (b) a treatment program that used the same materials within a structured self-help group program. The structured self-help treatment program involved leaders who had experienced an anxiety problem for which they participated in a similar group treatment program themselves. These self-help treatment groups were compared to a waiting-list control group, and a group with a professional leader who had experience in cognitive-behavioral

therapy, using the same structure (self-help book, workbook, and audiotape).

As an additional component to the research project described above, the present study involved a two part investigation of interpersonal functioning in those who have generalized social phobia. In *Study One*, the generalized social phobia sample recruited for the treatment study was compared with community dwelling healthy control and outpatient panic disorder samples on self-report measures of interpersonal functioning. The analyses were designed to reveal more about what differentiates people with generalized social phobia from healthy persons and individuals with panic disorder with respect to their close personal relationships, and to broaden the understanding of the particular problems in interpersonal functioning that are experienced by individuals with generalized social phobia. By including healthy and panic disorder control groups, knowledge was gained about interpersonal characteristics in non-anxious respondents as well as how interpersonal difficulties are impaired across two of the more common, and frequently comorbid, anxiety disorders.

In *Study Two*, analyses were conducted to evaluate whether there were changes in interpersonal functioning in individuals with generalized social phobia who had completed a group cognitive behavioral treatment for generalized social phobia. Given that previous research in the anxiety research program described earlier found only modest change in self-administered treatment groups (Walker, Cox, Frankel, & Torgrud, 2001), the self-administered and waiting list groups in the present study were collapsed to designate a self-administered/waiting list control group of sufficient size which was compared with the combined group intervention groups (i.e., groups led by the professional or self-help program leaders). The responses on measures of interpersonal functioning were compared between the group intervention conditions (*group treatment*) and self-administered/waiting list (*no-group treatment*) conditions.

Hypotheses

Study One

First, with respect to comparisons of the social phobia and healthy control groups, it was hypothesized that: (a) mean scores on the *Emotionality, Activity, Sociability Scale* (Buss & Plomin, 1984) would be higher in the social phobia group on the dimensions of 'Emotionality-Distress' (*EAS Distress*) and 'Emotionality-Fearfulness' (*EAS Fearfulness*), and would be lower on the dimension of 'Sociability' (*EAS Sociability*); (b) mean scores on the *Revised Adult Attachment Scale* (Collins & Read, 1990) would be lower in the social phobia group for both 'Comfort with Closeness' (*RAAS Close*) and 'Confidence in the Dependability of Others' (*RAAS Depend*), and would be higher for 'Fear of Abandonment' (*RAAS Anxiety*); (c) mean scores on the *Risk in Intimacy (RII*; Pilkington & Richardson, 1998) would be higher in the social phobia group; (d) mean scores on the *Fear of Intimacy Scale-Friend* (*FIS-F*; Sherman & Thelen, 1996) subscales 'Current,' 'Past,' and 'Total' (*FIS-F Current, FIS-F Past, FIS-F Total*) would be higher in the social phobia group; and (e) mean scores on the *Inventory of Interpersonal Problems* (*IIP*; Horowitz et al., 1988) would be higher in the social phobia group for the thematic categories of "I find it hard to be..." *Assertive*, *Sociable*, and *Intimate*, in addition to the *Total Inventory of Interpersonal Problems* (*H-Assertive, H-Sociable, H-Intimate*, and *Total IIP*).

Second, it was hypothesized that there would be differences between the social phobia, the panic disorder, and the healthy control groups across all measures of interpersonal characteristics, with the panic group falling between the other two groups on measures of social functioning.

Study Two

It was hypothesized that there would be greater post-treatment change in the social phobia group treatment condition relative to the no-group treatment condition on several measures: (a) Emotionality, Activity, Sociability Scale: 'Emotionality-Distress' (EAS Distress) and 'Emotionality-Fearfulness' (EAS Fearfulness); (b) Revised Adult Attachment Scale: 'Comfort with Closeness' (RAAS Close) and 'Confidence in the Dependability of Others' (RAAS Depend);

(c) Risk in Intimacy (RII); (d) Fear of Intimacy Scale-Friend: 'Current' (FIS-F Current); and (e) Inventory of Interpersonal Problems:"I find it hard to be... Sociable" (IIP H-Sociable). No post-treatment change on these subscale scores was predicted for the no-group treatment condition. Further, it was predicted that the change for the group treatment condition would be in the direction of the mean score values reported for these measures for the healthy control group in Study One.

Study One

Method

Subjects

A total of 142 subjects participated in this study. Two clinical groups were comprised of 96 adult outpatients at the Anxiety Disorders Clinic at St. Boniface General Hospital who satisfied DSM-IV criteria for either social phobia (generalized subtype; $n = 71$) or panic disorder ($n = 25$). A third group of subjects was composed of individuals from the local community who constituted a healthy comparison group ($n = 46$).

Individuals with social phobia were participating in a clinical trial of CBT and included (a) 17 individuals who participated in a professionally led treatment group, (b) 16 people who participated in a self-help treatment group led by an individual who had both experienced an anxiety problem and completed a group treatment program, (c) 16 persons who participated in a self-administered treatment program, and (e) 22 individuals who comprised a waiting-list control group. One participant who completed pretreatment information and was assigned to a treatment group did not return for the remainder of the study requirements and the pre-treatment data for that person were eliminated.

Data were initially collected from 61 participants in the panic disorder treatment program, of whom 50 were female (82%) and 11 were male (18%). Of these individuals, 20 females (80%) and 5 males (20%) reported that they experienced no more than mild social anxiety, based on an established method used to differentiate primary diagnoses of generalized social phobia and panic

disorder (Cox, Swinson, & Shaw, 1991). This distribution of gender was consistent with the female-to-male ratio generally seen in the panic disorder treatment groups through the Anxiety Disorders Program. The panic treatment program was a clinical service rather than a research program, so participants had completed a clinical interview verifying that panic disorder was a primary problem. Persons with additional diagnoses (such as generalized anxiety disorder or moderate levels of depression) other than social phobia were allowed to participate.

Inclusion Criteria

As noted above, subjects in the social phobia group satisfied DSM-IV criteria for generalized social phobia and met criteria of: (a) the ability to read and write in English at a level consistent with completion of Grade 8, based on clinician judgement, (b) age of 18 years or older, (c) willingness to provide informed consent and to be randomly assigned to the treatment conditions, and (d) the ability to attend thirteen group meetings and to complete pre and post treatment self-report assessments. Individuals in the healthy control group fulfilled criteria (a) and (b) above, provided informed consent and were willing to complete self-report assessments, and did not have any current psychiatric diagnoses. The absence of current diagnoses was confirmed by a telephone interview covering a brief form of the *Structured Clinical Interview for DSM-IV* (*SCID*; Spitzer, Williams, Gibbon, & First, 1992). Persons in the panic disorder group satisfied criteria (a) and (b) above, provided informed consent and were willing to complete self-report assessments.

Exclusion Criteria

In the case of the social phobia group, exclusion criteria for the clinical trial included: (a) the presence of psychiatric disorders including schizophrenia, major depressive disorder, substance abuse or dependence, obsessive-compulsive disorder and panic disorder, (b) report of an organic psychiatric disorder which may relate to social phobia or interfere with, or be intensified by, participation in treatment, (c) suicide risk or severe distress to the extent that it might cause an unstable life situation, (d) concurrent psychological treatment, and (e) concurrent

pharmacological treatment with any psychiatric medication other than benzodiazepines (to a maximum dose of the equivalent of 20 mg. diazepam) that had not been at a stable dosage for at least three months. The exclusion criteria related to concurrent treatment and co-morbid diagnoses did not apply to participants in the panic group.

Recruitment

Subjects in the social phobia groups were recruited from several sources including: local newspaper advertisements, individuals who contacted the Anxiety Disorders Association of Manitoba or the Anxiety Disorders Program at the St. Boniface General Hospital for information about treatment, the waiting-list of persons requiring diagnostic assessment and/or treatment at the Anxiety Disorders Program, individuals who responded to announcements regarding the research project posted on local bulletin boards, and persons who called for information in response to media announcements about social phobia or the study. Individuals in the panic disorder group were recruited from ongoing panic treatment groups at the Anxiety Disorder Program.

The 46 individuals in the healthy control group were recruited through bulletin board notices which requested the "participation of healthy individuals" and were posted at the St. Boniface General Hospital and at local Winnipeg businesses and schools. Persons without psychiatric symptoms were invited to participate in the study by coming to the clinic and completing a questionnaire package. Healthy control subjects received an honorarium of $25.

Informed consent to participate in the study was obtained from each subject (see Appendix A).

Self-Report Questionnaire Measures of Interpersonal Functioning

The *Background Information Questionnaire* (*BIQ*) is a self-report measure of relationship functioning modified from a 28-item self-report measure, the *Student Information Questionnaire*, developed by Sherman & Thelen (1996) in their extension of Descutner and Thelen's (1991) *Fear of Intimacy Scale*. The BIQ questionnaire used in this study is a 23-item self-report measure that consists of Likert type, forced choice, and open-ended questions that assess dating/marital and friendship behaviours, histories and levels of satisfaction. Sample items regarding aspects of relationship functioning include "How difficult or easy do you consider yourself to get to know?" and "For what length of time was your longest, close non-romantic friendship?" (see Appendix B).

The *Emotionality, Activity, Sociability Scale* (*EAS*; Buss & Plomin, 1984) is a 20-item self-report measure with five subscales that assess dimensions of adult temperament in terms of emotionality distress (*EAS Distress*), emotionality fearfulness (*EAS Fearfulness*), emotionality anger (*EAS Anger*), activity (*EAS Activity*), and sociability (*EAS Sociability*). (See Appendix C) Sample items of the instrument are "I have fewer fears than most people" and "I prefer working with others rather than alone." The instrument is comprised of four items for each of the five subscales. Respondents are asked to rate the extent to which each i tem is characteristic or typical of themselves on a Likert scale ranging from 1 ("not at all characteristic of me") to 5 ("extremely characteristic of me"). Each subscale is scored by taking the mean rating across items, and scores within the range of 1 to 5 indicate the degree to which the dimensions may influence temperament.

Buss and Plomin (1984) reported a two week test-retest mean reliability coefficient of .82 in an undergraduate sample, with subscale coefficients that ranged from .75, for EAS Distress, to .85, for both EAS Sociability and EAS Anger. Factor analysis of the whole scale produced five factors that were consistent with the five temperament traits that the authors proposed to measure

(Buss & Plomin, 1984). Additionally, the intercorrelations of the subscales indicated that the "Emotionality" subscales were largely distinct from the Activity and Sociability subscales.

The *Revised Adult Attachment Scale* (*RAAS*; Collins & Read, 1990) is an 18-item self-report measure with three subscales that assess styles of adult attachment with respect to *Comfort with Closeness* (*RAAS Close*), *Confidence in the Dependability of Others* (*RAAS Depend*), and *Fear of Abandonment* (*RAAS Anxious*) (see Appendix D). Sample items of the measure are "In relationships, I often worry that my partner will not want to stay with me" and "I am comfortable depending on others." The instrument is comprised of six items for each of the three subscales. Respondents are asked to rate the extent to which each item is characteristic of him or herself on a Likert scale ranging from 1 ("not at all characteristic of me") to 5 ("extremely characteristic of me"). Each subscale is scored by taking the mean rating across items, and scores within the range of 1 to 5 indicate the degree to which each of the dimensions may influence the adult attachment process in close relationships.

Collins and Read (1990) demonstrated internal consistency of each of the three dimensions of attachment in a study of 406 undergraduates. They reported Cronbach's alpha coefficients of .69, .75, and .72 for RAAS Close, RAAS Depend, and RAAS Anxiety, respectively. Test-retest reliability over a two month period was .68 for RAAS Close, .71 for RAAS Depend, and .52 for RAAS Anxiety. Collins and Read suggested that the lower coefficient for RAAS Anxiety may be due to a sensitivity of the items of the subscale being based on a respondent's particular relationship, which may contribute to a relatively lower stability in the RAAS Anxiety score.

Collins and Read (1990) reported significant positive correlations between the RAAS Close and measures of: self-esteem (.19), social behavior (.29), trust (.22) expressiveness (.38) and independence (.30). They also reported significant positive correlations between RAAS Depend and measures of: social behavior (.22), expressiveness (.31), trust (.30) and independence (.40). Further, significant negative correlations were found between the RAAS Anxiety and measures of: self-esteem (-.29) social behavior (-.30), trust (-.16), and independence (-.17).

Finally, Doi and Thelen (1993) reported significant negative correlations between a measure of fear of intimacy and RAAS Close (-.59) and RAAS Depend (-.40), contrasted by a significant positive correlation between RAAS Anxiety and the same measure of fear of intimacy (.30).

The *Risk In Intimacy Inventory* (*RII*; Pilkington & Richardson, 1988) is a 10-item self-report instrument which measures an individual's appraisal of risk in intimate relationships (See Appendix E). Sample items of the instrument are "I'm afraid to get really close to someone because I might get hurt" and "I find it difficult to trust other people." Respondents are asked to rate the extent to which each item is characteristic or typical of themselves on a Likert scale ranging from 1 ("not at all characteristic of me") to 5 ("extremely characteristic of me"). The scale is scored by taking the mean rating across items, and scores within the range of 1 to 5 indicate the degree to which the individual perceives intimate relationships as risky.

Pilkington and Richardson (1988) conducted a study of dating, interpersonal trust, and sensation seeking behavior involving 195 female and 201 male undergraduates. They reported that factor analyses of the RII produced a principal factor containing the ten items, accounting for 37% of the variance. Cronbach's alpha was .80 for the scale. A second study that examined issues such as intimacy, sociability, and love attitudes in a sample of 48 males and 48 females provided additional support of the RII. The same ten items loaded on one principal factor and accounted for 45% of the variance. Cronbach's alpha of .86 was reported in this study.

Construct validity of the RII was demonstrated in each of the studies described above (Pilkington & Richardson, 1988). In the first study, significant negative correlations were reported between the RII and self-esteem (-.11), number of close friends (-.20), emotional trust (-.27), and current romantic involvement (-.15). In the second study, significant negative correlations were reported between the RII and sociability (-.48) and extraversion (-.40); positive correlations were reported between the RII and "mania" love (.29), a relationship attitude which is marked by ambivalence. These studies suggest that individuals who perceive that intimate relationships are highly risky may have lower self-esteem, fewer close friends, and are less likely

to be in a current romantic relationship. In addition, they are less outgoing or sociable, and may harbor ambivalence in love relationships.

The *Fear of Intimacy Scale - Friend* (*FIS-F*; Sherman & Thelen, 1996) is an extension of the *Fear of Intimacy Scale* (*FIS*) which was originally developed by Descutner and Thelen (1991) and studied by Doi and Thelen (1993). The FIS is based on a three-part conceptualization of intimacy, involving: (1) intimate content - the communication of personal information, (2) emotional valence - the individual has strong feelings about the personal information (s)he conveys, and (3) vulnerability - the person communicating the personal information has high regard for the intimate partner. The FIS is a 35-item self-report instrument which measures an individual's anxiety about close relationships in terms of a target person. That is, subjects are asked to respond to each item in reference to a person with whom the subject imagines to be with in a close romantic relationship. In this way the FIS measures the fear of intimacy whether or not the subject is involved in a current romantic relationship (Descutner & Thelen, 1991). The FIS-F (Sherman & Thelen, 1996) is based on the same items as the FIS, but the target person is identified as a close same sex friend (see Appendix F). Sample items of the instrument are "I would be afraid of sharing my private thoughts with O(ther)" and "I would be comfortable with having a close emotional tie between us". Respondents are asked to rate the extent to which each item is characteristic of themselves on a Likert scale ranging from 1 ("not at all characteristic of me") to 5 ("extremely characteristic of me"). The scale is scored by taking the mean rating across items, and scores within the range of 1 to 5 indicate the degree of anxiety the individual feels with regard to close relationships. In the present study, the term "close same sex friend" was reworded to "close nonromantic friend" because it was anticipated that not all close nonromantic friendships are limited to same sex dyads.

The FIS has been reported as a valid and reliable measure (Descutner & Thelen, 1991; Doi & Thelen, 1993; Sherman & Thelen, 1996). The development and validation of the scale was conducted with undergraduate samples, and Descutner & Thelen (1991) demonstrated internal

consistency of the scale (Cronbach's alpha = .92 - .93), and a high test-retest reliability coefficient of .89, using a one month period between testing. Construct validity was assessed using measures that were predicted to be either positively or negatively correlated with the fear of intimacy. Correlations revealed a significant positive relationship between the FIS and a measure of loneliness (.48), and significant negative relationships with measures of self-disclosure (-.52) and social intimacy (-.58).

Doi and Thelen (1993) reported similar internal consistency for the FIS (Cronbach's alpha of .92) in their extension of the scale for use with a sample of men and women between 35 - 55 years of age. Significant positive correlations were found between the FIS and the measures of loneliness (.41), and negative correlations with measures of self-disclosure (-.21) and social intimacy (.20). Additionally, significant negative correlations were found between the FIS and attachment styles of confidence in others dependability (-.40) and comfort with closeness (-.59).

The FIS-F was developed as one of two extensions of the FIS to include additional types of close relationships (dating partners and same sex friends), and the application of the scale for use with a high school sophomore sample (Sherman & Thelen, 1996). Reference in the scales was directed to (a) a close dating partner (*FIS-D*), and (b) a close same sex friend (FIS-F). Sherman and Thelen (1996) reported Cronbach's alphas of .90 and .92 for, respectively, the FIS-D and the FIS-F. Significant positive correlations were reported between the FIS-F and a measure of loneliness (.37 for males, .54 for females), and significant negative correlations were reported between the FIS-F and a measure of friendship intimacy (-.59 for males, -.48 for females). Finally, significant positive correlations were reported between the FIS-D and the FIS-F

(.56 for males, .51 for females), and the authors suggested that those who fear intimacy in dating relationships may be more likely to fear intimacy in their friendships as well.

The *Inventory of Interpersonal Problems* (*IIP*; Horowitz et al., 1988) is a 127-item self-report measure which assesses a variety of interpersonal problems. It is useful in making explicit aspects of interpersonal functioning in terms of both behavioral insufficiencies and excessiveness. The scale contains statements about interpersonal behaviors and is divided into two parts: items in the first part begin with the phrase "It is hard for me to...," (e.g., "It is hard for me to attend parties at work") and items in the second part describe "things that you do too much" (e.g., "I try to do too much for other people").

Respondents are asked to rate the extent to which each problem is distressing for them on a Likert scale ranging from 0 ("not at all distressing") to 4 ("extremely distressing"). Six empirically derived subscales have been established as: "Hard to be" (*H-*) *Assertive*, *Sociable*, *Submissive*, *Intimate*, and "Too" (*T-*) *Responsible* and *Controlling*. A measure of overall distress is calculated as the average score of all items in the inventory (*Total IIP*). Subscale values are scored by taking the mean rating across items within each of the particular subscales.

In the development and validation of the scale, Horowitz et al. (1983) reported that the internal consistency of the items within each subscale was consistently positive and significant at the $p < .01$ level. Cronbach's alpha for the subscales ranged from .82 to .94 in a clinical sample, and test-retest correlation coefficients ranged from .80 to .90 for a ten-week interim period. The authors also reported that the IIP is sensitive to treatment response but that patients who reported having relatively more noninterpersonal problems (e.g., health worries, inability to work, intrusive thoughts), dropout more frequently from treatment and have less successful treatment outcomes (Horowitz et al., 1988).

Construct validity was established in the development of the test, the basis of which was psychotherapy patients' own statements about the problems they had with regard to interpersonal functioning (Horowitz et al., 983). A sample of psychiatric outpatients responded to the IIP and

other measures of distress, loneliness, assertiveness, and interpersonal dependency (Horowitz et al., 1988). Findings revealed significant positive correlations at the $p < .01$ level between H-Sociable and measures of interpersonal sensitivity (.75) and loneliness (.73), T-Responsible and a depression inventory (.60), and H-Submissive and a measure of hostility (.64). Construct validity has been further demonstrated by Gurtman's (1992) findings in which overall interpersonal distress (IIP Total) was negatively correlated with interpersonal trust (-.27) and sociability (-.25), and positively correlated with negative affect (.64) and shyness (.59). Additionally, Machiavellianism (the attitude that people are immoral and can be manipulated through cunning) was found to be negatively correlated with problems in being intimate (-.47), submissive (-.42), and sociable (-.38).

