Marital Functioning and Communication in a Clinical Sample

of

Social Anxiety Disorder Clients

A Thesis

Submitted to the Faculty

of

Drexel University

by

Kircia Marie Casten

in partial fulfillment of the

requirements for the degree

of

Doctor of Philosophy

February 2004

DEDICATION

This dissertation would not have been possible without the patience, encouragement, and unwavering love of my husband, Richard Casten. For these gifts, and the many other joys he has bestowed upon my life, I dedicate my dissertation to him. Thank you.

ACKNOWLEDGEMENTS

I am truly indebted to my mentor, James Herbert, Ph.D., for his exceptional guidance, invaluable training, and generous support throughout my graduate education. Special gratitude also goes to my mother, Cherie Maffie, for giving me the continual encouragement and inspiration to complete this dissertation. I also owe much thanks to my husband, Richard Casten, for his patience and unremitting support during this long process. I am also very grateful to the lab members of the Social Anxiety Treatment Program at Drexel University who shared much of their time and energy to assist with data collection. I would also like to thank my classmate, Kristy Dalrymple, for her generous assistance. In addition, I would like to thank my committee members, James Herbert, Ph.D., Steven Sayers, Ph.D., Julie Graham, Ph.D., and Evan Forman, Ph.D. for contributing their time and wisdom to this project.

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ABSTRACT

Marital Functioning and Communication in a Clinical Sample
of Social Anxiety Disorder Clients
Kircia Marie Casten
James D. Herbert, Ph.D.

Social Anxiety Disorder (SAD) is a prevalent and debilitating disorder that frequently has deleterious effects on interpersonal relationships. However, no research has yet examined the marital relationships of individuals with SAD and little attention has been given to the relation between marital status and SAD. The current investigation involved two studies. Study 1 examined overall marital satisfaction and communication patterns of clients with SAD and their partners, relative to control couples. Twenty-six married or cohabitating SAD clients and their partners were compared with 26 controls and their partners. Compared to control couples, SAD clients and their partners reported (a) lower ratings of overall marital satisfaction, (b) less overall positive communication, (c) more demand/withdraw interaction, with the SAD client in the withdrawing role, and (d) more demand/withdraw interaction, with the SAD client in the demanding role. With the exception of the finding regarding positive communication, these results remained significant when controlling for depression. Although SAD couples reported lower ratings of marital satisfaction, their scores nevertheless did not fall in the range of distressed couples. Gender of the SAD client did not impact ratings of marital adjustment. Discussion of these findings focuses on the interpersonal dynamics of SAD couples and how these interactions might be understood. Implications for treatment and future research are also discussed. Study 2 investigated potential differences between married and single clients with SAD in (a) degree of avoidance, (b) symptom severity,

and (c) comorbid depressive symptoms in a sample of 177 SAD clients. Study 2 also evaluated whether marital status is related to treatment response in SAD clients undergoing cognitive-behavior therapy for SAD. When controlling for age, there were no significant differences between married and single patients in terms of self-reported or observer-rated symptom severity, self-reported avoidance of social interaction, or comorbid depressive symptoms. Both groups reported significant improvement from pre-treatment to post-treatment, and there was no significant difference between the groups in rate of improvement. Similar results were found when controlling for depression. Additional clinical and research implications of the findings are discussed.

1: INTRODUCTION

Psychologists have long been interested in the interpersonal relationships of individuals with psychiatric disorders. Almost five decades ago researchers began examining the wide-ranging effects of individual psychopathology on marital and social relationships (Clausen & Yarrow, 1955; Yarrow, Clausen, & Robbins, 1955; Yarrow, Schwartz, Murphy, & Deasy, 1955). More recently, significant theoretical and empirical advances have been made toward understanding the link between marital relations and psychological disorders such as depression (Barnet & Gotlib, 1988; Burns, Sayers, & Moras, 1994; Coyne, 1976; Epstein, 1985; Jacobson, 1984; Rousanville, Weissman, Prusoff, & Herceg-Baron, 1979) and alcohol abuse (Jacob & Krahn, 1988; Jacob & Leonard, 1992; Zweben, 1986). Although considerable progress has been made in understanding the interpersonal causes and consequences of some psychiatric disorders, researchers have devoted relatively little attention to the relationship between anxiety disorders and marital functioning. The research that has been conducted has focused primarily on the marital relationships of women with agoraphobia (Arrindell & Emmelkamp, 1986; Buglass, Clarke, Henderson, Kreitman, & Ppresley, 1977; Fry, 1962; Goldstein, 1973; Goldstein & Chambless, 1978, Hafner, 1982; Lange & van Dyck, 1992).

As a result of these efforts, we have gained important insights into the close relationships and interpersonal styles of individuals with various psychological problems. The purpose of the present study is to extend these efforts to individuals with Social Anxiety Disorder (SAD) in attempt expand our conceptualization of SAD and, potentially, our treatment efforts in this area. For example, knowing more about specific communication patterns that are common in the marriages of individuals with SAD could

help strengthen current treatments by including techniques designed to facilitate positive communication during marital conflict, in addition to those designed to address general social skills.

SAD is a prevalent and debilitating anxiety disorder that has deleterious consequences on one's social relationships. Persons with SAD experience excessive fear of negative evaluation by others in social or performance situations. Epidemiological data confirm that SAD is quite common. In fact, the National Comorbidity Survey (NCS; Kessler et al., 1994) reported 12-month prevalence estimates of 7.9% (6.6% of men and 9.1% of women) and lifetime estimates of 13.3% (11.1% of men and 15.5% of women) in a representative sample of the United States. The NCS results suggest that SAD is the third most common psychiatric disorder in the United States, with only major depression and alcohol dependence having a higher 12-month or lifetime prevalence.

Social anxiety disorder by its very nature interferes with interpersonal relationships. Several studies of clinical populations show that individuals with SAD are less likely to be married relative to persons with other anxiety disorders (Amies, Gelder, & Shaw, 1983; Sanderson, Rapee, & Barlow, 1990; Solymon, Ledwidge, & Solymon 1986). Furthermore, data from community samples also indicate that individuals with SAD are more likely to be unmarried than are individuals without SAD, even after controlling statistically for community site, subject age, gender, socioeconomic status, and race (Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992). In addition, a recent study investigating the disabilities and impairments associated with SAD shows that SAD affects most areas of life, but especially education, career, and romantic relationships (Wittchen, Fuetsch, Sonntag, Muller, & Liebowitz, 2000). Despite its

prevalence and the documented association between SAD and impaired interpersonal relationships, no studies have explored the marital functioning of patients with SAD.

Thus far, most of our understanding of the social behaviors of individuals with SAD has come from structured-role play and related behavioral assessment procedures (McNeil, Reis, & Turk, 1995). Although these efforts have proven instrumental in documenting specific social skills deficits in individuals with SAD, they may be unsuccessful in capturing important elements of close relationships. For instance, behavioral assessments generally use role-played interactions with confederate posing as neighbors, co-workers, or potential romantic partners. These structured assessments offer very little insight into how individuals with SAD actually behave within close personal relationships.

The present investigation consisted of two studies. The principle aim of Study 1 was to examine the overall level of marital satisfaction and marital communication patterns that are common in patients with SAD, relative to couples in which neither partner has SAD. Study 1 also evaluated whether the gender of the partner with SAD has implications for marital adjustment.

Study 2 explored the relationship between marital status, SAD severity, and treatment outcome within a sample of patients with SAD. Hart, Heimburg, and Turk (1998) found that single patients with SAD were more likely to have an additional diagnosis of avoidant personality disorder or a mood disorder. Single patients were also rated as more severe by trained clinicians on four of six measures of SAD severity. There were, however, no differences between the married and unmarried patients on self-reported measures of depression, fear of negative evaluation, or performance anxiety.

Single patients did, however, rate themselves as more severe than married patients on social interaction anxiety. The present study attempted to replicate and expand the previous study by investigating potential differences between married and single patients with SAD with regard to their degree of avoidance, symptom severity, and comorbid depressive symptoms. Secondly, this study evaluated whether marital status is related to treatment response in patients with SAD undergoing cognitive-behavior therapy for SAD.

2: LITERATURE REVIEW

2.1: Association of Individual Psychopathology and Marital Functioning

In general, there is a well-established association between marital status and individual psychopathology. Epidemiological data suggest that married individuals are less likely to suffer from a psychiatric disorder than those who are separated or divorced (Bebbington, 1987a). In addition, men and women who are married have a lower rate of presentation to outpatient mental health services and are less likely to be admitted to a psychiatric hospital (Bebbington, 1987b). It is not the case, however, that simply being married offers protection against developing a psychological disorder. Couples who exhibit ongoing marital difficulty have high rates of psychological disorder, particularly depression in wives (Beach, Arias & O'Leary, 1986; Beach & O'Leary, 1986) and alcohol abuse in husbands (Halford & Osgarby, 1993). Conversely, men and women in satisfying marriages appear to be at lower risk for psychiatric disorder than other segments of the population (Weiss & Aved, 1987; Weissman, 1987).

There is growing literature linking marital dissatisfaction with the onset, course, and treatment of adult psychiatric disorders. Although a strong association has been reported between marital problems and psychopathology by numerous researchers, the causal connection remains uncertain. Several studies indicate that marital discord may have a causal effect on psychological disorders (see Beach & Cassidy, 1991 for a review). Other studies suggest that psychological disorders play a causal role in creating and maintaining disrupted marital interactions (Hautzinger, Linden, & Hoffman, 1982; Nelson & Beach, 1990). Finally, some research indicates that marital problems and psychological disorders reciprocally influence one another (Coyne, 1976).

Whisman (1999) examined the association between marital dissatisfaction and 12-month prevalence rates of common Axis I psychiatric disorders in married respondents from the National Comorbidity Survey (NCS; Kessler et al., 1994). Results indicated that spouses with any disorder, any mood disorder, any anxiety disorder, and any substance abuse disorder reported significantly greater marital dissatisfaction than spouses without the corresponding groupings of disorders. With regard to specific disorders, greater marital dissatisfaction was associated with 7 of 12 disorders for women (with the largest association found for PTSD, dysthymia, and major depression) and 3 of 13 specific disorders for men (dysthymia, major depression, and alcohol dependence). In order to further evaluate the association between marital dissatisfaction and psychiatric disorders, analyses were conducted to control for comorbid disorders. In general, covariance lessened the bivariate associations between marital dissatisfaction and specific disorders and groupings of disorders. However, marital dissatisfaction was uniquely related to major depression and PTSD for women and dysthymia for men, after controlling for age, education, and each of the remaining disorders. These results are especially noteworthy in that they are the first to evaluate the association between marital dissatisfaction and psychiatric disorders based on a nationally representative sample.

In order to assess if the association between psychiatric disorders and marital dissatisfaction is specific to marital relationships, rather than a result of dissatisfaction with other types of social relationships, Whisman, Sheldon, and Goering (2000) tested specificity of this association by evaluating the association between nine Axis I psychiatric disorders and quality of the relationship with spouse, relatives, and friends in married couples who completed the Ontario Health Survey Mental Health Supplement (*N*

= 4,933). When the authors controlled for the quality of other social relationships with relatives and friends, not getting along with one's spouse was related to six disorders. The strongest associations were found for generalized anxiety disorder (GAD), major depression, panic, and alcohol problems. Four associations remained significant when they controlled for comorbid disorders. These results suggest that the association between marital satisfaction and psychiatric disorders is not an artifact of overall social dissatisfaction. To analyze further the relationship between psychopathology and marital functioning, the relationship of specific disorders and marital discord will now be briefly discussed.