Procedure

A version of the *Structured Clinical Interview for DSM-IV* (*SCID*; Spitzer et al., 1992) was used to establish diagnoses for the participants with social phobia and to exclude diagnoses for the healthy control participants. The SCID is a semi-structured psychiatric diagnostic interview, the content of which has been formulated in accordance with the definitions and criteria of the DSM-IV. Reliability has been widely reported in the scientific literature in psychopathology, and use of the SCID in the selection and description of research samples has been well established (Goldstein & Hersen, 1990).

Presence of panic disorder without significant co-morbid social phobia was based on research in which the *Fear Questionnaire* (*FQ*; Marks & Mathews, 1979) was used to differentiate between panic disorder and social phobia (Cox et al., 1991). This self-report measure contains 20 items which generate ratings for *Main Phobia, Total Phobia, Anxiety-Depression*, and a global rating of phobic symptoms. The FQ provides additional subscales of *Agoraphobia, Blood-Injury Phobia*, and *Social Phobia* derived from factor analyses of the total scale. Individual phobia items are rated on an 8-point Likert-type scale in terms of degree of avoidance. Test-retest reliability for each of the four main ratings and three subscales of the FQ is

high, ranging from .79 to .96. In the Cox et al. (1991) study, participants were comprised of anxiety disorder patients who had been diagnosed with generalized social phobia or panic disorder with agoraphobia according to DSM-III-R criteria through clinical interview. The results of the study indicated that the Social Phobia subscale of the FQ (*FQ -Soc*) accurately differentiated panic disorder with agoraphobia and generalized social phobia. That is, relative to the DSM-II-R diagnoses previously established, the FQ-Soc correctly classified 77% of the panic disorder and 70% of the social phobia participants in the study. Given that the mean score on the FQ-Soc for the individuals with generalized social phobia in that study was 22.4, with a standard deviation of 8.8, a cut-off score of <15 on the FQ-Soc was used in the present study to identify panic disorder group participants with relatively low levels of social phobia symptoms.

As noted in the 'Subjects' section, a total of 61 individuals who were being treated in the Anxiety Disorders group treatment program for panic disorder completed the FQ-Soc as part of the Anxiety Disorders Program pre-treatment questionnaire assessment package. Twenty-five respondents scored below the screening cut-off score of 15 on the FQ-Soc, and these individuals subsequently comprised the panic disorder comparison group for Study One.

Data Analyses

Statistical analyses were performed using the *Statistical Package for the Social Sciences* (*SPSS*; *SPSS Release 10.05*; 1999) computerized analysis program. Group responses on the demographic and Background Information Questionnaire (BIQ) items were evaluated with (a) Chi-square tests of independent proportions or, for open-ended and Likert-type items, (b) one-way Analysis of Variance (*ANOVA*), with (c) subsequent *Ryan-Einot-Gabriel-Welsh (REGW)* multiple *F* tests (in instances of a statistically significant difference in the ANOVA) to compare the females-only item means across the three groups. The REGW multiple *F* test was selected because it controls the familywise error rate while maintaining statistical power (Seaman, Levin, & Serlin, 1991). The various self-report measures of interpersonal functioning were evaluated by Multivariate Analysis of Variance *(MANOVA)* statistical procedures, using Wilks' Lambda as the

criterion of statistical significance and univariate analyses to determine potential group, gender, and interaction effects. Instances in the females-only analyses across the healthy control, social phobia, and panic disorder samples of a statistically significant MANOVA were subsequently submitted to REGW multiple *F* tests to determine relative mean differences among the samples. The probability of a Type I error was designated as .05 for all analyses in Study One.

Results

Open-ended *Background Information Questionnaire* items were explored for outliers which might compromise accurate depictions of between group comparisons. Based on established statistical procedure (Tabachnick & Fidell, 2001), responses which exceeded three standard deviations from the mean in a given group were modified to +/- 1 measurement unit of the next closest response in the distribution, removing some of the effect of the outlier while maintaining the general distribution of group responses. As an example, to a question that asked subjects about how many nonromantic relationships they had, one response exceeded three standard deviations above the mean for the given group. This particular response was "30" and the next closest response in the group was "10" and, as such, the outlying response was changed to "11". Consistent with this procedure, a total of nine responses were designated as outliers and adjusted accordingly: (a) "Number of people dated exclusively for longer than two months" (two responses in the healthy control group and one response each in the social phobia and panic disorder groups); (b) "Length of longest, closest dating or spousal relationship" (one response in the social phobia group); (c) "Number of nonromantic friendships of greater than one year duration within the past three years" (one response in the social phobia group); (d) "Duration of

closest nonromantic friendship" (one response in the social phobia group); and (e) "Number of current close nonromantic friends" (two responses in the social phobia group).

The small number of males in the panic disorder group, and the ensuing instances of insufficient cell sizes, made comprehensive analyses across the three groups unfeasible. For this reason, the panic group could not be included in across-group gender analyses. The social phobia and healthy control group responses were analyzed for group, gender, and interaction (group x gender) effects, whereas data for only the female participants (*females-only*) were analyzed across the social phobia, healthy control, and panic disorder groups to compare the two clinical group responses and those of the healthy control participants.

Demographic and Background Information

Sample demographic characteristics. Gender was similarly distributed in the social phobia (51% females) and healthy control (59% females) groups, but as noted earlier, there was a predominance of females (80%) in the panic disorder group, $X^2(2, N = 142) = 6.54, p < .05$. Racial background information was not available for the panic disorder group, although no statistically significant differences were found between the social phobia and healthy control groups, which were comprised primarily of Caucasian participants (89%) with a remaining distribution of 2% Filipino, 6% Aboriginal, and 3% Other ($X^2(3, N = 117) = 5.12, p > .05$).

The sample demographic characteristics of this study are unusual in some respects. Although there was a predominance of females in the panic disorder group, gender was similarly distributed in the healthy control and social phobia groups, primarily due to efforts in the larger research project to generally balance the gender distribution of the participants. However, it is not unusual in the Anxiety Disorders Program to have more females in a given group treatment, perhaps due to a tendency for females to access mental health services more readily than do males (Chartier et al., 2002; Lin, Goering, Offord, Campbell, & Boyle, 1996). The relatively low number of males in the panic disorder group in this study may exemplify this. Further, the finding of a vast majority of Caucasian participants across groups was not due to attempts to assign

participants in one group to match another but instead was a reflection of the population served by the teaching hospital.

Summaries of additional sample demographic characteristics are presented in Tables 1-2, for comparisons of the healthy control and social phobia groups, and in Tables 3-4, for comparisons between the females-only across the three groups. Analyses revealed that there were no gender or group differences with respect to age or the proportion of participants who completed high school, although group differences were found for number of years of education, which was lower for the social phobia vs. healthy control participants, as well as for the both the social phobia and panic disorder samples relative to the healthy control sample in the females-only comparisons.

The fewer mean years of education reported for both the social phobia and panic disorder respondents relative to the healthy control group should be interpreted with caution. It is possible that the disparity between groups regarding total years of education may be due to selection bias in the healthy control sample. That is, those who responded to the recruitment campaign for healthy control subjects may have done so in part because they were interested in the prospect of contributing to research in the mental health field, and this interest or bias may have been generated on the basis of greater educational experience. Moreover, in addition to local businesses and schools, recruitment posters were placed in the St. Boniface Hospital, which may have increased the likelihood of attracting individuals who have levels of education and training that exceed the general population average. Nonetheless, it is possible that the lower education level for the social phobia and panic disorder groups relative to the healthy control group is consistent with the lower educational achievement reported in epidemiological studies for individuals with anxiety disorders (Hope & Heimberg, 1993; Kachin et al., 2001; Mendlowicz & Stein, 2000; Quilty et al., 2002; Schneier et al., 1992; Walker & Stein, 1995).

Table 1.

Sample Demographic Characteristics: Item Responses by Group with Gender

	Healthy Control (N=46)	Social Phobia (N=71)
Age (yrs.)	Males M=35.68 (SD=11.42, n=19)	Males M=35.12 (SD= 9.06, n=34)
	Females M=38.26 (SD=12.96, n=27)	Females M=40.14 (SD=14.48, n=36)
	Combined M=37.20 (SD=12.28, N=46)	Combined M=37.70 (SD=12.33, N=70)
Education (yrs.)	Males M=16.00 (SD= 4.19, n=19)	Males M=14.15 (SD= 1.99, n=34)
	Females M=14.93 (SD= 3.28, n=27)	Females M=13.06 (SD= 2.09, n=35)
	Combined M=15.37 (SD= 3.68, N=46)	Combined M=13.59 (SD= 2.10, N=69)
Grade 12 (yes)	Males 94.7%	Males 91.2%
	Females 88.9%	Females 88.6%
	Combined 91.3%	Combined 89.9%
Parents' in married/ spousal relationship during Ss teens (yes)	Males 78.9%	Males 80.0%
	Females 77.8%	Females 66.7%
	Combined 78.3%	Combined 73.2%
Current exclusive dating/marital relationship (yes)	Males 64.7%	Males 44.0%
	Females 74.1%	Females 63.6%
	Combined 70.5%	Combined 55.2%
Current relationship duration (yrs.)	Males M=12.51 (SD=14.99, n=12)	Males M=11.49 (SD= 8.71, n=11)
	Females M=14.51 (SD=14.17, n=20)	Females M=14.10 (SD=10.00, n=21)
	Combined M=13.76 (SD=14.27, n=32)	Combined M=13.20 (SD= 9.51, n=32)

Table 2.

Sample Demographic Characteristics: Comparisons of Item Responses by Group with Gender

		Statistic	*df*	*p*
Age (yrs.)	Group	F= 0.08	1, 115	*NS*
	Gender	F= 2.63	1, 115	*NS*
	Interaction	F= 0.27	1, 115	*NS*
Education (yrs.)	Group	F=11.91	1, 114	.01
	Gender	F= 4.03	1, 114	*NS*
	Interaction	F= 0.00	1, 114	*NS*
Grade 12 (yes)	Males	X^2= 0.23	1	*NS*
	Females	X^2= 0.02	1	*NS*
	Combined	X^2= 0.07	1	*NS*
Parents' in married/ spousal relationship during Ss teens (yes)	Males	X^2= 0.01	1	*NS*
	Females	X^2= 0.95	1	*NS*
	Combined	X^2= 0.38	1	*NS*
Current exclusive dating/ marital relationship (yes)	Males	X^2= 1.76	1	*NS*
	Females	X^2= 0.75	1	*NS*
	Combined	X^2= 2.51	1	*NS*
Current relationship duration (yrs.)	Group	F= 0.50	1, 63	*NS*
	Gender	F= 0.52	1, 63	*NS*
	Interaction	F= 0.10	1, 63	*NS*

Note. *NS*=non-significant, p>.05

Table 3.

Sample Demographic Characteristics: Females Only Item Responses by Group

	Healthy Control (N=27)	Social Phobia (N=36)	Panic Disorder (N=20)
Age (yrs.)	M=38.26 (SD=12.96, N=27)	M=40.14 (SD=14.48, N=36)	M=38.40 (SD=13.08, N=20)
Education (yrs.)	M=14.93[b] (SD= 3.28, N=27)	M=13.06[a] (SD= 2.09, N=35)	M=13.30[a] (SD= 1.59, N=20)
Grade 12 (yes)	88.9%	88.6%	95.0%
Parents' in married/ spousal relationship during Ss teens (yes)	77.8%	66.7%	85.0%
Current exclusive dating/marital relationship (yes)	74.1%	63.6%	70.0%
Current relationship duration (yrs.)	M=14.51 (SD=14.17, n=20)	M=14.10 (SD=10.00, n=21)	M= 12.67 (SD= 7.88, n=14)

Note. Means with different superscripts differ significantly at $p< .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple F-test following significant *ANOVA*.

Table 4.

Sample Demographic Characteristics: Comparisons of Females Only Item Responses by Group

	Statistic	*df*	*p*
Age (yrs.)	$F = 0.18$	2, 80	*NS*
Education (yrs.)	$F = 4.83$	2, 79	.01
Grade 12 (yes)	$X^2 = 0.78$	2	*NS*
Parents' in married/ spousal relationship during Ss teens (yes)	$X^2 = 2.55$	2	*NS*
Current exclusive dating/marital relationship (yes)	$X^2 = 0.77$	2	*NS*
Current relationship duration (yrs.)	$F = 0.12$	2, 52	*NS*

Note. *NS*=non-significant, $p>.05$

To explore whether higher levels of total years of education might offer an alternative explanation for group differences in the study, correlations between total years education and the open-ended and Likert-type variables were conducted for the study sample. Most of the BIQ items were not significantly associated with total years education, except for: (a) level of satisfaction with the quality of dating ($r = .23, p < .01$), and (b) number of non-romantic friends with whom the participant considered him/herself close ($r = .19, p < .05$). With the exceptions of EAS Activity, EAS Sociability, and FIS-F Total, for which no significant associations were indicated, the majority of self-report interpersonal measures evidenced low positive/negative correlations with total years of education (r values ranging from .16 to .29). Further, analyses of both the social phobia/healthy control groups and the females-only samples were conducted to explore for potential group by education level interaction effects, none of which were found for any of the BIQ items or any of the interpersonal measure subscales. Thus, although the social phobia and panic disorder participants in the study reported lower educational achievement relative to the healthy control participants, differences in education did not appear to present a viable competing hypothesis for any differences found in the analyses of the measures of interpersonal functioning.

As indicated in Tables 1-4, the majority of participants, regardless of gender or group, reported that their parents were married during the participants' teen years. There were no differences in terms of gender or group designation regarding the participants' relationship status, and the majority of them across groups reported that they were currently in an exclusive dating, marital, or live-in romantic relationship. Although no statistically significant differences were found regarding current relationship status, relative to the males with social phobia (44%), there was a trend toward higher proportions of the healthy control male and female respondents (respectively, 64% and 74%), and the social phobia and panic disorder female participants (respectively, 63% and 70%) to be in such relationships. Nevertheless, of those individuals who indicated that they were currently in such exclusive relationships, there were no significant differences in the duration of those relationships with respect to gender or group.

Spousal and dating relationship characteristics. Refer to Tables 5-6 for gender and group comparisons of spousal and dating relationship characteristics between the social phobia and healthy control participants, and to Tables 7-8 for females-only comparisons across the social phobia, healthy control, and panic disorder samples. Males with social phobia demonstrated lower proportions of having ever dated, and of having been in long-term dating or spousal relationships, relative to the male healthy control respondents. Significant differences were also found which indicated that, compared to the female social phobia participants, the male social phobia participants had proportionately fewer experiences with dating ($X^2(1, N=71) = 4.51, p<.05$) and long-term dating/spousal relationships ($X^2(1, N=71) = 5.07, p<.05$). There were no significant differences indicated for these items in the females-only analyses.

Of those respondents who reported dating and long-term relationship experiences, no significant differences were found for gender or group with respect to the number of exclusively dated partners with whom the respondents were involved for a duration of greater than two months. However, a gender effect emerged for females in the healthy control and social phobia groups, who reported a greater duration of their longest dating or spousal relationships relative to the males in the corresponding groups. No differences were found across the healthy control, social phobia, or panic disorder groups in the females-only analyses regarding the length of these relationships. Of note, compared to the male healthy control respondents, a significantly greater proportion of the male social phobia participants indicated that they had been told by their dating/spousal partners that they are difficult to get close to, although there was no difference between the male and female social phobia participants regarding this item ($X^2(1, n=58) = 1.05, p>.05$). Further, the females-only comparisons did not indicate significant differences across the social phobia, healthy control, and panic disorder samples regarding the proportions of those who reported that they had been told that it is difficult for their relationship partners to get close to them. Finally, the majority of all participants, regardless of gender or group, indicated that they were closer to their exclusive romantic partner rather than to their closest friend.

Table 5.

BIQ Dating and Spousal Relationships: Item Responses by Group with Gender

	Healthy Control (N=46)	Social Phobia (N=71)
Dating history (yes)	Males 100%	Males 82.9%
	Females 100%	Females 97.2%
	Combined 100%	Combined 90.1%
# Exclusively dated partners (>2 mo.)	Males M= 3.95 (SD= 2.44, n=19)	Males M= 3.55 (SD= 3.01, n=29)
	Females M= 3.69 (SD= 2.00, n=26)	Females M= 3.74 (SD= 2.36, n=35)
	Combined M= 3.80 (SD= 2.17, n=45)	Combined M= 3.66 (SD= 2.65, n=64)
Long-term dating/ spousal relation-ship history (yes)	Males 94.7%	Males 71.4%
	Females 96.3%	Females 91.7%
	Combined 95.7%	Combined 81.7%
Longest dating/spousal relationship (yrs.)	Males M=10.71 (SD=12.35, n=18)	Males M= 9.29 (SD= 7.54, n=25)
	Females M=15.83 (SD=12.79, n=26)	Females M=14.51 (SD= 9.37, n=33)
	Combined M=13.74 (SD=12.72, n=44)	Combined M=12.26 (SD= 8.94, n=58)
"You are difficult to get close to" (yes)	Males 16.7%	Males 56.0%
	Females 19.2%	Females 42.4%
	Combined 18.2%	Combined 48.3%
Closer to partner (yes) (vs. closest friend)	Males 100%	Males 81.8%
	Females 78.9%	Females 85.7%
	Combined 86.7%	Combined 84.4%

Table 6.

BIQ Dating and Spousal Relationships: Comparisons of Item Responses by Group with Gender

		Statistic	*df*	*p*
Dating history (yes)	Males	X^2= 5.60	1	.02
	Females	X^2= 1.10	1	*NS*
	Combined	X^2= 7.16	1	.01
# Exclusively dated partners (>2 mo.)	Group	*F*= 0.12	1, 108	*NS*
	Gender	*F*= 0.00	1, 108	*NS*
	Interaction	*F*= 0.21	1, 108	*NS*
Long-term dating/ spousal relation-ship history (yes)	Males	X^2= 4.88	1	.03
	Females	X^2= 0.59	1	*NS*
	Combined	X^2= 5.56	1	.02
Longest dating/spousal relationship (yrs.)	Group	*F*= 0.42	1, 101	*NS*
	Gender	*F*= 5.89	1, 101	.02
	Interaction	*F*= 0.00	1, 101	*NS*
"You are difficult to get close to" (yes)	Males	X^2= 7.20	1	.01
	Females	X^2= 3.71	1	*NS*
	Combined	X^2=10.39	1	.01
Closer to partner (yes) (vs. closest friend)	Males	X^2= 2.97	1	*NS*
	Females	X^2= 0.32	1	*NS*
	Combined	X^2= 0.70	1	*NS*

Note. *NS*=non-significant, $p>.05$

Table 7.

BIQ Dating and Spousal Relationships: Females Only Item Responses by Group

	Healthy Control (N=27)	Social Phobia (N=36)	Panic Disorder (N=20)
Dating history (yes)	100%	97.2%	100%
# Exclusively dated partners (>2 mo.)	M= 3.69 (SD= 2.00, n=26)	M= 3.74 (SD= 2.36, n=35)	M=3.75 (SD= 2.92, n=20)
Long-term dating/spousal relationship history (yes)	96.3%	91.70%	100%
Longest dating/spousal relationship (yrs.)	M=15.83 (SD=12.79, n=26)	M=14.51 (SD= 9.37, n=33)	M=11.97 (SD=7.94, n=20)
"You are difficult to get close to" (yes)	19.2%	42.4%	30.0%
Closer to partner (vs. closest friend)	78.9%	85.7%	92.3%

Note. Means with different superscripts differ significantly at $p < .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple F-test following significant *ANOVA*.

Table 8.

BIQ Dating and Spousal Relationships: Comparisons of Females Only Item Responses by Group

	Statistic	*df*	*p*
Dating history (yes)	$X^2 = 1.66$	2	*NS*
# Exclusively dated partners (>2 mo.)	$F = 0.04$	2, 78	*NS*
Long-term dating/spousal relationship history (yes)	$X^2 = 2.86$	2	*NS*
Longest dating/spousal relationship (yrs.)	$F = 0.80$	2, 76	*NS*
"You are difficult to get close to" (yes)	$X^2 = 3.74$	2	*NS*
Closer to partner (vs. closest friend)	$X^2 = 1.15$	2	*NS*

Note. *NS*=non-significant, $p>.05$

Past nonromantic friendship characteristics. There were no gender or group differences found among the social phobia and healthy control respondents (see Tables 9-10) with respect to whether they ever had a close, personal nonromantic friendship, nor were differences found across the social phobia, healthy control, and panic disorder samples regarding this in the females-only comparisons (see Tables 11-12). However, of those who reported having had friendship experiences in the past, the social phobia participants reported a significantly smaller number of nonromantic friendships within the past three years relative to the healthy control group. Consistent with this, the females-only comparisons of this item revealed a lower mean for the social phobia vs. the healthy control sample, although the panic disorder mean response did not statistically differ from that of either the social phobia or the healthy control sample. Further, the proportion of participants who had been told by their close, nonromantic friends that they are difficult to get close to was significantly higher for the males with social phobia relative to the males in the healthy control group. No differences for this item were found in comparisons between the males and females in the social phobia group ($X^2(1, n=60) = 2.69, p>.05$) or in the females-only analyses across the social phobia, healthy control, and panic disorder samples. Finally, there were no significant differences based on gender or group regarding the duration of the respondents' closest nonromantic friendship.

Current nonromantic friendship characteristics. No gender or group differences were found among the social phobia and healthy control respondents with respect to being currently involved in a nonromantic friendship (see Tables 13-14), nor were there differences in the females-only comparisons across the social phobia, healthy control, and panic disorder samples regarding current nonromantic friendship involvement (see Tables 15-16). However, the social phobia participants reported having fewer current nonromantic friends that they felt they could turn to if they had a problem relative to those in the healthy control group. The females-only comparisons were consistent with this finding, excepting that the panic disorder sample mean did not differ significantly from that of either the social phobia or the healthy control sample.

Table 9.

BIQ Past Nonromantic Friendships: Item Responses by Group with Gender

	Healthy Control (N=46)		Social Phobia (N=71)	
Close, personal nonromantic friendship in past (yes)	Males	89.5%	Males	77.1%
	Females	88.9%	Females	88.9%
	Combined	89.1%	Combined	84.5%
# Nonromantic friendships (>12 mo.) w/n past 3 yrs.	Males	M= 8.12 (SD= 5.68, n=17)	Males	M= 3.89 (SD= 2.64, n=27)
	Females	M= 6.29 (SD= 3.25, n=24)	Females	M= 4.00 (SD= 2.90, n=33)
	Combined	M= 7.05 (SD= 4.45, n=41)	Combined	M= 3.95 (SD= 2.76, n=60)
"You are difficult to get close to" (yes)	Males	11.8%	Males	40.7%
	Females	4.2%	Females	21.2%
	Combined	7.3%	Combined	30.0%
Closest nonromantic friendship (yrs.)	Males	M=11.40 (SD=10.18, n=19)	Males	M=11.93 (SD=10.75, n=35)
	Females	M=16.64 (SD=12.82, n=27)	Females	M=15.33 (SD=15.83, n=36)
	Combined	M=14.48 (SD=11.97, N=46)	Combined	M=13.66 (SD=13.58, N=71)

Table 10.

BIQ Past Nonromantic Friendships: Comparisons of Item Responses by Group with Gender

		Statistic	*df*	*p*
Close, personal nonromantic friendship in past (yes)	Males	X^2= 1.34	1	*NS*
	Females	X^2= 0.00	1	*NS*
	Combined	X^2= 0.52	1	*NS*
# Nonromantic friendships (>12 mo.) w/n past 3 yrs.	Group	*F*=20.32	1, 100	.01
	Gender	*F*= 1.41	1, 100	*NS*
	Interaction	*F*= 1.80	1, 100	*NS*
"You are difficult to get close to" (yes)	Males	X^2= 4.60	1	.03
	Females	X^2= 3.82	1	*NS*
	Combined	X^2= 8.50	1	.01
Closest nonromantic friendship (yrs.)	Group	*F*= 0.03	1, 116	*NS*
	Gender	*F*= 3.06	1, 116	*NS*
	Interaction	*F*= 0.14	1, 116	*NS*

Note. *NS*=non-significant, $p>.05$

Table 11.

BIQ Past Nonromantic Friendships: Females Only Item Responses by Group

	Healthy Control (N=27)	Social Phobia (N=36)	Panic Disorder (N=20)
Close, personal nonromantic friendship in past (yes)	88.9%	88.9%	90.0%
# Nonromantic friendships (>12 mo.) w/n past 3 yrs.	M= 6.29[b] (SD= 3.25, n=24)	M= 4.00[a] (SD= 2.90, n=33)	M= 5.39[a,b] (SD= 3.79, n=18)
"You are difficult to get close to" (yes)	4.2%	21.2%	11.1%
Closest nonromantic friendship (yrs.)	M=16.64 (SD=12.82, n=27)	M=15.33 (SD=15.83, n=36)	M=16.17 (SD= 9.40, n=18)

Note. Means with different superscripts differ significantly at $p< .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple F-test following significant *ANOVA*.

Table 12.

BIQ Past Nonromantic Friendships: Comparisons of Females Only Item Responses by Group

	Statistic	*df*	*p*
Close, personal nonromantic friendship in past (yes)	X^2= 0.20	2	*NS*
# Nonromantic friendships (>12 mo.) w/n past 3 yrs.	*F*= 3.59	2, 72	.03
"You are difficult to get close to" (yes)	X^2= 3.92	2	*NS*
Closest nonromantic friendship (yrs.)	*F*= 0.73	2, 78	*NS*

Note. *NS*=non-significant, $p>.05$

Table 13.

BIQ Current Nonromantic Friendships: Item Responses by Group with Gender

	Healthy Control (N=46)		Social Phobia (N=71)	
Currently, or w/n 2 yrs., involved in nonromantic friendship (yes)	Males	78.9%	Males	71.4%
	Females	92.6%	Females	83.3%
	Combined	87.0%	Combined	77.5%
# Current nonromantic friends S considers self close to	Males	M= 5.18 (SD= 3.26, n=17)	Males	M= 2.64 (SD= 1.70, n=25)
	Females	M= 4.24 (SD= 1.92, n=25)	Females	M= 2.32 (SD= 1.80, n=31)
	Combined	M= 4.62 (SD= 2.56, n=42)	Combined	M= 2.46 (SD= 1.75, n=56)
Closest nonromantic friend is same gender (yes)	Males	53.4%	Males	88.0%
	Females	88.0%	Females	86.7%
Nonrelative vs. relative as closest friend (yes)	Males	66.7%	Males	96.0%
	Females	79.2%	Females	70.0%
	Combined	74.4%	Combined	81.8%

Table 14.

BIQ Current Nonromantic Friendships: Comparisons of Item Responses by Group with Gender

		Statistic	*df*	*p*
Currently, or w/n 2 yrs., involved in nonromantic friendship (yes)	Males	X^2= 0.37	1	*NS*
	Females	X^2= 1.26	1	*NS*
	Combined	X^2= 1.71	1	*NS*
# Current nonromantic friends S considers self close to	Group	F=25.61	1, 97	.01
	Gender	F= 2.03	1, 97	*NS*
	Interaction	F= 0.50	1, 97	*NS*
Closest nonromantic friend is same gender (yes)	Males	X^2= 5.91	1	.02
	Females	X^2= 0.02	1	*NS*
Nonrelative vs. relative as closest friend (yes)	Males	X^2= 6.32	1	.01
	Females	X^2= 0.59	1	*NS*
	Combined	X^2= 0.75	1	*NS*

Note. *NS*=non-significant, p>.05

Table 15.

BIQ Current Nonromantic Friendships: Females Only Item Responses by Group

	Healthy Control (N=27)	Social Phobia (N=36)	Panic Disorder (N=20)
Currently, or w/n 2 yrs., involved in nonromantic friendship (yes)	92.6%	83.3%	90.0%
# Current nonromantic friends S considers self close to	M= 4.24[b] (SD= 1.92, n=25)	M= 2.32[a] (SD= 1.80, n=31)	M= 3.22[a,b] (SD= 2.67, n=18)
Closest nonromantic friend is same gender (yes)	88.0%	86.7%	83.3%
Nonrelative vs. relative as closest friend (yes)	79.2%	70.0%	88.9%

Note. Means with different superscripts differ significantly at $p < .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple F-test following significant *ANOVA*.

Table 16.

BIQ Current Nonromantic Friendships: Comparisons of Females Only Item Responses by Group

	Statistic	*df*	*p*
Currently, or w/n 2 yrs., involved in nonromantic friendship (yes)	X^2= 1.35	2	*NS*
# Current nonromantic friends S considers self close to	*F*= 5.90	2, 71	.01
Closest nonromantic friend is same gender (yes)	X^2= 0.19	2	*NS*
Nonrelative vs. relative as closest friend (yes)	X^2= 2.50	2	*NS*

Note. *NS*=non-significant, $p>.05$

A significantly greater proportion of females in both the social phobia and healthy control groups, as well as males in the social phobia group, reported that their closest nonromantic friend is the same gender as themselves, relative to the male healthy control participants, whose responses indicated that they were nearly as likely to have a same-gender person as an opposite-gender person as their closest nonromantic friend. The females-only comparisons for this item did not differ across samples, with the majority of them reporting that their closest nonromantic friend is female. Finally, most of the male social phobia respondents and most of the female participants (regardless of group), indicated that their closest friend is a nonrelative, in contrast to the male healthy control respondents, whose responses indicated that while about two-thirds of them have a non-relative as their closest friend, about one-third of them considered a relative to be their closest friend.

Questionnaire Measures of Interpersonal Functioning

Background Information Questionnaire (BIQ). The first two questions in the BIQ are broad items relating to the person's interpersonal ease and comfort, reported in Tables 17-18. Respondents in the social phobia group rated themselves as being less *Easy to get to know* and having less *Comfort getting close to people* relative to the healthy control group. Significant interaction terms for both of these items indicated that males in the social phobia group had the lowest mean scores relative not only to the healthy control males (highest mean scores) but also in contrast to the healthy control and social phobia females (respectively, second and third highest mean scores). Females-only analyses indicated that the social phobia sample means were significantly exceeded by those of the healthy control sample for both items, but that the panic disorder means fell at an intermediate level and did not differ from those of either the social phobia or the healthy control samples (see Tables 19-20).

Additional questions from the BIQ examined several interpersonal aspects of dating/spousal relationships such as emotional closeness, time spent together, and frequency of intimate discussion with an exclusive partner, as shown in Tables 21-24. The social phobia group

Table 17.

BIQ Interpersonal Ease and Comfort: Mean Ratings by Group with Gender

	Healthy Control (N=46)	Social Phobia (N=71)
How difficult/easy do you consider self to get to know? (*1-6)	Males M= 4.47 (SD= 1.26, n=19)	Males M= 2.46 (SD= 1.17, n=35)
	Females M= 4.11 (SD= 1.19, n=27)	Females M= 3.17 (SD= 1.23, n=36)
	Combined M= 4.26 (SD= 1.22, N=46)	Combined M= 2.82 (SD= 1.25, N=71)
How comfortable are you in getting close to people? (*1-4)	Males M= 3.05 (SD= 0.91, n=19)	Males M= 1.34 (SD= 0.48, n=35)
	Females M= 2.74 (SD= 0.81, n=27)	Females M= 1.97 (SD= 0.81, n=36)
	Combined M= 2.87 (SD= 0.86, N=46)	Combined M= 1.66 (SD= 0.74, N=71)

Note. *Denotes range of response choices

Table 18.

BIQ Interpersonal Ease and Comfort: Comparisons of Mean Ratings by Group with Gender

		F	*df*	*p*
How difficult/easy do you consider self to get to know?	Group	*F*=41.10	1, 116	.01
	Gender	*F*= 0.56	1, 116	*NS*
	Interaction	*F*= 5.39	1, 116	.02
How comfortable are you in getting close to people?	Group	*F*=75.46	1, 116	.01
	Gender	*F*= 1.24	1, 116	*NS*
	Interaction	*F*=10.89	1, 116	.01

Note. *NS*= non-significant, $p>.05$

Table 19.

BIQ Interpersonal Ease and Comfort: Females Only Item Mean Ratings by Group

	Healthy Control (N=27)	Social Phobia (N=36)	Panic Disorder (N=20)
How difficult/easy do you consider yourself to get to know? (*1-6)	M= 4.11[b] (SD= 1.19, N=27)	M= 3.17[a] (SD= 1.23, N=36)	M= 3.55[a,b] (SD= 1.47, N=20)
How comfortable are you in getting close to people? (*1-4)	M= 2.74[b] (SD= 0.81, N=27)	M= 1.97[a] (SD= 0.81, N=36)	M= 2.35[a,b] (SD= 0.93, N=20)

Note. *Denotes range of response choices. Means with different superscripts differ significantly at $p< .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple F-test following significant *ANOVA*.

Table 20.

BIQ Interpersonal Ease and Comfort: Comparisons of Females Only Mean Ratings by Group

	F	*df*	*p*
How difficult/easy do you consider yourself to get to know?	*F*= 4.22	2, 80	.02
How comfortable are you in getting close to people?	*F*= 6.45	2, 80	.01

Note. *NS*= non-significant, $p>.05$

Table 21.

BIQ Dating and Spousal Relationships: Mean Ratings by Group with Gender

	Healthy Control (N=46)	Social Phobia (N=71)
How dissatisfied/satisfied with quality of dating relationships? (*1-6)	Males M= 4.95 (SD= 0.91, n=19)	Males M= 2.79 (SD= 1.57, n=28)
	Females M= 4.60 (SD= 1.29, n=25)	Females M= 3.44 (SD= 1.58, n=34)
	Combined M= 4.75 (SD= 1.14, n=44)	Combined M= 3.15 (SD= 1.60, n=62)
How dissatisfied/satisfied are/would be in a long-term spousal-type relationship? (*1-6)	Males M= 5.37 (SD= 1.42, n=19)	Males M= 5.12 (SD= 1.17, n=34)
	Females M= 5.41 (SD= 0.80, n=27)	Females M= 4.63 (SD= 1.46, n=35)
	Combined M= 5.39 (SD= 1.08, N=46)	Combined M= 4.87 (SD= 1.34, N=69)
How emotionally close to longest, closest long-term partner? (*1-4)	Males M= 3.83 (SD= 0.51, n=18)	Males M= 3.40 (SD= 0.82, n=25)
	Females M= 3.40 (SD= 0.87, n=25)	Females M= 3.27 (SD= 0.80, n=33)
	Combined M= 3.58 (SD= 0.76, n=43)	Combined M= 3.33 (SD= 0.80, n=58)
How emotionally close to current exclusive romantic partner? (*1-4)	Males M= 3.91 (SD= 0.30, n=11)	Males M= 3.18 (SD= 0.87, n=11)
	Females M= 3.32 (SD= 0.95, n=19)	Females M= 3.38 (SD= 0.67, n=21)
	Combined M= 3.53 (SD= 0.82, n=30)	Combined M= 3.31 (SD= 0.74, n=32)

Table 21 (continued).

BIQ Dating and Spousal Relationships: Mean Ratings by Group with Gender

	Healthy Control (N=46)	Social Phobia (N=71)
How often time spent with partner? (*1-5)	Males M= 4.64 (SD= 0.67, n=11)	Males M= 4.00 (SD= 1.26, n=11)
	Females M= 3.80 (SD= 0.95, n=20)	Females M= 3.81 (SD= 1.36, n=21)
	Combined M= 4.10 (SD= 0.94, n=31)	Combined M= 3.87 (SD= 1.31, n=32)
How often discuss personal feelings/issues with partner? (*1-5)	Males M= 4.09 (SD= 0.54, n=11)	Males M= 3.36 (SD= 1.12, n=11)
	Females M= 4.05 (SD= 0.94, n=20)	Females M= 3.86 (SD= 1.06, n=21)
	Combined M= 4.06 (SD= 0.81, n=31)	Combined M= 3.69 (SD= 1.09, n=32)

Note. *Denotes range of response choices

Table 22.

BIQ Dating and Spousal Relationships: Comparisons of Mean Ratings by Group with Gender

		F	*df*	*p*
How dissatisfied/satisfied with quality of dating relationships?	Group	*F*=34.94	1, 105	.01
	Gender	*F*= 0.30	1, 105	*NS*
	Interaction	*F*= 3.19	1, 105	*NS*
How dissatisfied/satisfied are/would be in a long-term spousal-type relationship?	Group	*F*= 4.67	1, 114	.03
	Gender	*F*= 0.89	1, 114	*NS*
	Interaction	*F*= 1.23	1, 114	*NS*
How emotionally close to longest, closest long-term partner?	Group	*F*= 3.11	1, 100	*NS*
	Gender	*F*= 3.11	1, 100	*NS*
	Interaction	*F*= 0.93	1, 100	*NS*
How emotionally close to current exclusive roman-tic partner?	Group	*F*= 2.68	1, 61	*NS*
	Gender	*F*= 0.95	1, 61	*NS*
	Interaction	*F*= 3.84	1, 61	*NS*

Table 22 (continued).

BIQ Dating and Spousal Relationships: Comparisons of Mean Ratings by Group with Gender

		F	*df*	*p*
How often time spent with partner?	Group	*F*= 1.11	1, 62	*NS*
	Gender	*F*= 2.97	1, 62	*NS*
	Interaction	*F*= 1.18	1, 62	*NS*
How often discuss personal feelings/issues with partner?	Group	*F*= 3.25	1, 62	*NS*
	Gender	*F*= 0.79	1, 62	*NS*
	Interaction	*F*= 1.10	1, 62	*NS*

Note. *NS*= non-significant, $p>.05$

Table 23.

BIQ Dating and Spousal Relationships: Females Only Item Mean Ratings by Group

	Healthy Control (N=27)	Social Phobia (N=36)	Panic Disorder (N=20)
How dissatisfied/satisfied with quality of dating relationships? (*1-6)	M= 4.60[b] (SD= 1.29, n=25)	M= 3.44[a] (SD= 1.58, n=34)	M= 4.05[a,b] (SD= 1.54, n=20)
How dissatisfied/satisfied are/would be in a long-term spousal-type relationship? (*1-6)	M= 5.41[b] (SD= 0.80, N=27)	M= 4.63[a] (SD= 1.46, N=35)	M= 5.10[a,b] (SD= 0.85, N=20)
How emotionally close to longest, closest long-term partner? (*1-4)	M= 3.40 (SD= 0.87, n=25)	M= 3.27 (SD= 0.80, n=33)	M= 3.70 (SD= 0.80, n=20)
How emotionally close to current exclusive romantic partner? (*1-4)	M= 3.32 (SD= 0.95, n=19)	M= 3.38 (SD= 0.67, n=21)	M= 3.79 (SD= 0.58, n=14)
How often time spent with partner? (*1-5)	M= 3.80 (SD= 0.95, n=20)	M= 3.81 (SD= 1.36, n=21)	M= 4.07 (SD= 1.38, n=14)
How often discuss personal feelings/ issues with partner? (*1-5)	M= 4.05 (SD= 0.94, n=20)	M= 3.86 (SD= 1.06, n=21)	M= 4.50 (SD= 0.85, n=14)

Note. *Denotes range of response choices. Means with different superscripts differ significantly at $p< .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple F-test following significant *ANOVA*.

Table 24.