2.1.1: Depression and Marital Functioning

Numerous researchers have reported a strong association between marital problems and depression (e.g., Barnett & Gotlib 1988; Beach, Jourlies, & O'Leary, 1985; Coleman & Miller, 1975; O'Leary & Beach, 1990; Paykel & Weissman, 1973, Weissman, 1987). A cross-sectional association between marital dissatisfaction and depressive symptoms has consistently been observed in community samples (Fincham, Beach, Harold, & Osborne, 1997; Horneffer & Fincham, 1995; O'Leary, Christian, & Mendell, 1994). In addition, in studies using a nationally representative sample of married individuals, marital dissatisfaction was uniquely related to major depression for women and dysthymia for men, even after controlling for comorbid disorders (Whisman, 1999).

In light of the association between marital dissatisfaction and depression, theoretical and empirical work has started to address the causal relationship between the two. As reviewed by Burns, Sayers, and Moras (1994), at least four causal pathways are

plausible: (1) marital discord may precipitate or maintain a depressive episode (Beach et al., 1990), (2) an episode of depression may contribute to marital discord, (3) there could be reciprocal causal relationships between the two (Coyne, 1976), and (4) another variable, such as a personality characteristic, could simultaneously contribute to depression as well as marital discord. In investigating the causal relationship between depression and marital dissatisfaction, Burns et al. (1994) found that depression severity did not have a causal effect on relationship satisfaction and suggested that relationship satisfaction may have only a weak reciprocal effect on depression severity. Unexpectedly, these authors also found that chronic, low-level depression may have a stronger association with interpersonal problems than other forms of depression.

Other studies have suggested that marital distress has a substantial impact on depression. Several studies suggest that marital discord may precipitate or maintain depression (see Beach & Cassidy, 1991 and Jacobson, 1984, for reviews). The relative risk for developing depression in unhappily married women is approximately 25 times that for happily married women (Weissman, 1987). Furthermore, a prolonged increase in marital argument is the most frequent life event reported as preceding the onset of depression in married women (Paykel et al., 1969) and ongoing marital problems are associated with poor prognosis for depression (Rousanville et al., 1979). In addition, marital conflict appears to be associated with an increased likelihood of relapse among depressed women after discharge from the hospital (Hooley, Orely, Teasdale, 1986; Hooley & Teasdale, 1989).

Early studies on the temporal association between marital dissatisfaction and depression relied primarily on retrospective methods. Although retrospective reports

suggest marital dissatisfaction may be causally related to depression, their use has several methodological limitations, as responses may be influenced by depressed mood and response bias.

More recently, the association between marital dissatisfaction and depression has been examined with prospective studies. For example, Beach and O'Leary (1993) reported that marital dissatisfaction predicted subsequent depressive symptoms in a sample of newlyweds, and Fincham and Bradbury (1993) found that marital dissatisfaction predicted subsequent depressive symptoms for men, but not for women. In contrast, Fincham et al. (1997) used structural equation modeling (SEM) in a sample of community newlyweds and found that marital dissatisfaction predicted subsequent depressive symptoms for women, but that depressive symptoms predicted subsequent dissatisfaction for men. Using a prospective design, Whisman and Bruce (1999) evaluated the association between marital dissatisfaction at baseline and 12-month incidence of major depressive episode (MDE) in a community sample of married individuals from the New Haven Epidemiologic Catchment Area program (N =904) who did not meet criteria for MDE at baseline. Results indicated that dissatisfied spouses were nearly 3 times more likely than non-dissatisfied spouses to develop a MDE during the year and nearly 30% of the new cases of MDE were associated with marital dissatisfaction. The association between marital dissatisfaction and risk of MDE remained significant when controlling for demographics and depression history. In addition, it was not moderated by gender or by depression history. Although mixed, the results from these studies generally support the perspective that marital dissatisfaction is associated with longitudinal changes in depression.

2.1.2: Alcohol Abuse and Marital Functioning

There is also a strong association between alcohol abuse and marital distress. Whereas alcoholics are just as likely as the rest of the population to have been married (Steinglass, 1976), the separation and divorce rates are significantly higher (Nace, 1982). With regard to both male and female problem drinkers, the divorce rates are higher than for any other psychological disorder (Halford & Bouma, 1997). A study using data from the NCS (Kesslar et al., 1994), also found greater marital dissatisfaction was associated with alcohol dependence for men (Whisman, 1999). There is also a high rate of alcohol abuse in couples presenting for treatment for marital problems. Halford et al. (1993) found that approximately one-third of their sample of couples presenting with marital problems reported alcohol abuse in the male partners, and over three-quarters of couples reported frequent disagreement regarding alcohol consumption.

Numerous studies document that both men presenting for alcoholism and their partners report low relationship satisfaction (Zweben, 1986), frequent and intense arguments, and poor sexual functioning (Blankfield & Maritz, 1990). Furthermore, observational studies of marital discussion have identified noticeable deficits in problem-solving and communication skills in couples in which one partner is a problem drinker. In particular, couples in which one partner has an alcohol problem are characterized by high rates of verbal and non-verbal negative affect expression, few supportive and constructive responses, and male withdrawal during conflicts (Jacob et al, 1992; Jacob, Ritchey, Cvitkovic, & Blane, 1981).

2.1.3: Psychosis and Marital Functioning

Although the marriages of individuals with psychosis have not been studied extensively, there appears to be a strong association between psychosis and marital status. Individuals with a psychotic disorder are less likely to marry than the rest of the population (Reich & Thompson, 1985). Moreover, when they do marry, their relationships tend to be characterized by low relationship satisfaction (Hooley et al., 1987), and a high rate of separation and divorce (Reich & Thompson, 1985). These findings are not surprising given the various challenges a partner of a patient with a psychotic disorder must meet. Some of the difficulties may include coping with severely disturbed behavior during periods of acute psychotic episodes, disrupted household routines (e.g., as the result irregular sleeping and eating patterns and self-care), inappropriate interpersonal behavior, social withdrawal, and emotional unresponsiveness (Hatfield, 1987).

2.1.4: Agoraphobia and Marital Functioning

It has long been debated whether marital discord is an important determinant in the onset and maintenance of agoraphobia. Several studies conducted in the 1970's proposed that agoraphobia is caused by problematic interpersonal relationships (Fry, 1962; Goldstein, 1973; Goldstein & Chambless, 1978; Hafner, 1982; Holmes, 1982). According to these theories, the wife's anxiety disorder often maintains the stability of a relationship with a dysfunctional partner (Fry, 1962) and the marriage will deteriorate as the agoraphobic wife becomes more independent (Hafner, 1976). Fry (1962) suggested that the agoraphobic spouse functions to protect her partner, who is often phobic himself (but reluctant to admit this), especially if her partner was very jealous. More recent

empirical evidence largely refutes the validity of this systemic hypothesis of agoraphobia. There is almost no evidence that exposure therapy has adverse consequences on the marital relationship of the patient with agoraphobia. In fact, the controlled studies in this area conclude that the resolution of women's agoraphobic symptoms tends to increase marital satisfaction (Lange & van Dyck, 1992; Cobb, Matthews, Childs-Clarke, & Blowers, 1984; Himaldi et al., 1986; Emmelkamp et al., 1992).

Although the results are mixed, a number of studies have investigated the association of agoraphobia and marital functioning. Early studies concluded that agoraphobic marriages were characterized by conflict and excessive dependency, resulting in marital dissatisfaction in both spouses (Fry, 1962; Goldstein & Swift, 1977). These studies, however, were based on interviews of unknown reliability and validity, and used only small samples of women patients with agoraphobia, and lacked of adequate control groups.

More recent research rejects the conclusion that women with agoraphobia are particularly dissatisfied with their marriages. Several studies have found few significant differences when comparing the marital functioning of women patients with agoraphobia with the functioning of women with other anxiety disorders (Friedman, 1990), other psychiatric disorders (Arrindell & Emmelkamp, 1986), or with that of normal controls (Arrindell & Emmelkamp, 1986; Buglass, Clarke, Henderson, Kreitman, & Presley, 1977). In fact, when women with agoraphobia and their partners were compared with three groups of control couples (non-agoraphobic women psychiatric patients and their husbands, maritally-distressed couples, and happy-couples) on measures of marital adjustment, intimacy, and needs, neither the agoraphobics nor their partners rated their

marriages as more maladjusted or unpleasant than the non-agoraphobic psychiatric patients or their partners. Rather, agoraphobic women and their spouses were found to be more similar to the happily married couples than to the maritally distressed couples in terms marital and sexual adjustment and satisfaction, and certain communication dimensions. On the other hand, non-agoraphobic psychiatric patients and their partners were generally found to rate their marriage as being as distressing as those of the maritally distressed controls (Arrindell & Emmelkamp, 1986). It should, however, be noted that only women with agoraphobia participated in this study; thus the results do not necessarily apply to men with agoraphobia and their spouses, or agoraphobics in same-sex relationships.

Similarly, in a recent study using a nationally representative sample of married individuals, Whisman (1999) found that the relationship between agoraphobia and marital dissatisfaction in women was not significant when controlling for comorbid disorders. This finding suggests that existing associations between marital dissatisfaction and agoraphobia may be the result of comorbidity among disorders.

It appears, in general, that the marriages of individuals with agoraphobia are not that much different from those of normal couples. According to a quantitative analysis by Emmelkamp and Gerlsma (1994), the differences between agoraphobic and normal couples are small to medium, with the exception of one study by Kleiner, Marshall, and Spevack (1987), which showed substantially lower marital adjustment in agoraphobic couples. Given the robust finding across studies that depression is related to marital distress, there is a clear need to evaluate the role of depression as a moderator variable in the relationship quality of patients with agoraphobia. It is plausible that in cases where

there is a link between agoraphobia and marital problems, this link is due to depression. Furthermore, findings show that although marital distress does exist in some agoraphobic couples, marital conflict is not necessarily causal in the etiology of the disorder. It may be that an incapacitating disorder such as agoraphobia puts significant stress on the relationship.

2.1.5: Obsessive-Compulsive Disorder and Marital Functioning

There are a few studies documenting the association of obsessive-compulsive disorder (OCD) with low marital satisfaction. Emmelkamp, de Haan, and Hoogduin (1990) compared marital functioning of patients with OCD to the norms for the Dutch population and found the marital relationships of the patients with OCD to be disturbed. In addition, Riggs, Hiss, and Foa (1992) compared the Locke-Wallace MAT scores of obsessive compulsive patients with those of the norms reported by Peterson, Baucom, Elliot, and Farr (1989) for non-clinical couples and found marital relationships in couples with OCD to be less adjusted. Furthermore, a quantitative analysis of the relationship between anxiety disorders and marital functioning found that the marriages of patients with OCD are more problematic than those of patients with agoraphobia (Emmelkamp & Gerlsma, 1994). Again, this finding does not necessarily denote a causal role for marital distress in the development of OCD. Here depression may also be a moderator variable or OCD may place even a greater burden on the family than agoraphobia.