BIQ Dating and Spousal Relationships: Comparisons of Females Only Item Mean Ratings by Group

	F	*df*	*p*
How dissatisfied/satisfied with quality of dating relationships?	*F*= 4.44	2, 76	.02
How dissatisfied/satisfied are/would be in a long-term spousal-type relationship?	*F*= 3.67	2, 89	.03
How emotionally close to longest, closest long-term partner?	*F*= 1.70	2, 75	*NS*
How emotionally close to current exclusive romantic partner?	*F*= 1.74	2, 51	*NS*
How often time spent with partner?	*F*= 0.24	2, 52	*NS*
How often discuss personal feelings/ issues with partner?	*F*= 1.76	2, 52	*NS*

Note. *NS*= non-significant, $p>.05$

mean responses were lower than those of the healthy control group, regardless of gender, for both the participants' level of satisfaction with the quality of their dating relationships (*somewhat* to *moderately satisfied* vs. *somewhat dissatisfied*), and their degree of current or anticipated satisfaction in a long-term or marriage/partner relationship (*moderately satisfied* vs. *somewhat satisfied*). The results of the females-only analyses of these two items were consistent with the social phobia and healthy control group comparisons, excepting that the panic disorder means fell between but were not significantly different from those of either the social phobia or healthy control sample.

There were no indications of gender or group differences regarding the extent of the respondents' emotional closeness either with their longest-lasting, closest long-term partners, or with their current exclusive romantic partners. Similarly, there were no significant group or gender differences in terms of the time the respondents spend with their current exclusive partners, nor were there any differences among the study participants with respect to the frequency of their discussions about personal feelings or issues with their current exclusive relationship partners.

As presented in Tables 25-28, gender and group differences were indicated in the analyses of the remaining items of the BIQ, which concern aspects of nonromantic friendships such as perceived quality of, or confidence in, close friendships. The social phobia group mean was lower (*somewhat satisfied*) than that of the healthy control mean (*moderately satisfied*) regarding the respondents' satisfaction with the quality of their friendships within the past three years. The females-only comparisons for this question indicated that both the social phobia and panic disorder sample means were significantly lower than the healthy control sample mean

Regardless of group designation, male participants reported that they spend more time with their closest nonromantic friend (*several times per week*) compared to the female respondents (*once a week*). No differences were found in the females-only analyses for this item. With respect to how often the respondents talked about personal feelings/issues with their closest

Table 25.

BIQ Nonromantic Friendships: Mean Ratings by Group with Gender

	Healthy Control (N=46)	Social Phobia (N=71)
How dissatisfied/satisfied with quality of nonromantic friendships w/n past three years? (*1-6)	Males M= 5.12 (SD= 1.05, n=17)	Males M= 4.11 (SD= 1.55, n=27)
	Females M= 5.54 (SD= 0.51, n=24)	Females M= 4.15 (SD= 1.62, n=33)
	Combined M= 5.37 (SD= 0.80, n=41)	Combined M= 4.13 (SD= 1.58, n=60)
How often time spent with closest nonromantic friend? (*1-5)	Males M= 2.27 (SD= 0.88, n=15)	Males M= 2.16 (SD= 1.07, n=25)
	Females M= 1.80 (SD= 0.82, n=25)	Females M= 1.62 (SD= 0.86, n=29)
	Combined M= 1.98 (SD= 0.86, n=40)	Combined M= 1.87 (SD= 0.99, n=54)
How often discuss personal feelings/issues with closest nonromantic friend? (*1-5)	Males M= 3.20 (SD= 1.21, n=15)	Males M= 1.88 (SD= 1.20, n=25)
	Females M= 2.72 (SD= 0.94, n=25)	Females M= 2.45 (SD= 1.02, n=29)
	Combined M= 2.90 (SD= 1.06, n=40)	Combined M= 2.19 (SD= 1.13, n=54)
Confidence that closest friend would keep secrets private? (*1-4)	Males M= 3.75 (SD= 0.45, n=16)	Males M= 2.84 (SD= 1.11, n=25)
	Females M= 3.76 (SD= 0.60, n=25)	Females M= 3.24 (SD= 1.02, n=29)
	Combined M= 3.76 (SD= 0.54, n=41)	Combined M= 3.06 (SD= 1.07, n=54)

Note. *Denotes range of response choices

Table 26.

BIQ Nonromantic Friendships: Comparisons of Mean Ratings by Group with Gender

		F	*df*	*p*
How dissatisfied/satisfied with quality of nonromantic friendships w/n past three years?	Group	*F*=19.46	1, 100	.01
	Gender	*F*= 0.73	1, 100	*NS*
	Interaction	*F*= 0.50	1, 100	*NS*
How often time spent with closest nonromantic friend?	Group	*F*= 0.54	1, 93	*NS*
	Gender	*F*= 6.70	1, 93	.01
	Interaction	*F*= 0.04	1, 93	*NS*
How often discuss personal feelings/issues with closest nonromantic friend?	Group	*F*=11.96	1, 94	.01
	Gender	*F*= 0.04	1, 94	*NS*
	Interaction	*F*= 5.19	1, 94	.03
Confidence that closest friend would keep secrets private?	Group	*F*=14.94	1, 94	.01
	Gender	*F*= 1.24	1, 94	*NS*
	Interaction	*F*= 1.12	1, 94	*NS*

Note. *NS*= non-significant, $p>.05$

Table 27.

BIQ Nonromantic Friendships: Females Only Item Mean Ratings by Group

	Healthy Control (N=27)	Social Phobia (N=36)	Panic Disorder (N=20)
How dissatisfied/satisfied with quality of nonromantic friendships w/n past three years? (*1-6)	M= 5.54[b] (SD= 0.51, n=24)	M= 4.15[a] (SD= 1.62, n=33)	M=4.39[a] (SD= 1.24, n=18)
How often time spent with closest nonromantic friend? (*1-5)	M= 1.80 (SD= 0.82, n=25)	M= 1.62 (SD= 0.86, n=29)	M= 1.86 (SD= 1.21, n=18)
How often discuss personal feelings/ issues with closest nonromantic friend? (*1-5)	M= 2.72 (SD= 0.94, n=25)	M=2.45 (SD= 1.02, n=29)	M=2.89 (SD= 1.41, n=18)
Confidence that closest friend would keep secrets private? (*1-4)	M= 3.76[b] (SD= 0.60, n=25)	M= 3.24[a] (SD= 1.02, n=29)	M=3.06[a] (SD= 1.06, n=18)

Note. *Denotes range of response choices. Means with different superscripts differ significantly at $p < .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple F-test following significant *ANOVA*.

Table 28.

BIQ Nonromantic Friendships: Comparisons of Females Only Item Mean Ratings by Group

	F	*df*	*p*
How dissatisfied/satisfied with quality of nonromantic friendships w/n past three years?	*F*= 8.81	2, 72	.01
How often time spent with closest nonromantic friend?	*F*= 0.43	2, 69	*NS*
How often discuss personal feelings/ issues with closest nonromantic friend?	*F*= 0.96	2, 69	*NS*
Confidence that closest friend would keep secrets private?	*F*= 3.68	2, 69	.03

Note. *NS*= non-significant, $p>.05$

nonromantic friend, both group and interaction effects were found. The social phobia group reported a significantly smaller frequency of such personal discussion, which slightly exceeded *once a month*, relative to the healthy control group, which was nearly *once a week*. A significant group-by-gender interaction indicated that male social phobia participants reported the lowest frequency of personal discussion with their closest friend (*less than once per month)*, followed in turn by the female social phobia participants, the female healthy control participants, and then the male healthy control participants, whose mean response was highest. The females-only comparisons of this question did not result in any differences across samples. Finally, the mean response for the social phobia group (*moderately confident*) was exceeded by that of the healthy control group (*moderately* to *very confident*) regarding the respondents' confidence that their closest friend would keep a secret. The females-only analyses for this item yielded similar results, in that both the social phobia and panic disorder sample means were significantly lower than that of the healthy control sample.

Correlations among selected BIQ items and interpersonal measures. As presented in Table 29, significant Spearman's *rho* correlations for the study sample were found between selected BIQ items regarding current comfort and ease in interpersonal functioning, satisfaction with dating and friendship relationships, number of current close friends, and the self-report measures that were predicted in the study hypotheses to differ among groups. Selection of BIQ items was based on several of the findings in which the social phobia group differed from the healthy control group, and that the content of these items was pertinent to the focus of the study.

Moderately strong correlations were noted between these BIQ items and each of the selected interpersonal measures. This suggests that self-perceptions about how easy a person considers him/herself to be to get to know, how comfortable a person is in getting close to others, a person's level of subjective satisfaction in romantic and friendship relationships, and the extent to which a person believes he/she has support from close friends are empirically associated with

Table 29.

Sample Correlations (Spearman's): Selected BIQ and Interpersonal Measure Subscales (Predicted)

	BIQ Easy to get to know	BIQ Comfortable getting close to people	BIQ Satisfied w/ quality of dating	BIQ # Current close friendships	BIQ Satisfied w/ quality of friendships
EAS Subscales					
Distress	-.275**	-.375**	-.345**	-.396**	-.478**
Fearfulness	-.270**	-.328**	-.275**	-.363**	-.385**
Sociability	.476**	.625**	.399**	.473**	.364**
RAAS Subscales					
Close	.582**	.696**	.538**	.431**	.472**
Depend	.475**	.487**	.422**	.333**	.495**
Anxiety	-.451**	-.445**	-.536**	-.258**	-.393**
RII Scale					
Total RII	-.526**	-.653**	-.416**	-.450**	-.462**
FIS-F Subscales					
Current	-.460**	-.593**	-.377**	-.460**	-.504**
Past	-.602**	-.601**	-.490**	-.352**	-.301**
Total	-.503**	-.616**	-.422**	-.472**	-.506**
Hard-Assertive	-.438**	-.463**	-.297**	-.403**	-.388**
Hard-Sociable	-.573**	-.684**	-.494**	-.452**	-.477**
Hard-Intimate	-.458**	-.529**	-.331**	-.330**	-.373**

Note. **. Correlation is significant at the .01 level (2-tailed); $N = 177$.

the contributory factors (i.e., constructs of temperament, attachment, trust and intimacy, and interpersonal problems with being assertive, sociable and intimate) in the model described earlier regarding aspects of interpersonal functioning and the fear of disapproval in social phobia (refer to Figure 2, adapted from Markway et al., 1992).

Correlations among selected interpersonal measures. Table 30 presents Pearson's correlations among the interpersonal measures for which group differences were predicted. Without exception, significant correlations were found for each pairing of the various measures. The correlations were in the expected direction and were of sufficient magnitude to suggest that there is substantial overlap among the study measures (e.g., perceived risk in intimacy and fear of intimacy in friendships, anxious attachment and problems being assertive, etc.). Given that these study variables are statistically correlated, there is an empirical relation among them, which justifies the application of MANOVA to test the study hypotheses (Grimm & Yarnold, 1995).

Hypotheses tests and exploratory analyses of the self-report interpersonal measures. See Table 31 for the healthy control and social phobia group mean ratings (for gender and combined gender) for all of the self-report interpersonal measures. The self-report measures are considered in two groups. Separate analyses were conducted for: (a) the *predicted* group, comprised of the selection of measures for which we hypothesized differences among the groups, and (b) the *exploratory* group, including the set of measures that were considered on an exploratory basis with no stated hypotheses when the study was planned.

The MANOVA test of the healthy control and social phobia groups regarding the set of predicted variables was significant (Wilks' Lambda = .01, $F(13,97) = 1528.58$, $p < .01$, $n^2 = .99$) and yielded a significant between-group difference (Wilks' Lambda = .18, $F(13,97) = 34.88$, $p < .01$, $n^2 = .82$). Univariate tests of the predicted interpersonal measures are included in Table 32. The MANOVA test for the females-only samples of the predicted variables was also significant (Wilks' Lambda = .01, $F(13,64) = 868.27$, $p < .01$, $n^2 = .99$), including a significant between-group difference (Wilks' Lambda = .11, $F(26,128) = 10.11$, $p < .01$, $n^2 = .67$). (See Table 33 for the univariate tests.)

Table 30.

Sample Correlations (Pearson's): Selected Interpersonal Measure Subscales (Predicted)

	EAS Distress	EAS Fearfulness	EAS Sociab-ility	RAAS Close	RAAS Depend	RAAS Anxiety	RII Total	FISF Current	FISF Past	FISF Total	IIP Hard-Assert.	IIP Hard-Sociable	IIP Hard-Intimate
EAS Distress		.819**	-.257**	-.387**	-.445**	.592**	.522**	.417**	.453**	.424**	.617**	.685**	.522**
EAS Fearfulness			-.261**	-.329**	-.354**	.518**	.485**	.384**	.381**	.372**	.630**	.667**	.520**
EAS Sociability				.627**	.469**	-.350**	-.581**	-.527**	-.437**	-.542**	-.441**	-.608**	-.471**
RAAS Close					.688**	-.568**	-.712**	-.628**	-.653**	-.648**	-.470**	-.649**	-.513**
RAAS Depend						-.657**	-.709**	-.503**	-.591**	-.551**	-.430**	-.537**	-.485**
RAAS Anxiety							.661**	.494**	.630**	.539**	.532**	.653**	.576**
RII Total								.604**	.620**	.642**	.574**	.733**	.686**
FISF Current									.556**	.984**	.539**	.580**	.486**
FISF Past										.643**	.541**	.652**	.559**
FISF Total											.546**	.595**	.531**
Hard-Assertive												.783**	.678**
Hard-Sociable													.717**
Hard-Intimate													

Note. **. Correlation is significant at the .01 level (2-tailed); $N = 177$

Table 31.

Self-report Interpersonal Measure Subscales: Mean Ratings by Group with Gender and Combined Gender

	Healthy Control (N=46)	Social Phobia (N=71)
EAS Subscales		
Distress*	Males M= 1.32 (SD= 0.40)	Males M= 3.01 (SD= 0.86)
	Females M= 1.47 (SD= 0.43)	Females M= 3.16 (SD= 0.80)
	Combined M= 1.40 (SD= 0.42)	Combined M= 3.09 (SD= 0.83)
Fearfulness*	Males M= 1.58 (SD= 0.44)	Males M= 3.13 (SD= 0.74)
	Females M= 1.70 (SD= 0.46)	Females M= 3.31 (SD= 0.78)
	Combined M= 1.65 (SD= 0.45)	Combined M= 3.22 (SD= 0.76)
Anger*	Males M= 2.12 (SD= 0.79)	Males M= 2.38 (SD= 0.74)
	Females M= 2.41 (SD= 1.74)	Females M= 2.47 (SD= 0.72)
	Combined M= 2.29 (SD= 1.42)	Combined M= 2.42 (SD= 0.73)
Activity*	Males M= 2.84 (SD= 0.81)	Males M= 2.50 (SD= 0.82)
	Females M= 2.69 (SD= 0.83)	Females M= 2.86 (SD= 0.75)
	Combined M= 2.75 (SD= 0.82)	Combined M= 2.68 (SD= 0.80)
Sociability*	Males M= 3.79 (SD= 0.82)	Males M= 2.15 (SD= 0.70)
	Females M= 3.20 (SD= 0.85)	Females M= 2.29 (SD= 0.75)
	Combined M= 3.45 (SD= 0.88)	Combined M= 2.22 (SD= 0.73)
RAAS Subscales		
Close*	Males M= 4.04 (SD= 0.69)	Males M= 2.61 (SD= 0.70)
	Females M= 3.64 (SD= 0.77)	Females M= 2.80 (SD= 0.85)
	Combined M= 3.81 (SD= 0.76)	Combined M= 2.70 (SD= 0.78)
Depend*	Males M= 3.79 (SD= 0.71)	Males M= 2.76 (SD= 0.82)
	Females M= 3.48 (SD= 0.91)	Females M= 2.75 (SD= 0.86)
	Combined M= 3.61 (SD= 0.83)	Combined M= 2.76 (SD= 0.83)

Table 31 (continued).

Self-report Interpersonal Measure Subscales: Mean Ratings by Group with Gender and Combined Gender

	Healthy Control (N=46)	Social Phobia (N=71)
RAAS Subscales (continued)		
Anxiety*	Males M= 2.16 (SD= 0.57)	Males M= 3.03 (SD= 0.75)
	Females M= 2.26 (SD= 0.56)	Females M= 3.07 (SD= 0.64)
	Combined M= 2.22 (SD= 0.56)	Combined M= 3.05 (SD= 0.69)
RII Scale		
RII*	Males M= 1.48 (SD= 0.65)	Males M= 2.86 (SD= 0.78)
	Females M= 1.70 (SD= 0.71)	Females M= 2.89 (SD= 0.83)
	Combined M= 1.60 (SD= 0.69)	Combined M= 2.88(SD= 0.80)
FIS-F Subscales		
FIS-F Current*	Males M= 1.96 (SD= 0.55)	Males M= 3.03 (SD= 0.64)
	Females M= 1.98 (SD= 0.51)	Females M= 2.85 (SD= 0.82)
	Combined M= 1.97 (SD= 0.52)	Combined M= 2.94(SD= 0.74)
FIS-F Past*	Males M= 1.89 (SD= 0.90)	Males M= 3.65 (SD= 0.93)
	Females M= 2.20 (SD= 0.98)	Females M= 3.28 (SD= 1.01)
	Combined M= 2.07 (SD= 0.95)	Combined M= 3.46 (SD= 0.98)
FIS-F Total*	Males M= 1.95 (SD= 0.55)	Males M= 3.12 (SD= 0.60)
	Females M= 2.01 (SD= 0.51)	Females M= 2.91 (SD= 0.76)
	Combined M= 1.99 (SD= 0.52)	Combined M= 3.01 (SD= 0.69)
IIP Subscales		
Hard-Assertive**	Males M= 0.60 (SD= 0.67)	Males M= 2.30 (SD= 0.74)
	Females M= 0.95(SD= 0.63)	Females M= 2.55(SD= 0.68)
	Combined M= 0.80(SD= 0.66)	Combined M= 2.42(SD= 0.71)

Table 31 (continued).

Self-report Interpersonal Measure Subscales: Mean Ratings by Group with Gender and Combined Gender

	Healthy Control (N=46)	Social Phobia (N=71)
IIP Subscales (continued)		
Hard-Sociable**	Males M= 0.40 (SD= 0.43)	Males M= 2.83 (SD= 0.72)
	Females M= 0.62 (SD= 0.44)	Females M= 2.63SD= 0.53)
	Combined M= 0.53 (SD= 0.45)	Combined M= 2.73(SD= 0.63)
Hard-Submissive**	Males M= 0.46 (SD= 0.68)	Males M= 1.21 (SD= 0.62)
	Females M= 0.47 (SD= 0.39)	Females M= 1.24 (SD= 0.62)
	Combined M= 0.47 (SD= 0.53)	Combined M= 1.22 (SD= 0.61)
Hard-Intimate**	Males M= 0.36 (SD= 0.36)	Males M= 1.40 (SD= 0.61)
	Females M= 0.50 (SD= 0.38)	Females M= 1.27 (SD= 0.57)
	Combined M= 0.45 (SD= 0.37)	Combined M= 1.33 (SD= 0.59)
Too-Responsible**	Males M= 0.84 (SD= 0.79)	Males M= 1.81 (SD= 0.66)
	Females M= 0.77 (SD= 0.54)	Females M= 1.99 (SD= 0.65)
	Combined M= 0.80 (SD= 0.65)	Combined M= 1.90 (SD= 0.65)
Too-Controlling**	Males M= 0.53 (SD= 0.43)	Males M= 0.74 (SD= 0.40)
	Females M= 0.43 (SD= 0.33)	Females M= 0.88 (SD= 0.56)
	Combined M= 0.47 (SD= 0.37)	Combined M= 0.81 (SD= 0.49)
IIP Total**	Males M= 0.53 (SD= 0.38)	Males M= 1.80 (SD= 0.50)
	Females M= 0.62 (SD= 0.33)	Females M= 1.82 (SD= 0.43)
	Combined M= 0.58 (SD= 0.35)	Combined M= 1.81 (SD= 0.46)

Note. *Response range: (1) *not at all characteristic of me* to (5) *extremely characteristic of me*

Note. **Response range: (0) *not at all distressing* to (4) *extremely distressing*

Table 32.

Analyses of Selected (Predicted) Interpersonal Measure Subscales: Group, Gender, and Interaction

		F	*df*	*p*	n^2
EAS Distress	Group	*F*=156.01	1, 112	.01	.59
	Gender	*F*= 1.29	1, 112	*NS*	.01
	Interaction	*F*= 0.01	1, 112	*NS*	.01
EAS Fearfulness	Group	*F*=153.76	1, 112	.01	.59
	Gender	*F*= 1.37	1, 112	*NS*	.01
	Interaction	*F*= 0.06	1, 112	*NS*	.01
EAS Sociability	Group	*F*= 72.34	1, 112	.01	.40
	Gender	*F*= 2.21	1, 112	*NS*	.02
	Interaction	*F*= 5.97	1, 112	.02	.05
RAAS Close	Group	*F*= 59.02	1, 112	.01	.35
	Gender	*F*= 0.54	1, 112	*NS*	.01
	Interaction	*F*= 4.01	1, 112	*NS*	.04
RAAS Depend	Group	*F*= 29.44	1, 112	.01	.21
	Gender	*F*= .95	1, 112	*NS*	.01
	Interaction	*F*= 0.86	1, 112	*NS*	.01
RAAS Anxiety	Group	*F*= 44.65	1, 112	.03	.29
	Gender	*F*= 0.30	1, 112	*NS*	.01
	Interaction	*F*= 0.04	1, 112	*NS*	.01
RII	Group	*F*= 75.13	1, 112	.01	.41
	Gender	*F*= 0.67	1, 112	*NS*	.01
	Interaction	*F*= 0.46	1, 112	*NS*	.01

Table 32 (continued).

Analyses of Selected (Predicted) Interpersonal Measure Subscales: Group, Gender, and Interaction

		F	*df*	*p*	n^2
FIS-F Current	Group	*F*= 56.12	1, 112	.01	.34
	Gender	*F*= 0.40	1, 112	*NS*	.01
	Interaction	*F*= 0.60	1, 112	*NS*	.01
FIS-F Past	Group	*F*= 57.75	1, 112	.01	.35
	Gender	*F*= 0.03	1, 112	*NS*	.01
	Interaction	*F*= 3.25	1, 112	*NS*	.03
FIS-F Total	Group	*F*= 71.02	1, 112	.01	.40
	Gender	*F*= 0.37	1, 112	*NS*	.01
	Interaction	*F*= 1.19	1, 112	*NS*	.01
IIP Hard-Assertive	Group	*F*=154.02	1, 112	.01	.59
	Gender	*F*= 5.25	1, 112	.02	.05
	Interaction	*F*= 0.11	1, 112	*NS*	.01
IIP Hard-Sociable	Group	*F*=410.42	1, 112	.01	.79
	Gender	*F*= 0.01	1, 112	*NS*	.01
	Interaction	*F*= 3.65	1, 112	*NS*	.01
IIP Hard-Intimate	Group	*F*= 93.88	1, 112	.01	.46
	Gender	*F*= 0.01	1, 112	*NS*	.01
	Interaction	*F*= 1.93	1, 112	*NS*	.02
IIP Total	Group	*F*=222.80	1, 112	.01	.67
	Gender	*F*= 0.51	1, 112	*NS*	.01
	Interaction	*F*= 0.18	1, 112	*NS*	.01

Note. *NS*= non-significant, $p>.05$

Table 33.

Analyses of Selected (Predicted) Interpersonal Measure Subscales: Comparisons of Females Only Mean Ratings by Group

	Healthy Control $N = 27$		Social Phobia $N = 36$		Panic Disorder $N = 20$					
	Mean	(*SD*)	Mean	(*SD*)	Mean	(*SD*)	*F*	*df*	*p*	n^2
EAS Subscales										
Distress	1.47[a]	(0.43)	3.16[b]	(0.80)	3.32[b]	(1.00)	45.13	2, 76	.01	.54
Fearfulness	1.70[a]	(0.46)	3.31[b]	(0.78)	3.82[c]	(0.81)	59.27	2, 76	.01	.61
Sociability	3.20[b]	(0.82)	2.29[a]	(0.75)	2.84[b]	(0.98)	8.75	2, 76	.01	.19
RAAS Subscales										
Close	3.64[b]	(0.77)	2.80[a]	(0.85)	3.42[b]	(0.92)	8.03	2, 76	.01	.17
Depend	3.48[b]	(0.91)	2.75[a]	(0.86)	3.04[a,b]	(0.94)	4.87	2, 76	.03	.11
Anxiety	2.26[a]	(0.56)	3.07[b]	(0.64)	3.03[b]	(0.75)	13.20	2, 76	.01	.26
RII Scale										
RII	1.70[a]	(0.71)	2.89[b]	(0.83)	2.45[b]	(1.18)	12.85	2, 76	.01	.25

Table 33 (continued).

Analyses of Selected (Predicted) Interpersonal Measure Subscales: Comparisons of Females Only Mean Ratings By Group

	Healthy Control $N = 27$		Social Phobia $N = 36$		Panic Disorder $N = 20$				
	Mean	(*SD*)	Mean	(*SD*)	Mean	(*SD*)	*F*	*df*	*p*	n^2
FIS-F Subscales										
Current	1.98[a]	(0.51)	2.85[b]	(0.82)	2.39[a]	(0.75)	10.71	2, 76	.01	.22
Past	2.20[a]	(0.98)	3.28[b]	(1.01)	2.53[a]	(1.08)	8.89	2, 76	.01	.19
Total	2.01[a]	(0.51)	2.91[b]	(0.76)	2.41[a]	(0.72)	12.92	2, 76	.01	.25
IIP Subscales										
Hard-Assertive	0.95[a]	(0.61)	2.55[c]	(0.73)	2.10[b]	(1.01)	32.88	2, 76	.01	.46
Hard-Sociable	0.62[a]	(0.44)	2.63[c]	(0.53)	1.81[b]	(0.74)	93.01	2, 76	.01	.71
Hard-Intimate	0.50[a]	(0.38)	1.30[b]	(0.57)	1.07[b]	(0.76)	15.23	2, 76	.01	.29
IIP Total	0.63[a]	(0.33)	1.82[b]	(0.43)	1.58[b]	(0.74)	44.02	2, 76	.01	.54

Note. Means with different superscripts differ significantly at $p < .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple *F*-test following significant *MANOVA*.

The MANOVA of the healthy control and social phobia groups for the exploratory set of variables was significant (Wilks' Lambda = .06, $F(5,109) = 368.16$, $p < .01$, $n^2 = .94$), as was the between-group test (Wilks' Lambda = .53, $F(5,109) = 19.01$, $p < .01$, $n^2 = .47$). (Univariate tests are presented in Table 34.) The MANOVA test of the females-only samples for these variables was also significant (Wilks' Lambda = .06, $F(5,76) = 248.42$, $p < .01$, $n^2 = .94$), and included a significant between-group difference (Wilks' Lambda = .49, $F(10,152) = 6.56$, $p < .01$, $n^2 = .30$). (See Table 35 for the univariate tests.)

For clarity, the results described below for each of the self-report interpersonal measures include all subscales of each measure regardless of whether a given subscale was included in the predicted or exploratory set of variables. However, in the order of the description of the various subscales that follows, those comprising the predicted set of variables precede those that were included in the exploratory set of variables

Emotionality, Sociability Activity Scale (EAS). The group mean for the social phobia participants was significantly higher (*moderately characteristic of me*) on the subscale EAS Distress relative to that of the healthy control respondents (*not at all/slightly characteristic of me*), and there were no indications of either gender or interaction effects. The females-only analyses indicated that both the social phobia and panic disorder means for EAS Distress differed significantly from that of the healthy control sample, which was lower, but not from each other. To the same extent, the group mean for the social phobia participants on the subscale EAS Fearfulness significantly exceeded that of the healthy control respondents (*moderately characteristic of me* vs. *not at all/slightly characteristic of me*). The females-only analyses resulted in the highest EAS Fearfulness mean score for the panic disorder sample (approaching *very characteristic of me*), a mid-range score for the social phobia sample (*moderately characteristic of me*), and the lowest score for the healthy control sample (*not at all/slightly characteristic of me*).

Table 34.

Analyses of Selected (Exploratory) Subscales: Group, Gender, and Interaction

		F	*df*	*p*	n^2
EAS Anger	Group	*F*= 0.63	1, 116	*NS*	.01
	Gender	*F*= 0.87	1, 116	*NS*	.01
	Interaction	*F*= 0.24	1, 116	*NS*	.01
EAS Activity	Group	*F*= 0.31	1, 116	*NS*	.01
	Gender	*F*= 0.46	1, 116	*NS*	.01
	Interaction	*F*= 2.91	1, 116	*NS*	.03
IIP Hard-Submissive	Group	*F*= 45.66	1, 116	.01	.29
	Gender	*F*= 0.03	1, 116	*NS*	.01
	Interaction	*F*= 0.01	1, 116	*NS*	.01
IIP Too Responsible	Group	*F*= 76.94	1, 116	.01	.41
	Gender	*F*= 0.15	1, 116	*NS*	.01
	Interaction	*F*= 1.00	1, 116	*NS*	.01
IIP Too Controlling	Group	*F*= 15.23	1, 116	.01	.12
	Gender	*F*= 0.05	1, 116	*NS*	.01
	Interaction	*F*= 2.01	1, 116	*NS*	.02

Note. *NS*= non-significant, $p>.05$

Table 35.

Analyses of Selected (Exploratory) Interpersonal Measure Subscales: Comparisons of Females Only Mean Ratings By Group

	Healthy Control $N = 27$		Social Phobia $N = 36$		Panic Disorder $N = 20$				
	Mean	(*SD*)	Mean	(*SD*)	Mean	(*SD*)	*F*	*df*	*p*	n^2
EAS Subscales										
Anger	2.41	(1.74)	2.47	(0.72)	3.05	(0.85)	2.05	2, 80	*NS*	.05
Activity	2.69	(0.83)	2.86	(0.75)	3.14	(1.08)	1.59	2, 80	*NS*	.04
IIP Subscales										
Hard-Submissive	0.47^a	(0.39)	1.24^b	(0.62)	1.25^b	(0.92)	12.81	2, 80	.01	.24
Too Responsible	0.77^a	(0.54)	1.99^b	(0.65)	1.99^b	(0.80)	31.33	2, 80	.01	.44
Too Controlling	0.43^a	(0.33)	0.88^b	(0.56)	1.20^c	(0.63)	13.24	2, 80	.01	.25

Note. Means with different superscripts differ significantly at $p < .05$ based upon the Ryan-Einot-Gabriel-Welsh multiple *F*-test following significant *MANOVA*.

Group differences and interaction effects were indicated in the analyses of the EAS Sociability subscale. The social phobia group mean (*slightly characteristic of me*) was exceeded by that of the healthy control group (*moderately/very characteristic of me*). The lowest mean score, found for the male social phobia participants, was followed in turn by the mean score for the female social phobia participants, and then by the third and fourth highest mean scores, found for (respectively) the female and male healthy control respondents. The females-only analyses of EAS Sociability revealed that the social phobia sample mean was significantly lower than those of the healthy control and panic disorder samples, which did not differ from each other.

No significant gender or group differences were found in the comparisons of responses for either the Anger or Activity subscales of the EAS.

Revised Adult Attachment Scale (RAAS). Adult attachment behaviors in romantic relationships were explored in the RAAS with respect to the extent that one is, or would be, comfortable in being close to someone in a romantic relationship (Close), the confidence one has, or would have, that others are available when needed (Depend), and the degree of fear one has, or would have, of being abandoned in a romantic relationship (Anxiety). The mean scores for both RAAS Close and RAAS Depend were significantly lower for the social phobia group (*slightly/moderately characteristic of me*) relative to the healthy control group (*moderately/very characteristic of me*), but the social phobia group mean (*moderately characteristic of me*) was significantly higher compared to that of the healthy control group (*slightly characteristic of me*) for the RAAS Anxiety subscale. The females-only analyses indicated that (a) the social phobia sample mean for the subscale RAAS Close was significantly lower relative to the mean scores of the healthy control and panic disorder samples, which did not differ from each other; (b) the social phobia sample mean on the RAAS Depend subscale was significantly lower than that of the healthy control sample, although no significant differences were found between the panic disorder sample and either the social phobia or the healthy control sample means; and (c) the social phobia

and panic disorder sample means were not different from each other but significantly exceeded that of the healthy control group in the RAAS Anxiety subscale comparisons.

Risk in Intimacy Inven

tory (RII). The RII is comprised of items that concern the extent to which individuals perceive intimacy in close relationships as dangerous. The social phobia group mean was significantly higher (*slightly/moderately characteristic of me*) than that of the healthy control group (*not at all/slightly characteristic of me*), and there were no gender or interaction effects. The females-only analyses indicated that the social phobia and panic disorder sample means for the RII did not differ from each other but were significantly higher than that of the healthy controls.

Fear of Intimacy Scale - Friends (FIS-F). The FIS-F explores feelings and behavior related to intimacy in close nonromantic friendships in terms of Past, Current, and Total FIS-F subscale scores. The social phobia group means significantly exceeded those of the healthy controls for the FIS-F Past subscale (*slightly/moderately characteristic of me* vs. *not at all/slightly characteristic of me*), the FIS-F Current subscale (*moderately/very characteristic of me vs. slightly characteristic of me*), and the Total FIS-F (*moderately characteristic of me* vs. *not at all/slightly characteristic of me*). The females-only analyses indicated that the social phobia sample means were significantly higher for all three of the FIS-F subscales relative to those of both the healthy control and panic disorder samples, which did not differ from each other.

Inventory of Interpersonal Problems (IIP). Subscales of the IIP concern distress due to relationship difficulties in terms of 'Hard to be assertive' (H-Assertive), 'Hard to be sociable' (H-Sociable), 'Hard to be intimate' (H-Intimate), and overall interpersonal problems (Total IIP). Additional IIP subscales are 'Hard to be submissive' (H-Submissive), 'I am too responsible' (T-Responsible), and 'I am too controlling' (T-Controlling).

The analyses of H-Assertive indicated that the social phobia participants reported significantly more difficulties with assertiveness (*somewhat/quite a bit distressing*) relative to the

healthy control respondents (*not at all/a little bit distressing*). A gender effect revealed that the female participants had more difficulties with being assertive than the male participants. The females-only analyses of H-Assertive resulted in the highest mean score for the social phobia sample, a mid-range mean score for the panic disorder sample, and the lowest mean score for the healthy control sample.

Group main effects were indicated in the analyses of the H-Sociable subscale. The social phobia group mean (*somewhat/quite a bit distressing*) significantly exceeded that of the healthy control group (*not at all/a little bit distressing*). The females-only analyses of H-Sociable revealed that the three samples were significantly different from each other, with the panic disorder sample mean (*a little bit/somewhat distressing*) falling between those of the social phobia (highest) and the healthy control (lowest) sample means.

The analyses of H-Intimate revealed that the social phobia participants reported significantly more difficulties with intimacy (*somewhat/quite a bit distressing*) relative to the healthy control respondents (*not at all/a little bit distressing*). The females-only analyses of H-Intimate indicated that the social phobia and panic disorder sample means were statistically indistinguishable and were significantly higher than that of the healthy control sample.

Comparisons of the IIP Total subscale scores revealed that the social phobia group mean (*a little bit/somewhat distressing*) significantly exceeded that of the healthy control group (*not at all/a little bit distressing*) in terms of the extent of overall distress due to interpersonal problems. The females-only analyses indicated that although the social phobia sample mean did not differ from that of the panic disorder sample, both the social phobia and panic disorder sample means were significantly higher relative to that of the healthy control sample.

Analyses for group differences for the H-Submissive and T-Responsible subscales revealed the same pattern of findings (i.e., similar mean scores and descriptive responses) as reported above for the H-Intimate subscale. That is, the social phobia group mean scores

(*somewhat/quite a bit distressing*) for these two subscales were significantly higher relative to those of the heathy control group mean scores (*not at all/a little bit distressing*). Likewise, the females-only analyses indicated that the social phobia and panic disorder samples, which did not differ from each other, were significantly higher than the healthy control sample mean scores for H-Submissive, and T-Responsible.

Group differences were indicated in the analyses of the T-Controlling subscale. The social phobia group mean was significantly higher than that of the healthy control group regarding the extent that the respondents reported problems with being too controlling in their relationships, although both social phobia and healthy control mean scores fell within the same descriptive range (*not at all/a little bit distressing*). However, the females-only analyses revealed that the three samples differed significantly from each other, with the social phobia sample mean falling between the highest mean score of the panic disorder sample (*a little bit/somewhat distressing*) and the lowest mean score of the healthy control sample.

Summary of Results and Study One hypotheses. The overall results largely support the Study One hypotheses in that the social phobia group mean scores were: (a) lower than those of the healthy control group for EAS Sociability, RAAS Close and RAAS Depend, and (b) higher than those of the healthy control group for EAS Distress and EAS Fearfulness, RAAS Anxiety, RII, FIS-F subscales Current, Past and Total, and IIP H-Assertive, H-Sociable, H-Intimate and IIP Total. The results of the females-only analyses were consistent regarding the predicted differences between the social phobia and healthy control samples.

In further support of the Study One hypotheses, the panic disorder sample mean scores fell mid-way between those of the social phobia and healthy control samples for: H-Assertive and H-Sociable. However, the panic disorder sample means were indistinguishable from those of : (a) the social phobia sample for EAS Distress, RAAS Anxiety, RII, H-Intimate, and IIP Total, and (b) the healthy control sample for EAS Sociability, RAAS Close, and FIS-F subscales Current,

Past, and Total. Further, the panic disorder sample mean score for EAS Fearfulness was distinctive as the highest score of the three samples, but did not differ from either the social phobia of healthy control samples for RAAS Depend.

Study Two

Method

Subjects

Data for Study Two were initially collected from 70 social phobia participants who had provided data for Study One (i.e., the pre-treatment component, as described earlier). Subjects had been assigned to group treatment or no-group treatment conditions prior to their participation in the pre-treatment component (Study One).

Inclusion and Exclusion Criteria

Inclusion and exclusion criteria for Study Two are, by default, the same as specified for the social phobia respondents in Study One. Data from participants who voluntarily withdrew from the study or who provided post-treatment condition questionnaire packages which were incomplete were excluded from the Study Two analyses. This resulted in the final selection of Study Two participants ($N = 62$) as described above.

Questionnaire Measures of Interpersonal Functioning

With the exception of the Background Information Questionnaire (BIQ), the same self-report questionnaire measures of interpersonal functioning were administered at post-test. As such, the questionnaire package included (a) the Emotionality, Activity, Sociability Scale (EAS); (b) the Revised Adult Attachment Scale (RAAS); (c) the Risk in Intimacy Inventory (RII); (d) the Fear of Intimacy Scale - Friend (FIS-F); and (e) the Inventory of Interpersonal Problems (IIP).

Data Analyses

Statistical analyses were performed using the *Statistical Package for the Social Sciences* (*SPSS*; *SPSS Release 10.05*; 1999) computerized analysis program. Two doubly multivariate

repeated measures MANOVAs were performed on sets of the various subscales of the self-report measures of interpersonal functioning (sets were selected in terms of *predicted* or *exploratory* variables), using Wilks' lambda as the criterion of statistical significance. The doubly multivariate repeated measures MANOVA procedure was chosen because more than two dependent variables were measured at two points in time, and this procedure controls the Type I error, provides a multivariate analysis of effects by accounting for partial redundancy between dependent measures, and addresses whether the dependent measures, taken as a set, changed over time (Grimm & Yarnold, 1995). In each of the doubly multivariate repeated measures MANOVAs, additional MANOVAs determined the presence of significant condition main effects (i.e., group vs. no-group treatment), time main effects (i.e., pre- to post-treatment), and interaction effects (i.e., condition x time), with comparisons that revealed statistically significant differences being followed by univariate analyses to determine whether a given subscale demonstrated significant treatment condition, time, or interaction effects.