2.1.6: Generalized Anxiety Disorder, Specific Phobia, and Panic Disorder and Marital Functioning

Existing research contributes some insight into the relationship of generalized anxiety disorder, specific phobia, and panic disorder and marital interaction. Data from

the Epidemiologic Catchment Area study concerning marital functioning among individuals with panic disorder suggests that such individuals do not significantly differ from those with major depression in the risk of experiencing marital problems. Both groups were found to be at an increased risk for "not getting along" with their partners and for not being able to confide in their partners (Markowitz, Weissman, Ouellette, Lish, & Klerman, 1989). Similarly, Whisman (2000) found that marital dissatisfaction was strongly associated with GAD and panic disorder in a study of residents of Ontario, Canada, even when controlling for the quality of other social relationships. In addition, Whisman (1999) reported that marital dissatisfaction was associated with GAD for wives, but not for husbands, in data from the National Comorbidity Survey.

A landmark study by McLeod (1994) used a general population survey to compare perceived marital quality among couples in which one, both, or neither spouse met criteria for one of three anxiety disorders: (a) phobic disorder (specific phobia), (b) generalized anxiety disorder (GAD), or (c) panic disorder. McLeod found that the relationship between anxiety disorders and marital distress is moderated by the gender of the person with the problem, the type of anxiety disorder, whether the partner also has an anxiety disorder, and whose perception is assessed (the sufferer or the partner). More specifically, phobias in men were associated with lower marital quality being reported by both the men and their wives, but phobias in women did not appear to have a disruptive effect on perceived marital quality as reported by the phobic women or their husbands. In contrast, panic disorder in either men or women was associated with lower marital quality reported by both the sufferer and his or her spouse. Generalized anxiety disorder in women was associated with poorer marital functioning as reported by women, but not

by their male partners, whereas husbands' GAD was not associated with poorer marital functioning being reported by either spouse.

Dehle and Weiss (1999) further highlight the role of gender in the association between anxiety and marital adjustment. They examined the prospective associations between anxiety and marital adjustment in a sample of recently married (1-3 years) community couples and found that husbands' anxiety (at time 1) was predictive of both their own and their wives' subsequent reports of marital adjustment at time 2 (3 months later). However, wives' anxiety at time 1 was not predictive of either their own or their husbands' subsequent reports of marital adjustment at time 2.

McLeod (1994) suggests the relative significance of husbands' versus wives' phobias may reflect the stereotypically non-male nature of anxiety symptoms. Sociologists have reported that professionals respond more strongly to stereotypically female disorders in men and to stereotypically male disorders in women (Rosenfield, 1982). Thus, it is reasonable to hypothesize that sex-typed behavioral expectations influence one's own as well as one's spouse' reactions to symptoms. Because fear is generally more acceptable for women to express than for men, couples may view husbands' phobias as more disruptive than that of wives. On the other hand, since the anxiety attacks related to panic disorder and GAD are less situational-based, they may be equally difficult to manage regardless of which spouse is suffering.

Since depression and substance abuse are common in individuals with anxiety (Schneier et al., 1992), and have a strong link to poor marital functioning, McLeod (1994) also tested whether the relationship between marital quality and anxiety could be explained by comorbidity of these conditions. With the exception of panic disorder, the

relationships between anxiety disorders and marital quality could not be explained by comorbid depression or alcohol or drug dependence. Thus, only the wives of men with panic disorder, and the husbands of women with panic disorder, reported poorer marital quality because of their spouses' comorbid depression and alcohol or drug dependence.

McLeod (1994) also tested whether the relationship between anxiety and marital quality was stronger for persons with various comorbid disorders. None of the relationships between anxiety disorders and marital quality differed depending on the presence of other anxiety disorders. In regards to comorbidity for depression or alcohol or drug dependence, results varied by disorder. For example, husbands' phobias had adverse effects on marital quality regardless of whether other disorders co-occurred, as did wives' GAD. In contrast, for husbands with GAD, comorbid depression and alcohol or drug dependence increased marital distress.

Another issue of concern in McLeod's (1994) study was the effect of spouse concordance for anxiety disorders on marital perceptions. Concordant couples were defined as couples in which both members met criteria for a phobic disorder, panic disorder, or GAD. This effect was weak and also varied according to disorder. For phobias, wives from concordant couples reported more favorable marital relationships than wives from couples in which only the husband was affected. However, for other anxiety disorders, concordant couples did not significantly differ from couples where only partner had panic or GAD. The finding of better marital quality among couples in which both partners have phobias relative to couples with only a phobic husband is interesting because it opposes findings from older case studies reporting shared anxiety leads to distant and dissatisfied marital interactions (Fry, 1962; Hafner, 1982).

According to McLeod (1994), wives are generally happier and more supportive of husbands with specific phobia if they have shared similar experiences.

More recently, Dutton (2002) examined marital functioning in a clinical sample of female GAD patients. He found that GAD marriages fall somewhere between highly distressed couples and non-distressed couples. Women with GAD also evidenced lower emotional and intellectual intimacy, relative to female controls. In addition, results indicated that the GAD women had a negative bias regarding relationship interactions with their partner. Exploratory tests revealed that the GAD women used an avoidant approach to problem-solving, expressed ambivalence over emotional expression, and felt less related to and accepted by their husbands. Although there has been little empirical research or theorizing on the role of marital functioning in the onset, course, and treatment of GAD, results from these studies suggest that such a focus may be important in understanding and treating GAD, particularly among women.

2.1.7: Posttraumatic Stress Disorder and Marital Functioning

Posttraumatic stress disorder in women was the only disorder aside from depression that exhibited a unique association with marital dissatisfaction in a study based on nationally representative data from the National Comorbidity Survey (Whisman, 1999). Furthermore, studies have found men with PTSD (usually veterans) have been found to report more severe marital problems than non-anxious controls (Jordan, Marmar, Fairbank, & Schlenger, 1992).

2.2: Social Anxiety Disorder and Marital Functioning

Although recent advances have been made toward understanding the association between individual psychopathology and marital problems, no research has yet examined

the specific relationship between SAD and marital functioning. Social anxiety disorder is characterized by a marked and persistent fear of embarrassment or negative evaluation while engaged in social interaction or public performance (Herbert & Dalrymple, in press). Consequently, SAD is associated with extreme subjective distress and debilitating impairments across many areas of functioning. Although individuals with SAD report that the disorder interferes with most areas of their life, persons with SAD report the most severe degree of disability in the romantic relationship domain (Wittchen et al., 2000). Thus, it is not surprising that individuals with SAD are found to be less likely to be married than individuals without SAD in studies involving clinical populations (Amies, et al., 1983; Sanderson et al., 1990; Solyom et al., 1986) and in community samples (Schneier et al., 1992). Similarly, a recent study found that persons with either "pure," comorbid, or subthreshold SAD are less likely to be married, more likely to have never married, and more likely to have been divorced than controls without SAD (subjects with a history of recurrent herpes infections) matched for age and gender (Wittchen et al., 2000). Building on this work, the present study explored the relationship between marital status and SAD as well as examined marital satisfaction and communication patterns in married patients with SAD and their spouses, as well as potential differences in severity between married and non-married patients with SAD.

2.2.1: Social Anxiety Disorder and Interpersonal Behavior

Social anxiety disorder manifests itself in several ways that are likely to have negative consequences on one's social functioning. Behaviorally, SAD is typically accompanied by attempts to avoid or escape the anxiety-producing situation. Thus, people with SAD tend to withdraw both physically and psychologically from

interpersonal encounters. They may disaffiliate by talking less, or even by avoiding social situations altogether. One investigation of the daily interactions of socially anxious and non-anxious individuals asked university students to keep a daily record of their interactions for two weeks. Compared to non-anxious subjects, socially anxious students reported engaging in fewer social interactions, particularly those involving unstructured casual conversation (Dodge, Heimberg, Nyman & O'Brien, 1987). In addition, students with SAD engaged in less encounters with the opposite sex relative to non-anxious students. Moreover, several studies report that college students with SAD tend to date less frequently than students low in social anxiety (Arkowitz, Hinton, Perl, & Himaldi, 1978; Glasgow & Arkowitz, 1975; Heimberg, Harrison, Montgomery, Madsen, & Sherfey, 1980; Himadi, Arkowitz, Hinton, & Perl, 1980) and are less likely to form intimate relationships that involve a sexual dimension (Jones & Carpenter, 1986; Leary & Dobbins, 1983). They also tend to choose living accommodations that require less interaction with others, and when in small group settings, socially anxious college students choose to sit in places that require minimal interaction with group members (McCroskey & Leppard, 1975).

Although individuals with SAD usually prefer to avoid social encounters, in some cases such interactions are inescapable. When persons with SAD must engage in social interactions, research suggests they tend to appear inhibited and socially withdrawn, and often interact with others in an innocuously sociable manner (Leary & Kowalski, 1995). Leary and Kowalski (1995) interpret these behaviors mainly in terms of the protective functions they serve. According to the self-presentational theory, individuals with SAD are motivated to make certain impressions but are not convinced that they will (Leary &

Kowalski, 1995). Therefore, they behave in ways that will protect their social images as much as possible. Several studies show that socially anxious individuals are less likely to initiate conversations, talk a lower percentage of the time, take longer to respond, allow more silences to develop during conversations, and are less likely to break conversational silences (Arkowitz, Lichtenstein, McGovern, & Hines, 1975; Borkovec, Stone, O'Brien, & Kaloupeck, 1974; Borkovec, Fleischmann, & Caputo, 1973; Cheek & Buss, 1981; Daly & McCroskey, 1984; Glaskow & Arkowitz, 1975; Murray, 1977; Natale, Entin, & Jaffe, 1979; Pilkonis, 1977). These behaviors may involve attempts to avoid social disapproval and to minimize the likelihood of making undesired impressions on others.

Persons who are worried about making an unfavorable impression on others can also protect their images by revealing very little about themselves. Thus, when interacting with others individuals with SAD tend to avoid self-disclosure. Several studies demonstrate that individuals with SAD reveal less overall information about themselves and focus on more commonplace events during social interactions than individuals without SAD (DePaulo, Epstein, & LeMay, 1990; Leary, Knight, & Johnson, 1987).

Another primary way in which people with SAD withdraw from ongoing social interactions is by avoiding eye contact with others (Cheek & Buss, 1981; Pilkonis, 1977). Reducing the amount of eye contact may decrease one's subjective feelings of anxiety because it allows some degree of psychological withdrawal while the individual remains physically present. Avoiding eye contact with others may also reduce the chances that others will initiate interactions with them.

Although avoidance of interpersonal situations is a tempting short-term strategy for dealing with anxiety-producing circumstances, this behavior also has deleterious consequences. Over time, a regular pattern of inhibited and avoidant behavior tends to impede the development and maintenance of interpersonal relationships. Given that a minimal amount of social contact and self-disclosure is essential to the formation of interpersonal relationships, individuals who avoid social encounters, who have trouble participating in them, or who distance themselves from others are likely to have difficulty when it comes to forming and sustaining satisfying romantic relationships.

Davila and Beck (2002) examined the association between social anxiety and interpersonal functioning in close relationships in a sample of 168 college students with a range of social anxiety symptoms. They found that higher levels of social anxiety were associated with interpersonal styles characterized by less assertion, more conflict avoidance, more avoidance of expressing emotion, and greater interpersonal dependency. In addition, lack of assertion and over-reliance on others mediated the association between social anxiety and interpersonal stress. These associations held when controlling for depressive symptoms. It should be noted, however, that this study employed a college sample rather than a sample drawn from a clinical setting.

The present study examined marital satisfaction and communication patterns during conflict in couples with a socially anxious member. It was predicted that couples with a socially anxious partner would report less marital satisfaction and be more likely to display a destructive pattern of marital interaction when problems arise relative to non-anxious control couples. In addition, the present study evaluated if socially avoidant behavior, social anxiety severity, and comorbid depressive symptoms are related to

marital status in couples with a socially anxious partner. It was hypothesized that single patients with SAD will exhibit greater social avoidance, symptom severity, and comorbid depression than their married counterparts.