The first doubly multivariate repeated measures MANOVA involved analyses of those subscale variables which were predicted in the study hypotheses to evidence pre- to post-treatment change (i.e., EAS Distress, EAS Fearfulness, RAAS Close, RAAS Depend, RII Total, FIS-F Current, and IIP Hard-Sociable). The second doubly multivariate repeated measures MANOVA involved analyses of the exploratory set of subscale variables (i.e., EAS Anger, EAS Activity, EAS Sociability, RAAS Anxiety, and H-Assertive, H-Submissive, H-Intimate, T-Responsible, T-Controlling, and IIP Total). The alpha level was designated as .05 for all analyses in Study Two.

Results

Sample Demographics

Significant gender differences were not found between the participants in the group treatment and no-group treatment conditions ($X^2(1, N=70) = .07, p>05$). The group treatment

condition was comprised of 17 females (53.1%) and 15 males (46.9%), and the no-group treatment condition included the same number of female (19, or 50%) and male (19, or 50%) participants. The treatment conditions also did not differ ($F(1,68)= 3.21$, $p > .05$) with respect to age (group treatment condition: $M = 34.94$, $SD = 12$; no-group treatment condition: $M = 40.22$, $SD = 12.39$). However, of the initial 70 social phobia participants from whom data had been collected for Study Two, 8 participants did not provide questionnaire packages which contained complete pre- and post-treatment condition data. As such, Study Two analyses of the self-report measures of interpersonal functioning were based on $N = 62$ (group treatment condition: $n = 27$, no-group treatment condition: $n = 35$).

Questionnaire Measures of Interpersonal Functioning

Table 36 presents the mean pre- and post- scores and standard deviations of the group treatment and no-group treatment conditions for all of the subscales of the self-report questionnaire (both predicted and exploratory) measures of interpersonal functioning (for RII, the total mean score is presented).

Predicted Questionnaire Measures. The doubly multivariate repeated measures MANOVA of the predicted set of variables for Study Two was significant (Wilks' Lambda = .01, $F(7,54) = 1393.94$, $p < .01$, $n^2 = .99$) and yielded significant effects for time (Wilks' Lambda = .62, $F(7,54) = 4.64$, $p < .01$, $n^2 = .38$) and time x condition (Wilks' Lambda = .75, $F(7,54) = 2.52$, $p < .05$, $n^2 = .25$). The condition main effect was not significant (Wilks' Lambda = 0.95; $F(7,54) = 0.38$, $p > .05$, $n^2 = .05$). The subsequent within-subjects' univariate ANOVAs for time effects indicated significant findings for EAS Distress, EAS Fearfulness, RII, and IIP Hard-Sociable. Univariate ANOVAs also resulted in significant time x condition effects for RAAS Close and for IIP Hard-Sociable. (See Table 37.)

Results and Study Two hypotheses. Study Two hypotheses predicted that there would be greater change from pre- to post-treatment in the group treatment condition vs. the no-group

Table 36.

Interpersonal Measures: Mean Pre and Post Subscale Ratings By Treatment Condition

	Group Treatment Condition $N = 27$				No Group Treatment Condition $N = 35$			
	Pre		Post		Pre		Post	
	Mean	(*SD*)	Mean	(*SD*)	Mean	(*SD*)	Mean	(*SD*)
EAS Subscales								
Distress	3.25	(.87)	2.78	(.78)	3.06	(.79)	2.89	(.86)
Fearfulness	3.21	(.73)	2.89	(.70)	3.24	(.84)	3.08	(.79)
Anger	2.43	(.66)	2.35	(.56)	2.45	(.71)	2.54	(.69)
Activity	2.78	(.62)	2.69	(.78)	2.66	(.88)	2.73	(.87)
Sociability	2.22	(.76)	2.45	(.82)	2.28	(.72)	2.46	(.78)
RAAS Subscales								
Close	2.60	(.80)	2.96	(.81)	2.77	(.80)	2.69	(.67)
Depend	2.77	(.91)	2.84	(.82)	2.81	(.84)	2.94	(.81)
Anxiety	3.12	(.57)	2.77	(.55)	2.96	(.76)	2.87	(.73)

Table 36 (continued).

Interpersonal Measures: Mean Pre and Post Subscale Ratings By Treatment Condition

	Group Treatment Condition $N = 27$				No Group Treatment Condition $N = 35$			
	Pre		Post		Pre		Post	
	Mean	(*SD*)	Mean	(*SD*)	Mean	(*SD*)	Mean	(*SD*)
FIS-F Subscale								
Current	2.78	(.70)	2.68	(.70)	2.40	(.60)	2.33	(.61)
RII Scale								
Total RII	2.79	(.79)	2.61	(.94)	2.91	(.84)	2.73	(.87)
IIP Subscales								
Hard-Assertive	2.43	(.72)	2.00	(.94)	2.41	(.77)	2.16	(.70)
Hard-Sociable	2.78	(.65)	2.17	(.98)	2.69	(.64)	2.46	(.66)
Hard-Submissive	1.23	(.59)	1.04	(.70)	1.20	(.62)	1.19	(.54)
Hard-Intimate	1.51	(.54)	1.31	(.69)	1.23	(.62)	1.19	(.62)
Too Responsible	2.00	(.66)	1.63	(.78)	1.86	(.66)	1.57	(.50)
Too Controlling	.85	(.54)	.82	(.58)	.75	(.46)	.74	(.45)
IIP Total	1.86	(.47)	1.53	(.68)	1.73	(.50)	1.57	(.45)

Table 37.

Interpersonal Measures: Repeated Measures Analyses of Selected (Predicted) Subscale Ratings

		F	*df*	*p*	n^2
EAS Distress	Condition	.05	1, 60	*NS*	.01
	Time	7.99	1, 60	.01	.12
	Time x Condition	1.63	1, 60	*NS*	.03
EAS Fearfulness	Condition	.37	1, 60	*NS*	.01
	Time	7.91	1, 60	.01	.12
	Time x Condition	.82	1, 60	*NS*	.01
RAAS Close	Condition	.08	1, 60	*NS*	.01
	Time	3.11	1, 60	*NS*	.05
	Time x Condition	7.73	1, 60	.01	.11
RAAS Depend	Condition	.14	1, 60	*NS*	.01
	Time	1.29	1, 60	*NS*	.02
	Time x Condition	.09	1, 60	*NS*	.01
RII Scale	Condition	.31	1, 60	*NS*	.01
	Time	4.34	1, 60	.04	.07
	Time x Condition	.01	1, 60	*NS*	.01
FIS Current	Condition	.01	1, 60	*NS*	.01
	Time	.01	1, 60	*NS*	.01
	Time x Condition	.01	1, 60	*NS*	.01
IIP Hard-Sociable	Condition	.35	1, 60	*NS*	.01
	Time	31.17	1, 60	.01	.34
	Time x Condition	6.36	1, 60	.01	.10

Note. *NS*= non-significant, $p>.05$

treatment condition toward a level closer to the healthy control scores for the subscales EAS Distress, EAS Fearfulness, RAAS Close, RAAS Depend, RII Total, FIS-F Current, and IIP Sociable. The analyses partially support the Study Two hypotheses with greater improvement in the group treatment condition in RAAS Close and H-Sociable. The time effects that emerged in the analyses were unexpected findings, given the reductions in scores on EAS Distress, EAS Fearfulness, RII, and H-Sociable due to time main effects.

Exploratory Questionnaire Measures. The doubly multivariate repeated measures MANOVA of the exploratory set of variables was significant (Wilks' Lambda = .01, $F(10,52) = 455.11$, $p < .01$, $n^2 = .99$) and revealed a significant effect for time (Wilks' Lambda = .53, $F(10,52) = 4.66$, $p < .01$, $n^2 = .47$). The results indicated that there was not a condition main effect (Wilks' Lambda = 0.88; $F(10,52) = .72$, $p > .05$, $n^2 = .12$) nor was there an interaction effect (Wilks' Lambda = 0.84; $F(10,52) = 1.01$, $p > .05$, $n^2 = .16$). The subsequent within-subjects' univariate ANOVAs for time main effects indicated significant findings for EAS Sociability, RAAS Anxiety, H-Assertive, T-Responsible, and IIP Total. (See Table 38)

Discussion

In spite of the importance of interpersonal relationships in healthy psychological functioning and quality of life, there has been surprisingly little research on the interpersonal functioning of individuals with generalized social phobia. The results of the current study suggest that individuals with social phobia differ from those without social phobia in a number of areas of their romantic and friendship experiences, their relationship behaviors, and with respect to subtle aspects of their interpersonal functioning. The findings of Study One reveal ways in which persons with social phobia are both similar and quite different in their interpersonal functioning relative to the comparison groups. The results of Study Two provide valuable information for ongoing research and treatment consideration.

Table 38.

Interpersonal Measures: Repeated Measures Analyses of Selected (Exploratory) Subscale Ratings

		F	*df*	*p*	n^2
EAS Anger	Condition	.50	1, 61	*NS*	.01
	Time	.01	1, 61	*NS*	.01
	Time x Condition	1.41	1, 61	*NS*	.02
EAS Activity	Condition	.04	1, 61	*NS*	.01
	Time	.01	1, 61	*NS*	.01
	Time x Condition	.92	1, 61	*NS*	.02
EAS Sociability	Condition	.03	1, 61	*NS*	.01
	Time	10.86	1, 61	.01	.15
	Time x Condition	.20	1, 61	*NS*	.01
RAAS Anxiety	Condition	.05	1, 61	*NS*	.01
	Time	8.67	1, 61	.01	.12
	Time x Condition	3.17	1, 61	*NS*	.05
IIP Hard-Assertive	Condition	.16	1, 61	*NS*	.01
	Time	26.80	1, 61	.01	.31
	Time x Condition	2.07	1, 61	*NS*	.03
IIP Hard-Submissive	Condition	.19	1, 61	*NS*	.01
	Time	2.89	1, 61	*NS*	.05
	Time x Condition	2.03	1, 61	*NS*	.03
IIP Hard-Intimate	Condition	1.86	1, 61	*NS*	.03
	Time	3.54	1, 61	*NS*	.06
	Time x Condition	1.44	1, 61	*NS*	.02
IIP Too Responsible	Condition	.32	1, 61	*NS*	.01
	Time	8.85	1, 61	.01	.24
	Time x Condition	.08	1, 61	*NS*	.01

Table 38 (continued).

Interpersonal Measures: Repeated Measures Analyses of Selected (Exploratory) Subscale Ratings

		F	*df*	*p*	n^2
IIP Too Controlling	Condition	.54	1, 61	*NS*	.01
	Time	.19	1, 61	*NS*	.01
	Time x Condition	.07	1, 61	*NS*	.01
IIP Total	Condition	.11	1, 61	*NS*	.01
	Time	22.83	1, 61	.01	.27
	Time x Condition	2.81	1, 61	*NS*	.04

Note. *NS*= non-significant, $p>.05$

Study One

One purpose of this study was to differentiate aspects of interpersonal functioning in persons with social phobia versus persons whose lives are not significantly affected by social anxiety. While there were several areas of dating/spousal relationship and friendship experiences for which no differences were found among the social phobia, healthy control, and panic disorder comparisons, other areas of relationship experiences and interpersonal functioning were strikingly different. The Study One findings may be seen as a reflection in part of what qualitatively distinguishes interpersonal functioning in social phobia.

Dating/spousal relationships. Comparison of the healthy control and social phobia participants regarding their dating/spousal relationship history revealed several clear differences. With respect to the overall tone of their interpersonal functioning, compared to the healthy control participants, the people with social phobia in this study indicated that they considered themselves to be both more difficult to get to know and less comfortable in getting close to others. They also indicated that they were less satisfied with their dating experiences and their current or anticipated satisfaction with long-term dating or spousal relationships.

The male participants with social phobia were quite distinctive in many areas of their dating/spousal and friendship experiences. Relative to all other study respondents to statistically significant levels, they reported the lowest rates of dating and long-term relationship history, they indicated that they had been told most frequently by both dating/spousal and close friendship partners that they are difficult to get close to, and they regarded themselves to be both most difficult to get to know and the least comfortable in getting close to others. Lastly, although not statistically different from the other participants, the males with social phobia reported the lowest rates of current marital/spousal relationship status.

It has been proposed that considering one's self as difficult to get to know and being less comfortable in getting close to others may be tied more to general anxiety about being evaluated

by others, and less so in terms of anxiety that is particular to intimate relations (Doi & Thelen, 1993). The social phobia male participants' mean scores for these items were lowest relative to the other respondents in the study, yet the social phobia males in this study who had dating experiences reported that they were involved in current exclusive relationships, had a number of long-term dating partners, and had long-term relationship durations, which were on par with the healthy control males. Studies have established that many individuals with significant anxiety about intimate relations may nonetheless date as frequently as those who do not experience such anxiety (Descutner & Thelen, 1991). This may be understood in the context of a *universal drive for intimacy*, which purportedly motivates those who fear intimacy to nevertheless pursue close interpersonal relations. Still, it has been suggested that having many dating relationships is less a determinant of the degree of comfort with intimacy a person may have, as is the impact of having only one, brief rewarding dating relationship (Sherman & Thelen, 1996).

The Study One results raise the possibility that males with social phobia who are active in dating and have had close long-term relationships, share some aspects of interpersonal experiences that are comparable to those of healthy control males. However, it is possible that some males with social phobia in the study have relatively more intense anxiety regarding dating and close romantic relationships. For these individuals, the intense anxiety may prevent them from initiating and possibly experiencing even one brief, rewarding dating relationship which might otherwise promote the pursuit of longer-term relationships and the extent to which such relationships may begin to be perceived as intimate and satisfying experiences.

The majority of males with social phobia in the study were also quite similar to the other participants in terms of how emotionally close they rated themselves to be with their current romantic partners (if they were in a relationship), the amount of time they spent with those partners, and the extent to which they discussed personal issues and feelings with them. Despite these similarities, however, both males and females with social phobia indicated that they are less

satisfied with the quality of their dating and spousal relationships relative to the healthy control participants, and about half of them reported that their romantic relationship partners have told them that they are difficult to get close to. Previous research is consistent with these findings in that, it is less the extent of dating and close relationship experiences, but more the quality and perceived satisfaction of those relationships, that is related to interpersonal intimacy (Sherman & Thelen, 1996).

Of additional note, the male social phobia participants' report that they are relatively frequently told by their romantic partners that they are difficult to get to know may be more than an indicator of how they function in their romantic relationships (Doi & Thelen, 1993). Research has shown that people with social phobia may be rated by others as lacking in overall social skills and that as potential dating partners, they may be rated as less desirable by others (Johnson & Glass, 1989; Johnson et al., 1995). It is also suggested that people with social phobia not only tend to emit social behaviors which are associated with negative interpersonal outcomes, but are also likely to rate themselves as having social skill deficits (Alden & Bieling, 1998; Alden & Wallace, 1995; Segrin, 2000). Finally, given the one collateral index of how the male social phobia participants function in their relationships, it is possible that, if queried, their romantic partners may report that there are difficulties regarding interpersonal closeness and satisfaction in their relationships.

Of note, however, the females-only comparisons yielded significant differences between the healthy control and social phobia samples for only *easy to get to know* and *comfort getting close to people* (the panic disorder sample means did not differ from those of the other two samples). These findings suggest that women with social phobia may be quite similar in their romantic relationship functioning to most other women, including not only healthy females, but also those with panic disorder. Further, although research generally suggests that women tend to place more importance on and to value closeness in their close, personal relationships to a greater

extent than do men (Sherman & Thelen, 1996), the findings of this study are equivocal regarding this, given that for most of the items related to interpersonal closeness, the male healthy control participants evidenced comparatively high mean responses.

Nonromantic relationships. In contrast to their dating and spousal relationships, the males and females with social phobia were much more alike in terms of their nonromantic relationship functioning. Relative to the healthy control participants, they had fewer of both past and current friendships, had been told at greater rates by their friends that they are difficult to get close to, reported that they were less satisfied with the quality of their friendships, and were less confident that their closest friends would keep their secrets private. Although it has been reported that women in general tend to derive intimacy from a wider social network than do men (Doi & Thelen, 1993), based on the study findings, both women and men with social phobia have comparatively limited social networks.

The results revealed an interaction effect in which male social phobia participants reported the lowest frequency of personal discussion with their closest friends relative to the healthy control participants and the social phobia females. However, a gender main effect indicated that both the healthy control and social phobia males spend more time with their closest friend than do their female counterparts. As such, although the males with social phobia who are in a friendship relationship may not engage in intimate discussion with their closest friends as frequently as do the healthy control males, they are likely to at least spend as much time with their friends as they do. Of additional note, relative to all other study respondents, the healthy control male participants were more variable with respect to the gender and designation of their closest friend as relative vs. non-relative. This is surprising with respect to the social phobia participants in that it has been reported that individuals with low levels of trust tend to disclose more about themselves to family members rather than to their friends (Steele, 1991).

These latter findings both support and contradict previous research in which it was reported that community dwelling males spent more time with their friends in sports or common-interest activities as a way to establish intimacy, compared to females, who were more likely to engage less in activities *per se*, but more so with respect to direct personal, intimate communication with their friends (Sherman & Thelen, 1996). It is possible that the seemingly contradictory findings for these aspects of interpersonal behavior demonstrated by the healthy control males in this study may be explained in part by their greater total years of education. That is, the higher education level for the healthy control males may have offered a comparatively wider breadth of interpersonal experiences relative to the other participants, or may have increased their acceptance of changing gender role expectations and the impact this has had on interpersonal norms (Descutner & Thelen, 1991). However, given the lack of strong correlations in the study sample between total years of education and the various interpersonal measures, the interpersonal flexibility evidenced by the healthy control males is more likely to be evidence of their generally healthy functioning (Novaco, 1994). Still, the discrepancy between the healthy control males and females in terms of their respective frequency of personal discussions, or the time spent, with their closest nonromantic friends suggests that the healthy control females may focus more on their romantic relationships, and that healthy control males may invest their time in, and satisfy their drive for intimacy, across multiple close relationships.

The females-only analyses of the items regarding nonromantic relationships were more differentiating across the social phobia, healthy control, and panic disorder samples. The mean responses regarding the numbers of both past and current friends were significantly greater for the healthy control vs. the social phobia sample, although the panic disorder means did not differ from those of either of the other samples for these items. Further, there were no differences with respect to the proportions of the participants who had been told by their friends that they are difficult to get to know, the time they spend with their closest friends, or the frequency of their

personal discussions with their closest friends. However, the panic disorder and social phobia mean responses were very similar, but were significantly lower than those reported for the healthy control sample, with respect to their satisfaction with the quality of, and their confidence in, their close nonromantic friendships. Overall, these results suggest that women with social phobia may be more comparable to women with panic disorder than they are to healthy women in terms of their nonromantic friendships. In contrast, there were no differences among the samples regarding their romantic relationships. One possible explanation of these findings is that gender-role socialization may be quite influential and may have exerted a leveling effect across the social phobia, healthy control, and panic disorder samples in terms of their romantic relationships, but less so with respect to their nonromantic friendships.

Self-report measures of interpersonal functioning. Without exception, the social phobia and healthy control comparisons supported the Study One hypotheses regarding differences in aspects of temperament, attachment, fears and perceptions of risk in intimacy, and type of interpersonal problems that are most distressing in social phobia. The comparisons including the panic disorder sample were varied and less consistent with the study predictions.

As predicted, the analyses of EAS temperament were congruent with the proposition that Distress, Fearfulness, and low Sociability temperament are important contributing factors to the development of social anxiety (Doi & Thelen, 1993). Descutner and Thelen (1991) reported that individuals who have a trait-like predisposition to social anxiety are more likely to experience distress and inhibition at the prospect of exchanging thoughts and emotions with others who they value, which affects both their verbal and non-verbal interpersonal behavior and limits the development of intimacy in close, personal relationships. Of particular note, however, EAS Fearfulness, while predicted to be highest for the social phobia participants, was actually highest for the panic disorder sample. Upon review of the items that contribute to this subscale, Fearfulness appears to relate more to a tendency to be fearful in the general sense, and less

specifically to social anxiety. The items refer to being easily frightened, feeling panic when afraid, and having more fears in general than others do, which at face value are more reflective of the anxiety experiences of persons with panic disorder, rather than those with social phobia.

The results of the RAAS comparisons of attachment behavior in adult romantic relationships correspond with recent research comparing the attachment behavior of persons with social phobia and healthy control participants (Eng et al., 2001), given that the social phobia mean scores were significantly lower for RAAS Close and RAAS Depend, but were higher for RAAS Anxiety attachment. However, it is interesting that the panic disorder and social phobia sample means were indistinguishable for Anxiety (i.e., fear of abandonment in close relationships). Of note, the items that comprise RAAS Anxiety are marked by worries (e.g., that romantic partners may hurt, will not stay with, or will not care for, the respondent), and distress due to worrisome thoughts exemplify a cognitive attribute that is common across various types of anxiety disorders (e.g., panic disorder, social phobia, obsessive compulsive disorder, and generalized anxiety disorder). As such, it is not surprising that the mean scores for RAAS Anxiety were quite similar for the social phobia and panic disorder samples. Further, it has been reported that RAAS Anxiety attachment is positively associated with avoidance of humiliation and interpersonal rejection (Descutner & Thelen, 1991), and with problems with assertiveness (i.e., H-Assertive; Horowitz, Rosenberg, & Bartholomew, 1993), all of which are frequently noted characteristics of social phobia.

The social phobia and panic disorder respondents were also indistinguishable regarding their mean scores on the RII (a measure of perceived risk in intimacy), which were significantly higher than that of the healthy control participants. Studies have shown a positive relationship between RII and interpersonal mistrust, anxious attachment behavior, having fewer close friendships, and less likelihood of being involved in a romantic relationship (Descutner & Thelen, 1991). However, only the social phobia participants reported having fewer close friends relative

to the healthy controls. As such, it may be that the intensity with which individuals who have panic disorder regard intimacy as a risk or threat may be similar to persons with social phobia. However, people with panic disorder may be less constrained by their mistrust, at least in terms of their interpersonal behavior, so that they are able to maintain a greater number of friendships.

The comparisons regarding fear of intimacy in friendship (FIS-F) indicated that the social phobia participants have greater Current, Past, and Total fears, relative to the panic disorder and healthy control respondents,. It is somewhat surprising that the panic disorder mean responses were indistinguishable from those of the healthy controls for the FIS-F, given that the panic disorder sample means were quite similar to those of the social phobia sample for RAAS Anxiety and the RII. However, these results seem less unusual considering that the panic disorder participants, unlike the social phobia respondents, did not report having significantly fewer friendships relative to the healthy controls. Although individuals with panic disorder in this study are more similar to those with social phobia regarding aspects of their attachment functioning and perceptions that intimacy is risky, they appear to be more similar to the healthy control participants in their capacity to make and keep friends. This may be explained by Sherman and Thelen's (1996) notion that the Fear of Intimacy construct emphasizes less the interactions between relationship partners, but more the psychological processes within the individual that are specific to social fears (e.g., feeling nervous to show strong feelings to others), which seem less oriented to the general fearfulness and distress that are more reflective of panic anxiety.

The high FIS-F mean scores for the social phobia sample in this study are consistent with the notion that fear of intimacy hinders the development of long-term relationships and reports that it is associated with having fewer friends (Sherman & Thelen, 1996). However, the present findings are somewhat contrary to research regarding the relationship between gender and intimacy fears, given that previous studies have shown that males tend to report higher levels of intimacy fears than do women (Camarena, 1990; Sherman & Thelen, 1996). While comparisons

of the healthy control and social phobia participants in Study One indicated group differences on the FIS-F, no main effects or interaction terms were found involving gender. Still, consistent with reports that fear of intimacy is negatively correlated with interpersonal disclosure (Descutner & Thelen, 1991), a significant interaction effect revealed that the males with social phobia reported the lowest frequency of discussion about personal feelings with their closest nonromantic friend.

The findings on measures of interpersonal problems (IIP) supported the Study One predictions that the social phobia sample means would exceed those of the heathy control sample for H-Assertive, H-Sociable, H-Intimate, and IIP Total. Given that social phobia is largely characterized by high social anxiety, it follows that those who are so affected would report that they are much more distressed than healthy individuals are by a variety of relationship issues (Kachin et al., 2001). Moreover, if social anxiety is construed as a continuum-like aspect of human experience (Stein, Torgrud, & Walker, 2000) which involves end points of (a) healthy social functioning (i.e., relatively few and less intense episodes of distress in social interaction) and (b) social phobia (i.e., pathological social anxiety due to excessive fears of being negatively evaluated by others), then the findings for the healthy control and social phobia sample means for the subscale Sociable (respectively, lowest and highest mean scores) may be indicative of these extremes.

The highest mean score on T-Controlling, which was found for the panic disorder sample, may reflect one of the more common symptoms of panic anxiety, the fear of losing control (of physiological and mental functioning), which is less pronounced in social phobia. It is also not unusual that the highest mean scores on H-Assertive, H-Intimate, H-Submissive, and Total IIP were reported for the social phobia sample, given the extent to which problems with assertiveness (Alden & Phillips, 1990), trust regarding intimacy (Mikulincer & Orbach, 1995), allowing one's self to be submissive in close relationships (Cloitre & Shear, 1995), and overall interpersonal difficulties (Kachin et al., 2001) are characteristic of interpersonal functioning in people with

social phobia. The social phobia participants also scored higher than the healthy control participants on T-Responsible, which may be a reflection of the distorted cognitions that many people with social phobia have regarding the extent to which they believe they are responsible for the success and failure of their social interactions (Quilty et al., 2001).

It is surprising that the panic disorder sample means were indistinguishable from those of the social phobia sample for several of the IIP subscales. Persons with social phobia, like those with panic disorder, often cope with their distress through avoidance and social withdrawal, which limits their social experiences and hinders the development or practice of interpersonal coping skills, thus increasing the likelihood of having more interpersonal problems relative to healthy individuals (Wenzel, 2002). However, research has been equivocal regarding whether individuals with generalized social phobia experience more or less impairment in daily living compared with individuals with panic disorder (Simon, Otto, Korbly, Peters, Nicolaou, & Pollack, 2002). Nonetheless, recent studies have shown that people with panic disorder tend to experience more health related concerns and to report more limitations due to physiological problems than do those with social phobia, and that people with social phobia report that they are more impaired in areas outside of occupational functioning (Quilty et al., 2002; Simon et al., 2002). This underscores the importance of functional assessment, including information about the specific types of interpersonal problems that are particularly challenging for each of these common anxiety disorders (Horowitz, 1996; Stravynski et al, 2001). Moreover, quality of life measures are increasingly being used to explore and clarify specific role limitations due to the impact of emotional vs. physiological problems and interpersonal functioning (Quilty et al., 2002). This may be particularly useful in treatment planning for social phobia and panic disorder, given that some therapies may have similar impact on the reduction of anxiety in general, but may be qualitatively different in terms of meaningful effectiveness across areas of interpersonal and daily functioning (Mendlowicz & Stein, 2000).

Study Two

The purpose of Study Two was to determine the extent to which the aspects of interpersonal functioning explored in Study One might change within the short time frame a of 13 weekly session group intervention focused on reducing social anxiety and social avoidance. Results from the major treatment study indicated that anxiety symptoms and avoidance were significantly reduced with treatment (Walker et al., 2001). We found that there were changes attributable to the group treatment in only two areas of interpersonal functioning, increases in ratings of Close attachment (RAAS) and reductions of ratings in Hard to be Sociable (IIP H-Sociable). No changes due to the group treatment were found in any of the other measures.

Attachment behavior, historically construed as a largely enduring aspect of psychological operation, is increasingly being considered to be a more fluid component of interpersonal functioning (Cassidy, 2000; Fraley & Shaver, 2000). Although attachment appears to be reasonably stable and trait-like over short intervals, research has shown stability rates of only 70% over intervals ranging from 8 mos. to 4 yrs. (Baldwin & Fehr, 1995). This has raised questions regarding what factors may be related to attachment instability (Simms, 2002), and it is now suggested that the continuity of attachment may fluctuate with changes in the social environment and mental representations of attachment figures (Cassidy, 2000; Fraley & Shaver, 2000). Further, recent research suggests that attachment behavior may be an important predictor of treatment effectiveness, and how individuals with social phobia operate in social relations and interpret their social environment (Eng et al., 2001). As such, increased focus on attachment in treatment planning in social phobia may be important in initiating change in overall interpersonal functioning (Wenzel, 2002), especially because studies have reported strong correlations between RAAS Close attachment and measures of sociability (Doi & Thelen, 1993).

The post-treatment changes in this study may indeed be a reflection of effective treatment intervention, especially because having problems in being sociable is a functional, if not

diagnostic, distinction of social phobia (Kachin et al., 2001). However, beyond the effects of therapy *per se*, it is possible that participating in a group treatment format may have contributed something to the changes in Close attachment and Hard to be Sociable (RAAS Close and IIP H-Sociable), perhaps due to the beneficial effects of exposure to group members or the dynamics of the group itself.

It is interesting that Close attachment and Hard to be Sociable (RAAS Close and IIP Hard-Sociable) changed with treatment, but that fear (FIS-F Current) and perceived risk (RII) of intimacy did not, given that individuals with intimacy problems tend to withdraw from relationships before closeness and trust may be established (Descutner & Thelen, 1991; Wenzel, 2002). It is also somewhat surprising that EAS Distress and EAS Fearfulness did not change at post-treatment, because anxiety related symptoms in social phobia are frequently among the first areas of concern to show improvement (Mendlowicz & Stein, 2000). However, although the individuals in the group treatment condition may have experienced continued distress, fearfulness, fear of intimacy and interpersonal mistrust to substantial levels, these participants appear to nevertheless have been able to tolerate their fears as they began to make progress in being comfortable with close attachment and coping more effectively with problems in being sociable.

The limited support for the Study Two predictions of post-treatment change for this variable set may also be due in part to (a) the nature of the generalized subtype of social phobia and (b) the kind of interpersonal functioning tapped by the measures used in this study. First, research has shown that people with the generalized subtype of social phobia are pervasively impaired (Brown et al., 1995; Hope et al., 1996; Turner et al., 1996). Although symptoms of social phobia in these individuals may improve with treatment, the improvements are comparatively less than those reported for persons with non-generalized social phobia. Based on one criterion often used in behavioral assessment research (Blanchard & Schwartz, 1988), a 50% change in scores constitutes an effect of *clinical significance*. The group treatment participants'

mean score pre-post changes were 14% for RAAS Close attachment and 22% for IIP Hard to be Sociable, which do not satisfy this criterion for clinical significance. However, given the expectation of comparatively lower improvement rates for persons with generalized social phobia, it may not be appropriate to hold the post-treatment differences in this study to this standard.

Further, research has shown that people with generalized social phobia remain more impaired after treatment compared with normal controls (Brown et al., 1995; Eng et al., 2002). The mean post-treatment scores of the group treatment participants for RAAS Close attachment and IIP Hard to be Sociable, while evidencing statistically significant change, continued to differ substantially from the Study One healthy control participants' mean scores (see Table 31). In illustration of the extent of enduring deficiency, the group treatment participants' post-treatment mean score for RAAS Close attachment was -1.59 *SD* , and for IIP Hard to be Sociable was +3.10 *SD*, relative to the Study One healthy control group means for these measures.

Second, given that the nongeneralized, specific-subtype of social phobia tends to show more improvement with treatment, it is suggested that this may be less due to functional kinds of improvement but more to emphasis during treatment on a specific type of problem, which is less feasible in treatment plans for generalized social phobia because of the wider range of interpersonal impairment (Turner et al., 1996). Furthermore, most treatments for social phobia target decreases in anxiety and avoidance behavior, although social functioning is often relatively unspecified and remains largely unaffected by treatment (Stravynski et al., 2001). Pertinent to this study, Wenzel (2002) reported that attachment and intimacy problems may take longer to change and require innovative treatment intervention. Finally, difficulties in personal relationship functioning are both causes and consequences of social phobia and, as such, initial improvement may be slow due to the time required to develop close relationships and to evidence change (Segrin, 2000).

The foregoing discussion regarding the difficulty in treatment, and the slow rate of change in generalized social phobia, however, does not account for the unexpected time main effects which emerged in both the predicted and exploratory analyses. One important factor common to both the group treatment and no-group treatment respondents over the course of the study was their participation in the research project. It is possible that simply participating in the study may have altered the participants' self-appraisals regarding their ability to confront their fears and to cope with interpersonal difficulties (Ross & Conway, 1986; Wilson & Ross, 2001). Conversely, an additional possibility is that contact with the researchers generated a Hawthorne or a social desirability effect, which may have influenced the participants' questionnaire responses toward a more favorable self-presentation. Finally, talking with the researchers about their problems and answering questions about their functioning may have resulted in inadvertent therapeutic benefit for the participants (i.e., "talk" therapy effects and resultant attitude change, unintended cognitive and exposure interventions due to thinking about and completing the questionnaire packages, or serial assessment effects), which may have contributed to post-treatment changes.

Implications of the Research

Clinical implications. The results of this study raise several areas of consideration regarding treatment for the impaired interpersonal functioning and poor social support in social phobia. Implications of the study concern not only group, family, couple's and individual therapies, but also the need for fluid and creative intervention. Rather than the reduction of anxiety and avoidance behavior that is historically typical of treatment, recent research and the results of this study suggest that intervention directed toward specific aspects of, or role limitations due to, impairment in interpersonal functioning may offer more practical treatment gains and reduce relapse (Quilty et al., 2002; Stravynski et al., 2001). The context, timing, and modality of treatment may also substantially influence the outcome of therapy.

A group format may offer therapeutic options which are especially important in social phobia, and somewhat limited in other treatment modalities. If becoming comfortable with getting acquainted is an initial step in confronting intimacy fears and developing close, supportive interpersonal ties (Alden & Bieling, 1998; Doi & Thelen, 1993), then the context of group treatment offers opportunity for an individual with social phobia to test and alter expectations regarding rejection or abandonment, and to explore through the group how he or she is seen by others (Kachin et al., 2001; Segrin, 2000). Group treatment also provides the opportunity for group members to learn to observe and describe others, which may foster psychological mindedness, reduction of problematic automatic behavior (Kachin et al., 2001), and also provides a context in which specific role play and skill development may occur (Alden & Wallace, 1995; Stravynski et al., 2001; Turner et al., 1996).

Cognitive behavioral interventions, which may be applied in group, individual, and self-help formats, are being developed in which there is more focus on the quality of relationships and interpersonal functioning. Increasingly, the focus of such treatment is to develop interventions to fit goals specific to improvement in interpersonal functioning (Stein & Walker, 2001; Stravynski et al., 2000). However, based on the findings and earlier research, treatment response may be slow. In the case of generalized social phobia, it is likely that treatment effects may be relatively low and that there may be residual post-treatment impairment (Eng et al., 2002). As such, it has been suggested that extended periods of treatment with generalized social phobia is warranted (Brown et al., 1995). This may involve an increased number of sessions, variations to the schedule in the latter-third of treatment, including increased intersession intervals to allow time for generalization of session and homework assignments, and extended follow-up or booster sessions during which specific aspects of social functioning are assessed, the results of which may be used to plan ongoing treatment.

The timing of intervention in social phobia is also very important because early onset of social phobia is a predictor of comorbidity and greater impairment in interpersonal, academic, and career functioning (Brown et al., 1995; Stein & Walker, 2001). Attachment functioning is a crucial consideration in intervention, given that attachment is to some degree plastic (Simms, 2002), may be influenced by environmental and mental representation changes (Cassidy, 2000; Fraley & Shaver, 2000), and is an important predictor of treatment response (Wenzel, 2002) and how individuals with social phobia operate in social relations and interpret their social environment (Eng et al., 2001). As such, the earlier a need for intervention is identified, the greater the likelihood that problems with attachment functioning and being sociable may be addressed. Increasingly, community outreach programs are screening school age children for anxiety disorders, including social phobia (Dadds et al., 1997), and psychoeducational group interventions are offered to at-risk children and their parents in hopes that impairment may be reduced or avoided (Barrette et al., 2001).

This study demonstrated that individuals with social phobia have relatively fewer friends and less satisfaction and confidence in, or support from, their close friendships. Inadvertently, the spousal partners of persons with social phobia may be significantly affected by this, given that close friendships are believed to help maintain the stability of spousal relations because they help to meet the overall need for intimacy (Oliker, 1989; Rhodes, 2000). Additionally, while it has been suggested that social phobia may foster emotional contagion in friendships (Alden & Bieling, 1998), this may also be true of spousal relationships, especially if the partner of the person with social phobia is over burdened due to his or her role as primary provider of social support (Rhodes, 2000). The level of satisfaction with social support and other aspects of couples-based activities may be regarded as insufficient by the spouses of people with social phobia, especially if they limit their own social pursuits in deference to those of their socially anxious mates. Finally, it is possible that when a person in treatment for social phobia begins to undergo changes in his or

her social functioning, the changes in that person may then lead to shifts in existing relations with the spouse, which may instigate significant adjustment issues in the relationship.

As such, a couple's therapy format may be an effective intervention regarding not only the direct impact of social phobia on the person with the diagnosis, but also in terms of the spousal partners, who may have experienced significant secondary impact of social phobia on a chronic basis. The focus in such therapy might involve (a) the development of options to correct the over burdening of the partner who provides the primary social support of the other, (b) the couples' learning to increase collective satisfaction by shifting attachment patterns, (c) facilitating adaptation to changing roles and responsibilities in the relationship, and (d) promoting the establishment of new relationships with other individuals or couples, etc.

The results and implications of this study may also be applied to planning and implementing individual treatment for social phobia. The therapy context itself is one in which the person with social phobia will need to contend with temperament, attachment, fear of and perceived risk in intimacy, and a range of interpersonal problems. The therapist's awareness of the potential for these factors to affect engagement in therapy may be used to augment the therapeutic alliance and the effectiveness of treatment.

Future research. The exploration of interpersonal functioning in social phobia is a burgeoning field, and the results of this study and other recent research raise the possibility of several areas for future consideration. Unfortunately, the sample size of participants with generalized social phobia in this study was not large enough to allow comparison of those who were not currently involved in an exclusive spousal-type relationship with those who were. Research findings suggest that people with generalized social phobia who are not in close personal relationships experience more anxious attachment and are more impaired across a wide range of daily functioning (Eng et al., 2001; Wenzel, 2002). Studies of social support indicate that males who are unmarried are more likely than married individuals and unmarried women to

experience greater health and psychological problems (Rhodes, 2000). Given that the male social phobia participants in this study reported the most difficulties in several areas of relationship functioning, the exploration of whether males with social phobia who are not involved in spousal relationships experience a greater degree of interpersonal impairment and health problems may be relevant regarding the identification of risk factors for additional problems, and the development of intervention strategies to strengthen physical and psychological well-being (Quilty et al., 2001; Mendlowicz & Stein, 2000).

The present study describes the personal relationships of a clinical sample of people with generalized social phobia. However, although the findings reveal much about certain aspects of their interpersonal functioning, a richer understanding would involve information from and about their relationship partners. These persons might include spousal partners, family members, and/or close friends. Information from them may help to determine the extent to which the participants' self-reports regarding their relationship functioning, role limitations, social skills, and types of interpersonal problems correspond with their relationship partners' perceptions of the same. Further, it is suggested that self-report measures of functioning in individuals who experience psychopathology [e.g., social phobia] may often be influenced by the cognitive, affective, and interpersonal appraisals which form the conceptual basis of a given measure itself (Atkinson, Zibin, & Chuang, 1997; cited in Quilty et al., 2002, p. 6). Cognitive and affective distortions, response bias, etc., may compromise the accuracy of self-report measures (Quilty et al., 2002); assessment by relationship partners may strengthen the validity of the social phobia participants' self-reported functioning. Of additional utility, measures taken over the course of treatment from both the person in treatment and a relationship partner may also be valuable to determine whether the self- and other-reported ratings increasingly correspond with each other as the socially anxious person begins to restructure the cognitive and affective distortions that are common in social phobia.