2.2.2: How Social Anxiety Disorder May Impact Interpersonal Relationships

Leary and Kowalski (1995) offer several explanations as to why SAD may be associated with impeded relationship development and adjustment. First, relative to non-socially anxious persons, individuals with SAD grant themselves less opportunity for social interaction (Jones & Carpenter, 1986). As discussed above, socially anxious individuals tend to avoid and withdraw from interpersonal encounters. They date less frequently, participate less in recreational activities, and often express a preference for working alone as opposed to working with others (Arkin, Lake, & Baumgardner, 1986; Jones & Carpenter, 1986). Thus, even when social opportunities are presented, persons with SAD tend to behave in ways unlikely to generate relationships or even casual conversation. They even attempt to distance themselves from others in the midst of ongoing social interactions. Consequently, individuals with SAD may be at a disadvantage when it comes to forming and maintaining satisfying romantic relationships, and may therefore be at greater risk for remaining single. Furthermore, as a result of their tendency to avoid, married individuals with SAD may be reluctant to join their spouse in social activities, prefer to spend less time engaged in social interactions with their partner, or even withdraw from discussions.

Secondly, SAD may be connected with impeded relationship development because frequently displayed avoidant and withdrawn behavior may prompt others to exclude or avoid individuals with SAD. Although avoidant behaviors, such as reticence,

fidgeting, appearing distracted, or disclosing very little about oneself, may simply reflect a high level of anxiety, these behaviors may be interpreted by others as indicating disinterest, leading the other person to end the interaction. Along these lines, research suggests that others perceive individuals with social anxiety to be less friendly than less anxious individuals (Cheek & Buss, 1981; Jones & Briggs, 1984; Pilkonis, 1977).

Third, individuals with SAD tend to generate a number of negative self-statements before and during social encounters. When asked to report what they are thinking prior to or while engaging in social interactions, socially anxious persons frequently report thinking that they will perform, or are performing, poorly in the situation and that they will be, or are being, negatively evaluated by the other interactants (Burgio, Glass, & Merluzzi, 1981; Cacioppo, Glass, & Merluzzi, 1979; Clark & Arkowitz, 1975). Since individuals with SAD tend to think that others perceive them negatively, they themselves may act less sociable, leading others to respond less positively toward them. This pattern may become a destructive cycle with the socially anxious person detecting others' less friendly responses and withdrawing even further, leading to less acceptance, and so on.

Lastly, the tendency to avoid social contact may have negative effects on the development of one's social skills. As with most complex behaviors, social behaviors are largely acquired through observation and modeling (Bandura, 1973) and require a great deal of practice to perfect. Consequently, people who avoid or rarely participate in social interactions miss opportunities to learn and practice the skills needed for successful interpersonal relationships such as initiating and maintaining conversation, being assertive, discussing intimate or delicate topics, resolving conflict, or negotiating.

Indeed, numerous studies have found that observers rate socially anxious individuals as generally less socially skilled than people who are low in social anxiety (Arkowitz et al., 1975; Bellack & Hersen, 1979; Curran, 1977; Twentyman & McFall, 1975). Thus, to the extent that relationship formation and marital adjustment is associated with social competence, relationships involving a partner with SAD may suffer.

2.2.3: Social Anxiety and Comorbidity

Most studies evaluating the association between marital relationships and psychiatric disorders have focused on a particular target disorder, without evaluating or reporting on coexisting disorders. However, epidemiological studies suggest that only approximately 44% of individuals with a lifetime psychiatric disorder have only one disorder. In fact, approximately 27% of individuals with a lifetime psychiatric disorder have two disorders and approximately 29% have three or more disorders (Kessler et al., 1994). If a disorder is strongly associated with marital problems, and it frequently co-occurs with other disorders, then the observed associations with other disorders might be artifacts of the unreported disorder. Therefore, it is often unclear whether observed associations are due to the specific disorder, whether they are do to the comorbid disorder(s), or whether they are due to the comorbidity between the disorders.

Social anxiety disorder is often accompanied by emotional reactions. Depression is a common emotional partner of anxiety (Brady & Kendall, 1992). A high percentage of individuals with SAD meet diagnostic criteria for major depression or dysthymic disorder (Amies et al., 1983; Sanderson et al., 1990; Schneier et al., 1992). In addition, when present, the mood disorder has been found to begin after the onset of the SAD in the majority of the cases (Schneier et al., 1992). This finding is not surprising given that

SAD is associated with significant impairments, particularly in the area of interpersonal relationships. Comorbid conditions, however, have been found to increase the frequency and severity of impairments related to SAD (Wittchen et al., 2000). Given that comorbid depression is common among persons with SAD and has been linked to poor marital functioning in several studies, the present study will statistically control for the effects of comorbid depressive symptoms when examining the level of marital satisfaction in couples in which one partner suffers from SAD. In addition, the proposed study will evaluate if comorbid depression is related to marital status in patients with SAD. Based on the well-documented link between marital distress and depression, it is predicted that comorbid depressive symptoms will negatively impact ratings of marital satisfaction. Secondly, consistent with previous research suggesting that non-married patients with SAD were more likely to have a comorbid mood disorder (Hart, Heimberg, & Turk, 1998), it is predicted that single patients with SAD will be more likely to have a higher rate of depression.

2.3: Communication and Marital Functioning

Coping with daily marital problems requires some specific skills. Research on relationship functioning in maritally distressed and non-distressed couples suggests that communication and problem-solving skills are particularly important in coping with marital problems and maintaining a satisfying relationship (e.g., Raush, Barry, Hertel, & Swain, 1974). Numerous studies demonstrate that the nature of a couple's marital interactions, especially during conflict, is associated with their marital adjustment (e.g., Christensen, 1988; Christensen & Shenk, 1991; Gottman, Markman, & Notarius, 1977). Research suggests that good communication patterns facilitate the resolution of daily

marital tensions and helps to prevent the accumulation of lasting resentments (Lowenthal & Haven, 1968; Roy, 1978). There is also evidence demonstrating that certain patterns of communication during conflict are associated with longitudinal changes in relationship satisfaction (Bradbury & Karney, 1993; Heavey, Christensen, & Malamuth, 1995; Heavey, Layne, & Christensen, 1993).

Studies examining relationship development have found that factors such as poor communication and problem-solving skills, when present premaritally or early in marriage, can predict the development of relationship distress later in marriage (Markman, 1981). In fact, longitudinal studies have suggested that dysfunctional communication patterns precede the development of marital problems and that early signs of future distress are potentially identifiable in premarital interaction, regardless of the couple's level of premarital relationship satisfaction (Markman, 1981).

Although the commonly held belief is that compatibility between couples predicts marital success, reviews of the literature suggest that the quality of the couple's communication is a significantly better predictor of future marital satisfaction (Gottman, 1979). As Levinger (cited in Markman, Floyd, Stanley, & Storaasli, 1988) stated, "What counts in making a happy marriage is not so much how compatible you are, but how you deal with incompatibility" (p.210). To test this theory, Markman et al. (1988) studied the impact of an intervention designed to prevent divorce and marital distress that emphasizes communication and problem-solving skills, clarifying and sharing expectations, and sensual/sexual enhancement. Although post-intervention results indicated that couples learned the skills taught in the program, no group differences showed on self-report measures of relationship quality. However, after three years,

intervention couples showed higher levels of both relationship satisfaction and sexual satisfaction, as well as lower levels of problem intensity.

More recently, a longitudinal study was conducted involving a follow-up of a weekend version of the Prevention and Relationship Enhancement Program (PREP-WK) (Schilling, Baucom, Burnett, Allen, & Ragland, 2003). Schilling (1999) showed that the PREP-WK was as effective in preventing deterioration of average marital satisfaction during the first three years of marriage as the original (Markman et al., 1988) and German (Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1988) PREP programs. The PREP focuses on preventing deterioration in marital satisfaction using communication skills training. Overall, couples who participated in PREP-WK significantly increased their positive communication and decreased their negative communication. However, in terms of marital satisfaction, results were in the expected direction for men but not for women. That is, men's pretest to posttest increases in positive communication and decrease in negative communication predicted decreased risk of marital distress in future years. Women's pretest to posttest increase in positive communication and decrease in negative communication predicted an increased risk of distress onset for both genders. Self-reported mutual avoidance of problem discussion helped to explain the effect of female positive communication on distress onset. Lastly, they found couples with men high on premarital risk factors particularly benefited from the men acquiring positive communication skills.

Although the results regarding women were unexpected, results from other studies also suggest that increased levels of female positive communication might be damaging to the couple over time. For example, Gottman and Krokoff (1989) found that

wives' positive verbal behavior was related positively to concurrent marital satisfaction but negatively to satisfaction after three years. Similarly, Heavey, Layne, and Christensen (1993) found that wives' positive communication was correlated with higher concurrent marital satisfaction but was not related to satisfaction measured one year later. The reverse correlation emerged for husbands' positive communication. Additionally, Karney and Bradbury (1997) reported a similar relationship between newlywed wives' positive communication and later changes in marital satisfaction during the first four years of marriage based on growth curve analysis. Specifically, they found that more negative and/or less positive communication by husbands was associated with greater declines in wives' satisfaction over time. However, they reported that more negative and/or less positive communication from wives predicted slower declines in husbands' and wives' marital satisfaction. Gottman, Coan, Carrere, and Swanson (1998) also found that anger expressed by newlyweds did not predict unhappiness or divorce three years later.

In a discussion of their results, Karney and Bradbury (1997) suggest that higher negative communication behaviors in wives may represent a willingness to wrestle with difficult relationship issues. In other words, they are willing to assert themselves and address problems. Although these interactions may be objectionable at the time, they are likely to be part of a beneficial communication process in the long term. In essence, these results suggest that higher female assertive negative communication is associated with positive marital outcomes in the long run.

In two longitudinal studies of marital interaction using observational coding of couples attempting to resolve a high-conflict issue, Gottman and Krokoff (1989) found

that a different pattern of results predicts concurrent marital satisfaction than predicts change in marital satisfaction over three years. Findings suggested that some marital interaction patterns, such as disagreement and anger exchanges, which have usually been considered detrimental to a marriage, may not be harmful in the long run. These patterns of interaction were found to be associated with unhappiness and negative interaction concurrently, but they were predictive of improvement in marital satisfaction longitudinally. However, three specific interaction patterns were identified as dysfunctional in terms of marital deterioration longitudinally: defensiveness (which includes whining), stubbornness, and withdrawal from interaction. These interaction patterns were found to be more deleterious if they are characteristic of husbands.

According to Gottman (1993), there seems to be a constant that is consistent across all types of stable couples, the ratio of positive to negative interactions during conflict resolution. Thus, it appears that neither conflict avoidance nor intense conflict engagement and escalation are necessarily dysfunctional. Negative interactions appear to be dysfunctional only when they are not balanced with approximately five times as much positive feeling and interaction.

2.3.1: Marital Communication and Depression

Although little research has focused on marital communication patterns associated with anxiety disorders, various studies have examined the marital interactions associated with depression. Results of these efforts indicated that couples with a depressed member are more likely to have disturbed communication patterns relative to couples without a depressed member (Basco, Prager, Pita, Tamir, and Stephens, 1992; Biglan, Hops, Sherman, Friedman, Arthur, & Osteen, 1985; Hautzinger, Linden, &

Hoffman, 1982; Hinchcliffe, Hopper, & Roberts, 1978; Johnson & Jacob, 1997; Kowalik & Gotlib, 1987; Sher & Baucom, 1993). For example, depressed individuals were found to communicate a higher percentage of negative messages (Blumberg & Hokanson, 1983; Hinchliffe, Hooper, Roberts, & Vaughan, 1975; Kowalik& Gotlib, 1987) and tended to communicate more negative mood expressions, negative statements of well-being, negative self-evaluations, and expressions of helplessness (Biglan et al., 1985; Blumberg & Hokanson, 1983; Hautzinger, Linden, & Hoffman, 1982). Other studies have described distinct patterns of marital interaction associated with depression. Hinchcliffe et al. (1978) reported that depressed inpatients were socially responsive when interacting with strangers but were more tense, negative, and self-preoccupied when communicating with their spouses. Additional research has extended these findings, suggesting that marital interaction in couples with a depressed spouse are more negative, unsupportive, and unbalanced, with more negative evaluations directed toward the depressed partner (Linden, Hautzinger, & Hoffman, 1983; Ruscher & Gotlib, 1988).

In a study comparing differences in communication among three types of couples: maritally distressed couples, in which the wife was depressed; maritally distressed-only couples; and nondistressed-nondepressed couples, Sher and Baucom (1993) found that depression within the context of a distressed marriage is related to (a) more negative communication both toward and from the depressed person, and (b) spouses' lower comprehension of each other's messages. However, among the nondistressed couples, the more negative their communication, the more maritally satisfied they were. These findings may suggest that negative communication might be used constructively by nondistressed couples, but may be damaging to distressed couples. Other research

suggests that marital distress, rather than depression per se, may be responsible for the dysfunctional patterns of interaction frequently observed in depressed couples (Schmaling & Jacobson, 1990).

Johnson and Jacob (1997) explored marital interactions of depressed men and women and found differences in marital interactions associated with husbands' versus wives' depression. More specifically, they found that couples with a depressed wife exhibited lower levels of positive communication than couples with a depressed husband, regardless of the fact that depressed husbands exhibited greater depression severity than depressed wives. This finding suggests depression among wives may be associated with more disturbed marital interaction than depression among husbands.

Many studies have focused solely on the depressed patient's interpersonal behaviors; however, the spouse can also have a negative impact on the patient and, therefore, the marriage. It has also been found that spouses of depressed patients seldom agree with their partners, offer help in an ambivalent way, and openly negatively evaluate their depressed partner (Hooley, Orley, & Teasdale, 1986). Similarly, Basco et al. (1992) found that, compared with non-psychiatric control subjects, depressed patients and their spouses (a) reported greater marital dissatisfaction, (b) demonstrated poorer communication and problem-solving ability, and (c) were more likely to have an impaired capacity for establishing and maintaining intimacy. Just as researchers have attempted to identify the interpersonal styles of individuals with depression, the current study attempted to identify the interpersonal styles that are common to individuals with SAD.

2.3.2: Demand/Withdraw Pattern of Interaction

One common and destructive pattern of marital interaction involves one partner who attempts to engage in a problem-solving discussion using pressure, complaints, criticisms, and demands, while the other partner attempts to avoid or withdraw from the discussion. Christensen and his colleagues have identified this pattern of marital interaction as a particularly destructive style of communication (Christensen, 1987, 1988; Christensen & Heavey, 1993; Christensen & Shenk, 1991; Gottman & Krokoff, 1989; Heavey, Layne, & Christensen, 1993; Jacobson, 1989), and label it the demand/withdraw pattern of marital interaction. Various other labels have been applied to this type of interaction, such as the nag/withdraw pattern (Watzlawick, Beavin, & Jackson, 1967), the pursuer/distancer pattern (Fogarty, 1976), and the rejection/intrusion pattern (Napier, 1978).

Research addressing demand/withdraw interactions demonstrates that: (a) husbands and wives can agree when reporting independently on this pattern in their relationship, (b) the reported frequency of this interaction is associated with marital dissatisfaction, and (c) women tend to assume the demanding role and men tend to assume the withdrawing role during conflict (Christensen, 1987, 1988; Christensen & Shenk, 1991, Christensen & Heavey, 1990). Christensen & Shenk (1991) compared demand/withdraw interaction among clinic couples seeking treating, divorcing couples, and nondistressed couples. They found that nondistressed couples demonstrated more mutual constructive communication than did clinic or divorcing couples. Additionally, clinic and divorcing couples had more mutual avoidance of problem discussions and more demand/withdraw interaction than did nondistressed couples. Findings also

revealed that the degree of disparity in demand/withdraw interaction is greater for distressed couples than for happily married couples. Lastly, consistent with prior research (Christensen & Heavey, 1990; Christensen, 1987, 1988) wife-demand/husband-withdraw communication was more likely across all groups than husband demand/wife withdraw communication.

Furthermore, Heavey, Christensen, and Malamuth (1995) conducted a study that evaluated the longitudinal impact of demand and withdrawal during marital conflict over 2.5 years using both partial correlations and change scores. Heavey et al. (1995) speculated that this pattern is destructive to couples over time because it leads to increasing polarization of roles. They found that during discussions of problems raised by the women, Man-Withdraw and Woman-Demand/Man-Withdraw patterns both predicted significant declines in women's satisfaction. However, these associations were not significant when couples discussed a problem raised by the men. Thus, it appears that couples in which the man withdraws when the woman raises an issue are the most likely to experience long-term problems. Similarly, other longitudinal studies have found the existence of demand/withdraw interaction, or aspects of this pattern, such as withdrawal from conflict, predicted a reduction in marital satisfaction longitudinally (Levenson & Gottman, 1985; Gottman & Krokoff, 1989).

2.3.3: Gender Differences in Demand/Withdraw Interaction

Christensen and Heavy (1990) and Heavey, Layne, and Christensen (1993), offer two different explanations for why women tend to demand and men tend to withdraw during conflict. One explanation, called the individual differences perspective, centers on stable differences between men and women such as personality and biological

differences. The other explanation, called the conflict structure perspective, proposes that the higher status and power typically granted to men leads them to avoid conflict because they have no interest in change. On the other hand, women typically have less power and see conflict engagement as a means of obtaining want they want. That is, the larger social structure, which gives men greater power and women less power, leads to women having more investment in change than men.

One individual differences explanation that explains why men are more likely to withdraw during conflict is based on the finding of Gottman and Levenson (1986) that men experience more physiological arousal during conflict than women. They suggest that men's higher level of physiological reactivity leads them to try to escape from the unpleasant feeling, whereas women, being less physiologically reactive to stress, do not desire to avoid conflict. This theory also offers support for the hypothesis that individuals with SAD, who are likely to consider social conflict as stressful, may be more likely to withdraw during conflict.

Heavey et al. (1993) suggest another individual differences explanation based on the notion that women are socialized to seek intimacy and closeness in relationships, whereas men are socialized to be independent and achievement-oriented (Rubin, 1983). There is substantial evidence that the demand/withdraw interaction reflects the amount and intensity of intimacy that each person in the couple wants (Christensen, 1987, 1998; Jacobson, 1989). As such, people in the demanding role generally want more closeness, while those in the withdrawing role want more distance or autonomy. As individuals with SAD typically are uncomfortable with intimacy, this explanation also offers support for the hypothesis that spouses with SAD may be likely to assume a withdrawing role.

Some research has also suggested that in a relationship those wanting more intimacy are often “one down” and those trying to reduce the level of intimacy are often the dominant partner in their relationships (Jacobson, 1987; Jacobson & Gottman, 1998). Data from Christensen and Heavy (1990) and Heavey, Layne, and Christensen (1993) indicate that this common pattern of women demanding and men withdrawing results from the combined effects of gender differences and the existing social structure.

2.3.4: Demand/Withdraw Interaction in Couples with a Violent Husband

Several studies have examined the demand/withdraw interaction in couples with violent husbands. Holtzworth-Munroe, Smutzler, and Stuart (1998) found that when discussing a topic raised by the husband, violent-distressed couples exhibited significantly high levels of husband-demand/wife-withdraw behavior, compared with violent-nondistressed, nonviolent-distressed, and nonviolent-nondistressed couples. Similarly, when discussing a topic raised by the wife, violent-distressed couples exhibited significantly high levels of wife-demand/husband-withdraw behavior. Holtzworth-Munroe et al. (1998) summarized that “as degree of marital dysfunction (i.e., violence, distress, or both) increase, both spouses engaged in more demanding and withdrawing behavior” (p. 740).

In another study, Babcock, Waltz, Jacobson, and Gottman (1993) found that battered women were no more demanding than women not in violent relationships. However, batterers were more demanding than nonviolent men. Therefore, in comparison to the usual pattern found in distressed couples, batterers were more likely to be demanding than men in nonviolent marriages. Additionally, both batterers and battered women responded to their partner’s demands by withdrawing.

Finally, Berns, Jacobson, and Gottman (1999) compared couples with a violent husband with nonviolent couples (controlling for levels of marital satisfaction), and maritally satisfied couples with dissatisfied couples (controlling for the existence of violence), in the demand/withdraw interaction. They found that even though distressed couples showed high levels of demand and withdraw, batterers were both more demanding and withdrawing than nonviolent men. In their discussion, Berns et al. (1999) conclude that despite equal amounts of marital distress, batterers demand more change than do nonviolent husbands. This finding supports the authors' hypothesis that despite their power and control tactics, batterers do not experience themselves as powerful.

2.3.5: Demand/Withdraw Interaction in Social Anxiety Disorder Couples

One aim of the present study was to determine whether there is evidence for the demand/withdraw pattern of interaction during conflict in patients with SAD and their spouses. This study addressed communication patterns because they play a central role in relationship functioning and because abundant research suggests that patients with SAD have weaknesses in this area. It was hypothesized that, over and above differences in satisfaction, couples with a socially anxious spouse would report that they engage in: (a) more demand/withdraw interactions, with the SAD spouse assuming the withdrawing role and their partner assuming the demanding role, (b) less demand/withdraw interactions, with the patient assuming the demanding role and their partner assuming the withdrawing role, and (c) less overall positive communication interactions relative to non-psychiatric control couples. There are several reasons for this hypothesis. First, as discussed previously individuals with SAD have a strong tendency to avoid or withdrawal from interpersonal interactions. In addition, because these individuals are

extremely concerned about the impressions they are making on others and greatly fear negative evaluation by others, they are less likely to voice disagreement or express their feelings to others. A moderate inverse correlation has been shown between complaining and social anxiety (Kowalski & Cantrell, 1994). Additionally, one study found that individuals who experience anxiety in interpersonal interactions are less likely to behave assertively during confrontations (Zimbardo, 1977). Finally, a persistent pattern of social avoidance may result in deficient development of interpersonal skills that are important for constructive communication, such as those needed for discussing problematic issues, expressing one's feelings, or negotiating with one's partner. Thus, SAD may be associated with particular patterns of marital interaction during conflict.

2.4: Marital Status and Treatment Response

The present study also examined whether married and single patients with SAD differed in response to cognitive behavior therapy (CBT) for SAD. It was predicted that married individuals would demonstrate greater improvement following CBT than unmarried persons with SAD for several reasons. First, there is a large exposure component in cognitive-behavioral treatment for SAD. Married patients with SAD may have more opportunities for exposure to social situations and for practicing new skills. Being that socially anxious individuals generally report having a very small, if any, social network, married patients may benefit by having someone available for social interaction, to facilitate the completion of exposure homework assignments, to help the socially anxious person to practice and build social competence. Secondly, married patients with SAD may have more social support than single patients.