In earlier discussion it was suggested that the primary partners of people with social phobia may be overburdened by the extent to which they provide support to the socially anxious individuals, yet little is known about the degree of "secondary" effect they may experience (e.g., fewer friends or social isolation, depressed mood or anxiety, arguments with the partner, etc.), or whether there are restrictions they accept in deference to their socially anxious partners' distress (e.g., limiting academic or job opportunities that might require relocation, being less able to participate in work-related socializing when partners are included, etc.). As such, gathering data from the relationship partners of those with generalized social phobia may contribute to the development of alternative treatment modalities or clarify the need for intervention for those who are indirectly affected by the impact of generalized social phobia (Mendlowicz & Stein, 2000).

Finally, future research may involve the use of quality of life measurements, not only as an additional reflection of outcome effectiveness, but also as an adjunct regarding what may constitute clinically significant change with treatment. Further, Eng et al. (2002) noted that due to the pervasive impairment in social phobia, significant life changes resulting from intervention may take months or years before they may be recognized. Assessing pre- and post-treatment quality of life may help to clarify the extent to which even small, slow to change treatment effects may be personally meaningful and clinically significant from the perspective of those who are participating in treatment.

Limitations of the Study

This study is somewhat limited with respect to the generalizability of the results. Because of the problems with gender distribution in Study One (i.e., too few males to allow for group with gender comparisons across the healthy control, social phobia, and panic disorder groups), the findings in the females-only analyses can not be generalized to males with panic disorder. Further, due to the location of the hospital in which the recruitment for participants for the study took

place, the racial distribution was marked by a preponderance of Caucasian participants, which limits the generalizability of the study findings to other racial groups.

The analyses in the study were also somewhat limited because of the large number of variables that were examined. However, the variables theoretically proposed as factors important to interpersonal functioning in social phobia were numerous and conceptually overlapping. Unfortunately, little evidence existed before this study to suggest which variables might be potentially greater contributors to interpersonal functioning in social phobia, and the variables selected for exploration were chosen because they were representative of the multiple factors included in the model of social phobia (Markway et al., 1992).

Although the results in Study One differentiated the healthy control and clinical groups and were largely consistent with the Study One hypotheses, the results of Study Two were less supportive of the hypotheses. It is possible that other measures of interpersonal functioning may help to clarify what constitutes effective treatment. Nonetheless, changes in interpersonal functioning may be subtle and difficult to measure, especially if impairment is relatively high. In consideration of this, it is also possible that variables for which no significant differences were noted at post-treatment in the present study may evidence change over longer term time. Therefore, this study is limited due to the unavailability of follow-up assessment of functioning and relapse. Longer-term monitoring would have clarified if the improvements in attachment and being sociable were maintained, in addition to determination of whether any of the remaining variables showed improvement with additional post-treatment time. Our group is gathering follow-up information on the participants in this study but that information is not available at this time.

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Appendix A

INFORMATION AND CONSENT FORM

Title of Study: Characteristics and Quality of Personal Relationships in Generalized Social Phobia

Investigators: Carrie Lionberg, M.A., Ph.D. Candidate
University of Manitoba

John R. Walker, Ph.D., C.Psych.
Senior Psychologist

Description of study

In order to provide as effective a service as possible, it is important for the staff of the Anxiety Disorders Clinic to carefully evaluate the problems experienced by patients referred to our service. The more we understand about these factors, the more effectively we can provide service.

We are asking patients seen in our clinic to consider participating in our research. This involves meeting with one of the psychologists at the Clinic for an initial interview during which you will be asked about various emotional experiences and problems. This interview will be similar (although more extensive) to the standard assessment interview normally conducted prior to starting any kind of treatment at the Clinic. This initial interview will take approximately two hours.

In addition, you will be asked to complete a number of questionnaires. Several of these questionnaires are normally used during assessment and treatment as part of our routine evaluation. Several others are included mainly for research purposes.

The questionnaires we are using cover the following areas:

- a description of the types of difficulty you may have with anxiety and related problems such as depression.
- distress in social situations, relationships, and types of social interactions.

There may be some duplication in the items from different questionnaires. This happens because we are working to establish which questionnaires are most helpful with which problem. The questionnaires will take approximately 1 ½ hours to complete.

RISKS OF THE STUDY

There are no significant risks associated with this study. The cost to you will be the time it requires to participate.

POTENTIAL BENEFITS OF THE STUDY

This study is designed to acquire information that will, in the long run, lead to an improved understanding of anxiety disorders. The knowledge gained from this study will be of considerable potential benefit to the scientific community, and ultimately, we hope, to individuals who suffer from anxiety disorders.

RESEARCH PERSONNEL

This study is being conducted by the staff of the Anxiety Disorders Clinic at St. Boniface General Hospital. If you have any questions or concerns about the study please contact Carrie Lionberg or Dr. John Walker a

VOLUNTARY PARTICIPATION

Your participation in this study is entirely voluntary. If you choose to participate you are free to withdraw at any time. You may also choose not to answer any questions or questionnaires that are a part of the project. This will not affect your treatment in the Anxiety Disorders Clinic.

SOCIAL PHOBIA STUDY CONSENT FORM - A

I, _____, have been informed of the nature of the Social Phobia study, and consent to participate in it. A copy of this agreement has been provided to me.

I understand that my participation is voluntary and that I may withdraw at any time with no penalty. I may also simply not answer any questions or questionnaires that are a part of the project. This will not affect my treatment in the Anxiety Disorders Clinic. I understand that any information derived from this study is confidential and may only be shared with the staff involved in the study. I also understand that this information will be used for research purposes, but that any details that may reveal my identity will be excluded from any research reports.

_____ _____

PARTICIPANT SIGNATURE DATE

_____ _____

INVESTIGATOR SIGNATURE DATE

_____ _____

WITNESS SIGNATURE DATE

INFORMATION AND CONSENT FORM FOR HEALTHY CONTROL SUBJECTS

Title of Study: Characteristics and Quality of Personal Relationships in Generalized Social Phobia

Investigators: Carrie Lionberg, M.A., Ph.D. Candidate
University of Manitoba

John R. Walker, Ph.D., C.Psych.
Senior Psychologist

Description of study

This study is designed to help us understand the problems experienced by individuals who have an anxiety disorder called social phobia. This study is a research project conducted by the staff of the Anxiety Disorders Clinic and the Anxiety Disorders Research Program at St. Boniface General Hospital.

Participating in the Study involves meeting with one of the psychologists at the Clinic for an initial interview during which you will be asked about various emotional experiences as well as health problems. This initial interview will take approximately 1 ½ hours.

In addition, you will be asked to complete a number of questionnaires. The questionnaires we are using cover the following areas:

- a description of the types of difficulty you may have with anxiety and related problems such as depression.
- distress in social situations, relationships, and types of social interactions.

There may be some duplication of the items from different questionnaires. This happens because we are working to establish which questionnaires are most helpful with which problem. The questionnaires will take approximately 1 ½ hours to complete.

As a healthy control subject, the information you provide through the interview and the questionnaires will be compared to the information provided by the patients who have anxiety disorders. This will enable us to better understand how the experiences of those individuals who have anxiety disorders differ from those who do not have an anxiety disorder.

ELIGIBILITY

In order to be a healthy control subject for this study, you must have no history of psychiatric or emotional illness. You must not have problems with alcohol or drug abuse.

RISKS OF THE STUDY

This study is designed to acquire information that will, in the long run, lead to an improved understanding of anxiety disorders. The knowledge gained from this study will be of considerable potential benefit to the scientific community, and ultimately, we hope to individuals who suffer from anxiety disorders.

In addition, you will receive an honorarium of $25 for your participation.

RESEARCH PERSONNEL

This study is being conducted by the staff of the Anxiety Disorders Clinic at St. Boniface General Hospital. If you have any questions or concerns about the study please contact Carrie Lionberg or Dr. John Walker at

VOLUNTARY PARTICIPATION

Your participation in this study is entirely voluntary. If you choose to participate you are free to withdraw at any time. You may also choose not to answer any questions or questionnaires that are a part of the project.

SOCIAL PHOBIA STUDY CONSENT FORM - B

I, _____, have been informed of the nature of the Social Phobia study, and consent to participate in it. A copy of this agreement has been provided to me.

I understand that my participation is voluntary and that I may withdraw at any time with no penalty. I may also simply not answer any questions or questionnaires that are a part of the project.

I understand that any information derived from this study is confidential and may only be shared with the staff involved in the study. I also understand that this information will be used for research purposes, but that any details that may reveal my identity will be excluded from any research reports.

I understand that I will be offered a $25 honorarium for my participation in the research study.

_____ _____

PARTICIPANT SIGNATURE DATE

_____ _____

INVESTIGATOR SIGNATURE DATE

_____ _____

WITNESS SIGNATURE DATE

Appendix B

BIQ

Instructions - Part A: Please circle the appropriate response:

1. How difficult or easy do you consider yourself to get to know?

(a)	(b)	(c)	(d)	(e)	(f)
very difficult	moderately difficult	somewhat difficult	somewhat easy	moderately easy	very easy

2. How comfortable are you in getting close to people?

(a)	(b)	(c)	(d)
not at all comfortable	somewhat comfortable	moderately comfortable	very comfortable

Instructions - Part B: Please circle or fill in the appropriate response:

Dating and/or Spousal Relationship: The following questions ask you about dating and/or spousal experiences. For some people this may have occurred years in the past, but please answer the questions regarding such experiences even if they happened a long time ago.

3. Have you been involved in a dating relationship at some point in your lifetime?
Circle one: (a) YES (b) NO

If you have NEVER been involved in a dating relationship at some point in your lifetime, proceed directly to Question 6.

4. How many people have you dated exclusively for longer than two months?

_____

5. How satisfied or dissatisfied are you, or have you been, with the quality of your dating relationships?

(a)	(b)	(c)	(d)	(e)	(f)
very dissatisfied	moderately dissatisfied	somewhat dissatisfied	somewhat satisfied	moderately satisfied	very satisfied

All answer Questions 6 & 7

6. What was the marital status of your parents during your teens?

(a) married (b) separated (c) divorced (d) widowed
(e) never married (f) other-_____
If separated, divorced, or widowed, how long ago did it occur?
____ years

7. How satisfied are you, or do you think you would be, in a long-term or marriage/partner relationship? Circle one:

(a)	(b)	(c)	(d)	(e)	(f)
very dissatisfied	moderately dissatisfied	somewhat dissatisfied	somewhat satisfied	moderately satisfied	very satisfied

If you have NEVER been involved in either a long term dating OR a spousal-type relationship at some point in your lifetime, proceed directly to Question 14

8. For what length of time was your longest, closest dating or spousal relationship?

____ years ____ months
(number) (number)

9. How emotionally close were you to this person? Circle one:

(a)	(b)	(c)	(d)
not at all close	somewhat close	moderately close	very close

10. Have your dating partners or your spouse suggested that it was difficult to get close to you?
Circle one: (a) YES (b) NO

11. Are you presently dating, married to, or living with one person exclusively in a romantic relationship?
Circle one: (a) YES (b) NO

If your answer above is "NO" proceed directly to "Part C" - Question 14

IF YES, for how long? ____ years ____ months

IF YES, how emotionally close are you to this person?

(a)	(b)	(c)	(d)
not at all close	somewhat close	moderately close	very close

IF YES, who are you closer to: your dating/spousal partner or the person involved in your closest non-romantic friendship? Circle one:

(a) dating/spousal partner (b) person in closest non-romantic friendship

12. In general, how often do you spend time (outside of work or school) with your dating partner or spouse? Circle one:

(a)	(b)	(c)	(d)	(e)
Less than once per week	Once a week	Several times per week	Once per day	Several times per day

13. In general, how often do you discuss personal feelings or issues with your dating partner or spouse? Circle one:

(a)	(b)	(c)	(d)	(e)
Less than once per month	Once a month	Once a week	Several times per week	At least once per day

Instructions - Part C: Please circle or fill in the appropriate response:

Non-romantic Friendship: The following questions ask you about non-romantic friendship experiences. For some people this may involve a lengthy period of their lives, but please answer according to the time-frame described in the question.

If you have NEVER been involved in a close, personal non-romantic friendship, skip Questions 14 - 23, and proceed directly to the "RAAS" Questionnaire.

14. Within the last three years, how many non-romantic friendships have you had for longer than 1 year? _____ (number)

15. How satisfied are you with the quality of your non-romantic friendships within the last three years? Circle one:

(a)	(b)	(c)	(d)	(e)	(f)
very dissatisfied	moderately dissatisfied	somewhat dissatisfied	somewhat satisfied	moderately satisfied	very satisfied

16. Have your non-romantic friends suggested that it was difficult to get close to you?
Circle one: (a) YES (b) NO

17. Think of your CLOSEST non-romantic friendship.
How long have you been friends with this person?

____ years ____ months

If you are not currently involved in a non-romantic friendship,
OR have not been within the last two years, skip Questions 18 - 23,
and proceed directly to the "RAAS" Questionnaire.

18. How many non-romantic friends do you currently have that you consider yourself to be close to (i.e., you could turn to them if you had a problem)?
_____ (number)

19. Is your closest non-romantic friend male or female?
Circle one: (a) male (b) female

20. Is your closest non-romantic friend a non-relative or relative?
Circle one: (a) non-relative (b) relative

IF your closest non-romantic friend is a relative, is that person your:
(a) mother (b) father (c) brother (d) sister
(e) male cousin (f) female cousin
(g) other (please specify): _____

21. In general, how often do you spend time (outside of work or school) with your closest non-romantic friend? Circle one:

(a)	(b)	(c)	(d)	(e)
Less than once per week	Once a week	Several times per week	Once per day	Several times per day

22. In general, how often do you discuss personal feelings or issues with your non-romantic friend? Circle one:

(a)	(b)	(c)	(d)	(e)
Less than once per month	Once a month	Once a week	Several times per week	At least once per day

23. How confident are you that your closest non-romantic friend would keep your secrets private? Circle one:

(a)	(b)	(c)	(d)
not at all confident	somewhat confident	moderately confident	very confident

Appendix C

EAS

Instructions: Rate each of the items below on a scale of 1 (not at all characteristic of me) to 5 (extremely characteristic of me).

Please fill in the appropriate choice:

1----------2----------3----------4----------5

not at all characteristic of me	slightly	moderately	very	extremely characteristic of me

1. I like to be with people. ____
2. I usually seem to be in a hurry. ____
3. I am easily frightened. ____
4. I frequently get distressed. ____
5. When displeased, I let people know right away. ____
6. I am something of a loner. ____
7. I like to keep busy all the time. ____
8. I am known as hot-blooded and quick-tempered. ____
9. I often feel frustrated. ____
10. My life is fast paced. ____
11. Everyday events make me troubled and fretful. ____
12. I often feel insecure. ____
13. There are many things that annoy me. ____
14. When I get scared I panic. ____
15. I prefer working with others rather than alone. ____
16. I get emotionally upset easily. ____
17. I often feel as if bursting with energy. ____
18. It takes a lot to make me mad. ____
19. I have fewer fears than most people my age. ____
20. I find people more stimulating than anything else. ____

Appendix D

RAAS

Instructions: Please read each of the following statements and rate the extent to which it describes your feelings about romantic relationships. Please think about all your relationships (past and present) and respond in terms of how you generally feel in these relationships. If you have never been involved in a romantic relationship, answer in terms of how you think you would feel.

Please fill in the appropriate choice:

1----------2----------3----------4----------5

not at all characteristic of me	slightly	moderately	very	extremely characteristic of me

1. I find it relatively easy to get close to others. ____
2. I find it difficult to allow myself to depend on others. ____
3. I often worry that my partner does not really love me. ____
4. I find that others are reluctant to get as close as I would like. ____
5. I am comfortable depending on others. ____
6. I do not often worry about someone getting too close to me. ____
7. People are never there when you need them. ____
8. I am somewhat uncomfortable being close to others. ____
9. I often worry that my partner will not want to stay with me. ____
10. I do not often worry about being abandoned. ____
11. I want to merge completely with another person. ____
12. I am comfortable having others depend on me. ____
13. I am nervous when anyone gets too close. ____
14. I know that others will be there when I need them. ____
15. My desire to merge sometimes scares people away. ____
16. I find it difficult to trust others completely. ____
17. Often, love partners want me to be more intimate than I feel comfortable being. ____
18. I am not sure that I can always depend on people to be there when I need them. ____

Appendix E

RII

Instructions: Please read each of the following statements and rate the extent to which it describes your feelings about being involved in relationships.

Please fill in the appropriate choice:

1----------2----------3----------4----------5

not at all characteristic of me	slightly	moderately	very	extremely characteristic of me

1. It is dangerous to get really close to people. ____
2. I prefer that people keep their distance from me. ____
3. I'm afraid to get really close to someone because I might get hurt. ____
4. At best, I can handle only one or two close friendships at a time. ____
5. I find it difficult to trust other people. ____
6. I avoid intimacy. ____
7. Being close to other people makes me feel afraid. ____
8. I'm hesitant to share personal information about myself. ____
9. Being close to people is a risky business. ____
10. The most important thing to consider in a relationship is whether I might get hurt. ____

Appendix F

FIS-F

Part A - Instructions: Imagine you are in a close relationship with a non-romantic friend. Respond to the following statements as you would *if you were in that close non-romantic relationship*. Rate how characteristic each statement is of you on a scale of 1 to 5 as described below, and write your responses on this sheet in the underlined spaces.

Please fill in the appropriate choice:

1----------2----------3----------4----------5

not at all characteristic of me	slightly	moderately	very	extremely characteristic of me

Note: In each statement "0" refers to the person who would be in the close relationship with you.

1. I would feel uncomfortable telling "0" about things in the past that I have felt ashamed of. ____
2. I would feel uneasy talking with "0" about something that has hurt me deeply. ____
3. I would feel comfortable expressing my true feelings to "0". ____
4. If "0" were upset I would sometimes be afraid of showing that I care. ____
5. I might be afraid to confide my innermost feelings to "0". ____
6. I would feel at ease telling "0" that I care about him/her. ____
7. I would have a feeling of complete togetherness with "0". ____
8. I would be comfortable discussing significant problems with "0". ____
9. A part of me would be afraid to make a long-term commitment to "0". ____
10. I would feel comfortable telling my experiences, even sad ones, to "0". ____
11. I would probably feel nervous showing "0" strong feelings of affection. ____
12. I would find it difficult being open with "0" about my personal thoughts. ____
13. I would feel uneasy with "0" depending on me for emotional support. ____
14. I would not be afraid to share with "0" what I dislike about myself. ____
15. I would be afraid to take the risk of being hurt in order to establish a closer relationship with "0". ____
16. I would feel comfortable keeping very personal information to myself. ____
17. I would not be nervous about being spontaneous with "0". ____
18. I would feel comfortable telling "0" things that I do not tell other people. ____
19. I would feel comfortable trusting "0" with my deepest thoughts and feelings. ____
20. I would sometimes feel uneasy if "0" told me about very personal matters. ____
21. I would be comfortable revealing to "0" what I feel are my shortcomings and handicaps. ____
22. I would be comfortable with having a close emotional tie between us. ____
23. I would be afraid of sharing my private thoughts with "0". ____

24. I would be afraid that I might not always feel close to "0". ____
25. I would be comfortable telling "0" what my needs are. ____
26. I would be afraid that "0" would be more invested in the relationship than I would be. ____
27. I would feel comfortable about having open and honest communication with "0". ____
28. I would sometimes feel uncomfortable listening to "0's" personal problems. ____
29. I would feel at ease to completely be myself around "0". ____
30. I would feel relaxed being together and talking about our personal goals. ____

Part B - Instructions: Respond to the following statements *as they apply to your past relationships.* Rate how characteristic each statement is of you on a scale of 1 to 5 as described in the instructions for Part A.

31. I have shied away from opportunities to be close to someone. ____
32. I have held back my feelings in previous relationships. ____
33. There are people who think that I am afraid to get close to them. ____
34. There are people who think that I am not an easy person to get to know. ____
35. I have done things in previous relationships to keep me from developing closeness. ____