2.4.1: Partner-Assisted Interventions for Anxiety Disorders

Although partner-assisted or family-assisted interventions (PFAIs) have not been studied specifically with SAD, partner-assisted interventions that utilize the patient's partner as a "coach" or "co-therapist" who encourages the completion of homework assignments and reinforces the use of techniques taught by the therapist have been studied with other anxiety disorders such as agoraphobia (Cobb, Matthews, Childs-Clarke, Burton, & Barlow, 1984; Emmelkamp, Van Dyck, Bitter, Heins, Onstein, & Eisen, 1992; Cerny, Barlow, Craske, & Himaldi, 1987) and obsessive-compulsive disorder (OCD; Emmelkamp & de Lange, 1983; Emmelkamp, deHaan, & Hoodguin, 1990; Mehta, 1990). Although the results are not conclusive, certainly the bulk of studies that have examined PFAI therapy have provided evidence that it is at least as good as individual therapy.

Baucom, Shoham, Mueser, Diauto, and Stickle (1998) evaluated the efficacy, effectiveness, and clinical significance of empirically supported couple and family interventions for treating individual adult disorders, including agoraphobia and OCD. The involvement of the partner or other family member in the treatment of OCD has been evaluated as a means of improving the efficacy of commonly used behavioral interventions, particularly exposure and response prevention. It has been hypothesized that including a partner or family member as a co-therapist in exposure might enhance practice sessions at home, during which the patient is instructed to expose himself to feared stimuli and resist engaging in compulsive behaviors to reduce his anxiety. Two studies conducted by Emmelkamp and colleagues (Emmelkamp & de Lange, 1983; Emmelkamp, deHaan, & Hoodguin, 1990) compared treatments consisting of in vivo

exposure and response prevention implemented with or without the involvement of the patient's partner. In the first of these studies, Emmelkamp and de Lange (1983) found that the partner-assisted treatment produced significantly better results at posttest on self-report and therapist-rated measures of anxiety, as well as self-reported general life adjustment, and ratings of depression. Emmelkamp et al. (1990), however, found no significant differences between the partner-assisted and non-assisted treatments at posttest. Nevertheless, the fact that the inclusion of the partner in the exposure exercises was at least as beneficial as implementing them without the partner indicates that the partner assisted format may be a viable treatment modality. In terms of family-assisted exposure, Mehta (1990) found family-assisted treatment to be significantly better than treatment without a family member. Taken together, these studies suggest that involving a partner or family member in the treatment of OCD is at least as effective as treating the patient without partner or family involvement.

There is also evidence indicating that involving the patient's partner in exposure therapy for agoraphobia is at least as beneficial as conducting the treatment without partner assistance. Partner-assisted exposure involves graded exposure practice conducted in the patient's home environment, with the spouse involved in helping to plan and carry out hierarchical homework assignments. Partner-assisted exposure has been compared with non-assisted exposure therapy (Cobb et al., 1984; Emmelkamp et al., 1992), graded exposure therapy (Hand, Angenendt, Fischer, & Wilke, 1986), and friend-assisted exposure (Oatley & Hodgson, 1987). In all of these studies, partner-assisted exposure was equivalent to, but not better than, the comparison treatment. Cerny et al. (1987) compared partner-assisted cognitive behavioral group treatment with a similar

treatment that did not involve patients' partners and found that the treatments did not differ significantly on clinicians' ratings or subjective measures at posttest. However, investigators also divided patients into two a priori categories (treatment responders and non-responders) based on whether they showed at least 20% improvement on at least three of five measures. On the basis of these criteria, 85% of the patients in the partner-assisted group were classified as treatment responders, as compared to 50% of the patients in the non-assisted group. In conclusion, studies suggest that partner-assisted exposure interventions for agoraphobia are at least as effective as treatment without such assistance.

2.4.2: Social Support and Treatment Response

Another reason why married patients with SAD may show greater response to treatment is that they may have more sources of social support. Social scientists argue that social support has direct, indirect, and interactive effects on physical and mental health (Mitchell, Billingd, & Moos, 1982). Interpersonal relations appear to directly assist recovery from illness by facilitating appropriate health behaviors, such as seeking medical assistance or complying with medical regimens (Wallston, Alagna, DeVellis, & DeVellis, 1983). In addition, various studies have reported that patients with panic use the seeking of social support as a coping strategy (Vitaliano et al., 1987; Vollrath & Angst, 1993). During the past few decades, there have been numerous investigations of the effects of social support on well-being (for reviews see Cohen & McKay, 1984; Dean & Lin, 1977; Heller, 1979; Heller & Swindle, 1983; Sarason & Sarason, 1984; Wallston et al., 1983) and evidence suggests that social support is an important factor in sustaining health and mitigating the impact of stress.

Although the relationship between social support and recovery has not been studied with regards to SAD, there is overwhelming evidence that has shown that patients with supportive social relationships recover from their depression more quickly than those who lack such relationships (Beiser, 1976; Billings & Moos, 1985; Brown & Lewinsohn, 1984; Brugha, Bebbington, MacCarthy, Wykes, & Potter, 1990). In addition, McLeod, Kesslar, and Landis (1992) examined speed of recovery from major depressive episodes in a community sample of married men and women and found persons with depression whose spouses reported feeling warmth and compassion for the depressed spouses condition were much more likely to recover in any given time period than were depressed spouses whose spouses did not report those feelings. On the other hand, spouses' reports of burden showed a consistent, but nonsignificant, pattern of relation to recovery and predicted less rapid recovery during all time periods. Thus, perceived social support has significant positive effects on recovery from depressive episodes.

There is also some evidence that social support may play a role in treatment outcome in patients with agoraphobia. Milton and Hafner (1979) found that agoraphobic patients whose marriages were rated as unsatisfactory before treatment improved less and were more likely to relapse than those patients with satisfactory marriages. This finding was supported in a study by Bland and Hallam (1981). Other studies have also provided evidence that marital relationship problems effect treatment outcome in agoraphobic patients (e.g., Emmelkamp & van der Hout, 1983; Monteiro, Marks, & Ramm, 1985).

3: OVERVIEW AND PURPOSE: STUDY 1

Given the documented association between SAD and impaired interpersonal relationships, it is surprising that no studies to date have explored the marital functioning in couples in which one partner suffers from SAD. The principle aim of the present research was to investigate marital satisfaction and communication patterns in a sample of patients with SAD and their spouses. In this study, patients with SAD and their spouses were compared to non-psychiatric control couples. The following questions regarding marital satisfaction were examined: First, do couples with a socially anxious partner report less relationship satisfaction relative to non-psychiatric control couples? Second, does gender of the partner with SAD have implications for the couples' level of marital satisfaction? Lastly, this study examined if patients with SAD would report different levels of marital satisfaction than their spouses. Based on existing knowledge of the adverse interpersonal consequences of SAD, it was predicted that when compared with non-psychiatric couples, SAD patients and their partners would report less overall marital satisfaction relative to a non-psychiatric control group. Based on the correlation between depression and marital satisfaction, depression was statistically controlled in data analyses.

With regards to communication patterns, the present study sought to examine if patients with SAD and their spouses are more likely to engage in destructive communication patterns during conflict, relative to non-psychiatric control couples. It was predicted that patients with SAD and their spouses would be more likely to engage in destructive communication patterns during conflict, relative to non-psychiatric control couples. Specifically, it was hypothesized that the socially anxious patients and their

spouses would report (a) more demand/withdraw interactions, with the SAD spouse assuming the withdrawing role and their partner assuming the demanding role, (b) less demand/withdraw interactions, with the patient assuming the demanding role and their partner assuming the withdrawing role, and (c) less mutual constructive communication interactions, relative to non-psychiatric control couples. Because of the correlation between marital satisfaction and the demand/withdraw pattern of interaction, marital satisfaction was statistically controlled in the data analyses.

This study attempted to incorporate some of the strengths of previous work with other anxiety disorders as well as to address some of the weaknesses of prior research by (a) examining global marital satisfaction as well a specific aspect of marital functioning, (b) examining specific behaviors that constitute marital interactions, (c) including both women and men with SAD in the study, (d) assessing marital functioning from both the patients' and their spouses' perspectives, (e) controlling for comorbid depressive symptoms, and (f) using Diagnostic and Statistical Manual of Mental Disorders (forth edition; DSM-IV) criteria to diagnose SAD by means of a structured clinical diagnostic interview.

4: METHOD: STUDY 1

4.1: Predicted Hypotheses: Study 1

In this study, the following hypotheses were predicted:

(1) Couples in which one partner has SAD would report lower levels of marital satisfaction relative to non-psychiatric control couples.

(2) SAD couples would report that they engage in less positive communication when discussing a problem relative to non-psychiatric control couples.

(3) SAD couples would report that they engage in more demand/withdraw interactions when discussing a problem, with the SAD patient assuming the withdrawing role and their partner assuming the demanding role, relative to non-psychiatric control couples.

(4) SAD couples would report that they engage in less demand/withdraw interactions when discussing a problem, with the SAD patient assuming the demanding role and their partner assuming the withdrawing role, relative to non-psychiatric control couples.

4.2: Variables: Study 1

This study examined the following independent variables: (1) type of couple (SAD or control) and (2) respondent (patient or partner) to determine their effect on the dependent variables of (1) overall marital satisfaction, (2) mutual constructive communication, (3) patient-demand/partner-withdraw communication, and (4) partner-demand/patient-withdraw communication.

4.3: Participants: Study 1

A total of 91 individuals participated in this study. The participants in the SAD couples group were 26 married or cohabitating individuals with a primary DSM-IV diagnosis of SAD (generalized subtype) seeking treatment for SAD and 16 of their partners. The participants in the control couples group were 26 married or cohabiting individuals matched with the SAD patients for age, gender, race, education, and marital status, and 23 of their partners. Of the 26 SAD participants, 18 were recruited from a larger treatment outcome study of SAD at Drexel University (formerly MCP Hahnemann University) in Philadelphia, Pennsylvania. The remaining eight patients were referred to the study from psychotherapists in the Philadelphia area and only completed the assessment phase of the study. The control couples were community volunteers recruited by word of mouth.

Descriptive data on the participants' demographics are outlined in Tables 1 and 2. The mean age of the 26 SAD participants was 34.77(*SD* = 8.48). Of the 26 SAD patients, 11 (42%) were male and 15 (58%) were female. Twenty-four (92%) were Caucasian, 1 (4%) participant was African-American and 1 (4%) participant was classified as "other." In terms of education, 2 (7%) participants had a high school degree, 3 (11.5%) had some college education, 11(42%) had a college degree, and 10 (38.5%) had attended graduate or professional school. Of the 26 patients, 20 (77%) were married and 6 (23%) were cohabitating.

Sixteen of the SAD patients' partners participated in the study. The mean age of the patient's partners was 39 (*SD* = 11.72). Of the 16 partners, 10 (67.5%) were male and 6 (37.5%) were female. Sixteen (100%) of the partners who participated were Caucasian.

In terms of education, 1 (6%) participant had a high school degree, 1 (6%) had some college education, 10 (63%) had a college degree, 3 (19%) had attended graduate or professional school and 1 (6%) participant had a GED. Of the 16 patients' partners, 11 (69%) were married and 5 (31%) were cohabitating.

The mean age for the 26 controls matched with the SAD patients was 34.73 (*SD* =9.22). Of the 26 controls, 11 (42%) were male and 15 (58%) were female. In terms of race, 24 (92%) were Caucasian, 1 (4%) participant was African-American and 1 (4%) participant was classified as "other." In terms of education, 1 (4%) participant had a high school degree, 3 (11.5%) had some college education, 12 (46%) had a college degree, and 10 (38.5%) had attended graduate or professional school. Of the 26 patients, 20 (77%) were married and 6 (23%) were cohabitating.

Twenty-three of the partners of the controls for the SAD patients participated. The mean age of these controls was 33.78 (*SD* = 10.22). Of the 23 control partners, 13 (56.5%) were male and 10 (43.5%) were female. In terms of race, 21 (91%) were Caucasian, 1 (4%) participant was African-American and 1 (4%) participant was Hispanic. In terms of education, 3 (13%) participants had a high school degree, 1 (4%) had some college education, 15 (65%) had a college degree, and 4 (17%) had attended graduate or professional school. Of the 23 control partners, 17 (74%) were married and 6 (26%) were cohabitating.

Table 1. Age of Participants: Study 1

	SAD Couples				Control Couples			
	SAD Patients (n = 26)		SAD Partners (n = 16)		Patient Controls (n = 26)		Partner Controls (n = 23)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age	34.77	8.48	39.00	11.72	34.73	9.22	33.78	10.72

Note. SAD = Social Anxiety Disorder. No significant differences were found between SAD patients and patient controls or between SAD partners and partner controls.

Table 2. Gender, Race, Education, and Marital Status of Participants: Study 1

	SAD Couples		Control Couples	
	SAD Patients (n = 26)	SAD Partners (n = 16)	Patient Controls (n = 26)	Partner Controls (n = 23)
Variable	f (%)	f (%)	f (%)	f (%)
Gender				
Male	11 (42.3)	10 (62.5)	11(42.3)	13 (56.5)
Female	15 (57.7)	6 (37.5)	15 (57.7)	10 (43.5)
Race				
Caucasian	24 (92.3)	16 (100)	24 (92.3)	21 (91.3)
African American	1 (3.8)	0 (0)	1 (3.8)	1 (4.3)
Hispanic	0 (0)	0 (0)	0 (0)	1 (4.3)
Other	1 (3.8)	0 (0)	1 (3.8)	0 (0)
Education				
High School	2 (7.7)	1 (6.3)	1 (3.8)	3 (13.0)
Some College	3 (11.5)	1 (6.3)	3 (11.5)	1 (4.3)
College	11 (42.3)	10 (62.5)	12 (46.2)	15 (62.5)
Graduate/ Professional School	10 (38.5)	3 (18.8)	10 (38.5)	4 (17.4)
GED	0 (0)	1 (6.3)	0 (0)	0 (0)

Table 2 (*continued*). Gender, Race, Education, and Marital Status of Participants

	SAD Couples		Control Couples	
	SAD Patients (*n* = 26)	SAD Partners (*n* = 16)	Patient Controls (*n* = 26)	Partner Controls (*n* = 23)
Variable	*f* (%)	*f* (%)	*f* (%)	*f* (%)
Marital Status				
Cohabitating	6 (23.1)	5 (31.3)	6 (23.1)	6 (26.1)
Married	20 (76.9)	11 (68.8)	20 (76.9)	17 (73.9)

Note. Chi-square tests were not significant.

4.3.1: Demographic Comparisons Between Groups: Study 1

A t-test conducted between SAD patients and matched controls showed no significant difference between groups for age of participant, t (50) = .016, $p > .05$. There were also no significant differences in age between patients' partners and partners in the control group, t (37) = 1.476, $p > .05$. Chi-square tests were conducted to compare patients and matched controls, as well as patients' partners and control partners, on gender, race, education, and marital status. No statistically significant differences between groups on gender, race, education, and marital status were found.

4.3.2: Inclusion and Exclusion Criteria: Study 1

The inclusion criteria for the SAD couples group included: (a) couples in which one partner has a primary DSM-IV diagnosis of SAD (generalized subtype); (b) couples

who are married or cohabitating; (c) both partners age between 18 and 65 years; and (d) literacy in English. In addition, partners of the SAD patients must have had a SPAI (Social Phobia subscale) score within the normal range.

The exclusion criteria for the SAD couples group included: (a) history of mental retardation, pervasive developmental disorder, organic mental disorder, or a psychotic disorder in either partner. Other Axis I disorders (e.g., major depression, dysthymia) were acceptable for the socially anxious partner, as long as SAD was judged to be primary to and of greater severity than the secondary diagnosis. Primacy was defined as the disorder with the earlier onset, and severity was defined in terms of the level of symtomatology resulting from the condition as well as the degree of impairment associated with it; and (b) SAD patient with substance dependence within the past year.

The inclusion criteria for the control group couples included: (a) couples who were married or cohabitating; (b) both partners must have had SPAI (Social Phobia subscale) and BDI scores within the normal range; (c) both partners aged between 18 and 65 years; and (d) literacy in English.

The exclusion criteria for the control couples group included: (a) history of mental retardation, pervasive developmental disorder, organic mental disorder, or a psychotic disorder in either partner; (b) currently seeking treatment for a psychological disorder.

4.4: Procedure: Study 1

As part of the pre-treatment assessment for the larger treatment outcome study from which participants were recruited, all potential SAD participants were offered a telephone screening interview to determine if they appeared to meet the participant

selection criteria. Those individuals who appeared eligible for the study on the basis of the telephone interview were invited to undergo an evaluation with a trained graduate student via a structured clinical interview (described below). During the interview, participants were provided with a copy of the consent form. Participants were encouraged to carefully review the consent form and to ask any questions they might have regarding the study. Participants were asked to initial each page and to sign the last page of two copies of the consent form. The research assistant then signed both consents as well and the participant was given one copy to keep. Participants who were found eligible after the initial screening and diagnostic phase, and their partners, were asked to complete a demographic form and a series of self-report questionnaires measuring fear and avoidance of social situations, symptoms of depression, marital satisfaction, and communication patterns. The partners of SAD patients were provided with pre-stamped, pre-addressed envelopes and asked to return their completed consent form and questionnaire packets to the researcher via mail.

Potential control couples who contacted the researcher were verbally presented with a brief version of the consent form in order to provide informed consent and inform potential participants about the exclusionary criteria for the study in order to screen out persons who did not meet study criteria. The control couples who were found eligible after the initial screening phase were asked if they were interested in participating in the study. If they declined, the researcher thanked them for their time. If they consented, an appointment was arranged in order to provide the participants with the consent form and questionnaires. If an appointment could not be arranged, each member of the couple was separately mailed a consent form and questionnaire packet (including a demographic

form and a series of self-report questionnaires measuring symptoms of SAD, symptoms of depression, marital satisfaction, and communication patterns), along with a pre-addressed, pre-stamped envelope.

4.5: Measures: Study 1

Telephone screening: A telephone screening was conducted with potential SAD participants to assess his or her likelihood of meeting the eligibility criteria for the study. If the potential patient appeared to satisfy the inclusion and exclusion criteria, and was interested in the study, an appointment was scheduled for the initial diagnostic evaluation.

Diagnostic Evaluation: All potential SAD participants were administered the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 1995) in order to determine if they had a primary DSM-IV diagnosis of the generalized subtype of SAD and met diagnostic criteria for participation in the study. The SCID is a structured clinical interview designed to assess DSM-IV criteria for each Axis I diagnosis in a systematic manner. A major advantage of the SCID over other structured interviews is its direct compatibility with the DSM-IV. All of the diagnostic interviews were administered by advanced graduate students in clinical psychology who were trained to criterion. Administration of the diagnostic interview required approximately 90 minutes.

Beck Depression Inventory: The Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) consists of 21 items, each which is rated on how it describes the patient's feelings over the two past weeks. The BDI is the most widely-used self-report measure of depression. It is supported by considerable psychometric research (Beck & Steer, 1988).

Dyadic Adjustment Scale: The Dyadic Adjustment Scale (DAS; Spainer, 1976) is a global assessment of marital satisfaction. The DAS is a 32-item self-report measure of overall marital adjustment that has been widely used in the marital literature and has been shown to have high reliability (Cronbach's alpha = .96; Spainer, 1976). Scores range from 0 to 151. Higher scores indicate greater satisfaction. The mean of married couples is 114.8 with a standard deviation of 17.8. Couples score below 97 (one standard deviation below the mean) are generally considered to be distressed. The DAS has good internal consistency and is strongly correlated with other measures of relationship satisfaction such as the Locke-Wallace Marital Adjustment Test. The DAS successfully differentiates married and divorced couples, distressed and non-distressed couples, and clinic and non-clinic samples.

Communication Patterns Questionnaire, Short Form: The Communications Patterns Questionnaire, Short Form (CQPSF) is a brief version of the Communications Patterns Questionnaire (CPQ; Christensen, 1987, 1988; Christensen & Sullway, 1984). It assesses spouse perceptions of dyadic communication about relationship problems. Each partner indicates on a 9-point scale the likelihood that the couple will interact in a specified manner when discussing a problem. All behaviors are assessed at the dyad level (e.g., mutual avoidance) rather than at the individual level. This measure contains four theoretically derived subscales: three asymmetrical communication subscales and one symmetrical positive communication subscale. The first two asymmetrical subscales focus on demand/withdraw interactions in which the spouses take opposite roles in the discussion. In this study, one subscale assessed the likelihood of the patient demanding while his or her partner withdraws, and the other assessed the likelihood of the patient's

partner demanding while the patient withdraws. The symmetrical overall positive communication subscale consists of three items assessing mutual discussion, mutual expression, and mutual negotiation. Previous research has demonstrated acceptable reliability and validity of the CPQSF (Christensen, 1987, 1988; Christensen & Heavey, 1990).

Social Phobia and Anxiety Inventory: The Social Phobia and Anxiety Inventory (SPAI; Turner, Beidel, Dancu, & Stanley, 1989) consists of 45-items, each of which is rated on a 7-point scale, assessing the severity of distress and functional impairment. Higher scores represent higher levels of distress and impairment. The inventory includes two subscales: a social phobia subscale (32-items), an agoraphobia subscale (13-items). Several studies support the test-retest reliability, internal consistency, and construct, concurrent, and discriminative validity of the instrument (Beidel, Borden, Turner, & Jacob, 1989; Beidel, Turner, Stanley, & Dancu, 1989**;** Beidel, Turner, & Cooley, 1993; Herbert, Bellack, & Hope, 1991; Turner, Stanley, Beidel, & Bond, 1989). In Study 2 the social phobia subscale of the SPAI was used to assess the degree of symptom severity in socially anxious participants, and was used as a treatment response measure. In Study 1, the SPAI was given to the partners' of the SAD patients, and to both partners of the potential control couples in order to determine if the participants met inclusion criteria. (i.e., the participants report scores within the normal range). Participants whose score on the SPAI Social Phobia subscale was below 80 were included in the control group. Eighty was designated as the cut-off score because Turner, Beidel, Dancu, and Stanley (1989) found a SPAI score of 80 to be optimal for minimizing false positive and negative rates.

5: RESULTS: STUDY 1

5.1: Description of Measures: Study 1

The means and standard deviations for BDI, SPAI, DAS, and CPQ scores of each group are presented in Table 3.

Table 3. Descriptive Statistics of Self-Report Measures: Study 1

	SAD Couples				Control Couples			
	SAD Patient		Partner		Patient Control		Partner	
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
BDI	11.6	10.6	4.6	4.8	4.9	4.2	3.3	2.7
SPAI-SP	131.0	25.9	51.4	23.1	43.1	22.9	32.9	22.4
DAS	110.7	14.0	113.7	11.7	120.1	10.9	123.2	10.4
CPQ								
PC	19.7	4.8	18.8	4.8	21.9	3.9	22.8	3.7
Part.D/ Pt.W	12.0	6.7	14.1	5.5	9.4	4.4	9.7	5.1
Pt. D/ Part.W	11.8	6.1	13.8	6.3	9.5	4.5	10.9	5.2

Note. BDI = Beck Depression Inventory. SPAI-SP = Social Phobia and Anxiety Inventory, Social Phobia Subscale. DAS = Dyadic Adjustment Scale. CPQ = Communication Patterns Questionnaire. PC = Positive Communication Subscale. Part.D/Pt.W = Demand/Withdraw Subscale with partner in demanding role and patient or patient control in withdrawing role. Pt.D/Part.W = Demand/Withdraw Subscale with patient or patient control in demanding role and partner in withdrawing.

An ANOVA comparing BDI scores of all groups (SAD patients, patients' partners, matched controls, and partners of controls) yielded a significant effect for group, F (3, 87) = 7.93, $p < .0001$, with the SAD patient group scoring significantly higher than all other groups. An ANOVA comparing SPAI scores of all groups yielded a significant effect for group, F (3, 87) = 89.87, $p < .0001$, with the SAD patient group scoring significantly higher than all other groups.

5.2: Hypotheses and Results: Study 1

The results of the statistical analyses are discussed in relation to the predicted hypotheses:

Hypothesis 1: Couples in which one partner has SAD will report lower levels of marital satisfaction relative to non-psychiatric control couples.

This study was based on a 2 x 2 factorial design (Type of Couple x Type of Respondent). Because all hypotheses in Study 1 were directional, one-tailed tests were used throughout the analyses. The results of this hypothesis were analyzed using a 2 by 2 analysis of variance (ANOVA). The independent variables were type of couple (SAD or control) and type of respondent (patient or partner). The dependent variable was marital satisfaction, as measured by DAS score. The means and standard deviations for DAS scores of each group are presented in Table 5. Mean DAS scores for SAD patients and their partners in this sample were 110.65 (SD = 13.95) and 113.69 (SD = 11.66), respectively. The mean scores for normal controls and their partners were 120.08 (SD = 10.93) and 123.17 (SD = 10.42), respectively. Levene's Test of Equality of Error Variances tests the null hypothesis that the error variance of the dependent variable is equal across groups. The Levene test was not significant, F (3, 87) = .640, $p > .05$, thus

meeting the assumption of the homogeneity of the variances. The 2 by 2 ANOVA yielded a significant main effect for type of couple, F (1, 87) = 13.85, $p < .001$, but no significant main effect for respondent or interaction between type of couple and type of respondent was found. Specifically, the SAD couples group reported significantly lower ratings of overall marital satisfaction than the control group couples.

Based on the correlation between depression and marital satisfaction, $r = -.33$, $p = .001$, the analysis was repeated using depression (BDI score) as a covariate. Pearson correlations of the covariates are presented in Table 6. Again, Levene's test was not significant, F (3, 87) = .640, $p > .05$, thus meeting the assumption of the homogeneity of the variance of the dependent variables between groups. Similarly, the 2 by 2 ANCOVA also yielded a significant main effect for type of couple, F (1, 86) = 9.16, $p < .01$, but no significant main effect for respondent or interaction between type of couple and type of respondent was found. As hypothesized, the SAD couples reported significantly lower ratings of overall marital satisfaction than the control group couples, even when controlling for depression.

Table 4. Pearson Correlations of Covariates

							CPQ			
	BDI		DAS		PC		Part. D/ Pt. W		Pt. D/ Part. W	
Measure	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
BDI	--	--	-.331**	.001	--	--	--	--	--	--
DAS	-.331**	.001	--	--	.616**	.000	-.395**	.000	-.176*	.048
CPQ										
PC	--	--	.616**	.000	--	--	-.371**	.000	-.329**	.001
Part. D/ Pt. W	--	--	-.395**	.000	-.371**	.000	--	--	.101	.170
Pt. D/ Part. W	--	--	-.176*	.048	-.329**	.001	.101	.170	--	--

Note. BDI = Beck Depression Inventory. DAS = Dyadic Adjustment Scale. CPQ = Communication Patterns Questionnaire. PC = Positive Communication Subscale. Part. D/Pt. W = Demand/Withdraw Subscale with partner in demanding role and patient or patient control in withdrawing role. Pt. D/Part. W = Demand/Withdraw Subscale with patient or patient control in demanding role and partner in withdrawing. *$p < .05$, **$p < .01$ (one-tailed).

Table 5. Analysis of Variance for Dyadic Adjustment Scale

Source	*df*	*F*	*p*
Couple (C)	1	13.85**	.0001
Respondent (R)	1	1.46	.116
C X R	1	.000	.495
Error	87	(141.18)	

Note. Values enclosed in parentheses represent mean square errors. *$p < .05$, **$p < .01$ (one-tailed).

Table 6. Analysis of Covariance for Dyadic Adjustment Scale

Source	*df*	*F*	*p*
BDI Total	1	4.10*	.023
Couple (C)	1	9.16**	.002
Respondent (R)	1	.29	.296
C X R	1	.17	.34
Error	86	(136.32)	

Note. Values enclosed in parentheses represent mean square errors. BDI = Beck Depression Inventory, which was used as a covariate. *$p < .05$, **$p < .01$ (one-tailed).

Hypothesis 2: SAD couples will report that they engage in less positive communication when discussing a problem relative to non-psychiatric control couples.

A 2 by 2 ANOVA was used to analyze the results. The independent variables were type of couple (SAD or control) and type of respondent (patient or partner). The dependent variable was overall positive communication. The overall positive interaction subscale of the CPQSF consisted of three items assessing mutual discussion, mutual expression, and mutual negotiation. Levene's test was not significant, F (3, 87) = 1.75, p > .05, thus meeting the assumption of the homogeneity of the variances. A significant main effect was found for type of couple, F (1, 87) = 12.06, p < .001, but no significant main effect was found for respondent or interaction between type of couple and respondent. As predicted, the SAD couples reported they engage in significantly less overall positive communication during conflict than the normal control couples.

Because of the correlation between marital satisfaction and positive patterns of interaction, r = 616, p < .0001, the analysis was repeated using marital satisfaction (DAS score) as a covariate. Levene's test was not significant, F (3, 87) = .716, p > .05, thus meeting the assumption of the homogeneity of the variances. After controlling for marital satisfaction, none of the associations remained significant. There were no significant main effects or interaction.

Table 7. Analysis of Variance for Positive Communication

Source	*df*	*F*	*p*
Couple (C)	1	12.06**	.001
Respondent (R)	1	.001	.491
C X R	1	.94	.167
Error	87	(18.01)	

Note. Values enclosed in parentheses represent mean square errors. *$p < .05$, **$p < .01$ (one-tailed).

Table 8. Analysis of Covariance for Positive Communication

Source	*df*	*F*	*p*
DAS Total	1	40.43**	.0001
Couple (C)	1	2.35	.065
Respondent (R)	1	.71	.201
C X R	1	1.35	.124
Error	86	(12.39)	

Note. Values enclosed in parentheses represent mean square errors. DAS = Dyadic Adjustment Scale, which was used as a covariate. *$p < .05$, **$p < .01$ (one-tailed).

Hypothesis 3: SAD couples will report that they engage in more demand/withdraw interactions when discussing a problem, with the SAD patient assuming the withdrawing role and their partner assuming the demanding role, relative to non-psychiatric control couples.

A 2 x 2 ANOVA was used to analyze the results. The independent variables were type of couple (SAD or control) and type of respondent (patient or partner). The dependent variable was partner-demand/patient-withdraw communication as measured by the CPQSF. Levene's test was not significant, F (3, 87) = 2.42, $p > .05$, thus meeting the assumption of the homogeneity of the variances. A significant main effect was found for type of couple, F (1, 87) = 8.72, $p < .01$, but no significant main effect was found for respondent or interaction between type of couple and respondent. As predicted, these results indicate that SAD couples engage in significantly more partner-demand/patient-withdraw interaction than normal control couples.

Because of the correlation between marital satisfaction and demand/withdraw patterns of interaction, $r = -.395$, $p < .0001$, the analysis was repeated using marital satisfaction (DAS score) as a covariate. Levene's test was not significant, F (3, 87) = 2.13, $p > .05$, thus meeting the assumption of the homogeneity of the variances. After controlling for marital satisfaction, the association between type of couple and partner-demand/patient-withdraw interaction remained significant, F (1, 86) = 2.731, $p = .05$. Thus, even when controlling for marital satisfaction, the SAD couples reported more partner-demand/patient-withdraw interaction than control couples.

Table 9. Analysis of Variance for Demand/Withdraw Subscale with Partner in Demanding Role and Patient in Withdrawing Role.

Source	*df*	*F*	*p*
Couple (C)	1	8.72**	.002
Respondent (R)	1	.986	.162
C X R	1	.579	.225
Error	87	(30.23)	

Note. Values enclosed in parentheses represent mean square errors. *$p < .05$, **$p < .01$ (one-tailed).

Table 10. Analysis of Covariance for Demand/Withdraw Subscale with Partner in Demanding Role and Patient in Withdrawing Role.

Source	*df*	*F*	*p*
DAS Total	1	11.36**	.001
Couple (C)	1	2.73*	.05
Respondent (R)	1	2.17	.07
C X R	1	.64	.21
Error	86	(27.02)	

Note. Values enclosed in parentheses represent mean square errors. DAS = Dyadic Adjustment Scale, which was used as a covariate. *$p < .05$, **$p < .01$ (one-tailed).

Hypothesis 4: SAD couples will report that they engage in less demand/withdraw interactions when discussing a problem, with the SAD patient assuming the demanding role and their partner assuming the withdrawing role, relative to non-psychiatric control couples.

A 2 by 2 ANOVA was used to analyze the results. The independent variables were type of couple (SAD or control) and type of respondent (patient or partner). The dependent variable was patient-demand/partner-withdraw communication. Levene's test was significant, F (3, 87) = 2.82, $p < .05$, thus rejecting the assumption of the homogeneity of the variances. ANOVA is fairly robust to violations of this assumption, provided the number of cases in each sample is the same, or nearly the same. Hays (1994) concluded "unequal variances make little difference in the results of an analysis of variance F test, so long as the ratio of the largest to the smallest group size is only about 1.5" (p. 407). Nevertheless, these results should be interpreted with caution given the unequal variances. A significant main effect was found for type of couple, F (1, 87) = 4.957, $p < .05$, but no significant main effect was found for respondent or interaction between type of couple and respondent. These results indicate that SAD couples engage in significantly more patient-demand/partner-withdraw interaction than normal control couples. Thus, the hypothesis that SAD couples will report that they engage in less patient-demand/partner-withdraw interactions when discussing a problem, as compared to normal control couples was not supported by the data.

Because of the correlation between marital satisfaction and demand/withdraw patterns of interaction, $r = -.18$, $p < .05$, the analysis was repeated using marital

satisfaction (DAS score) as a covariate. Again, Levene's test was significant, F (3, 87) = 3.37, $p < .05$, thus rejecting the assumption of the homogeneity of the variances. Given the unequal variances, these results should also be interpreted with caution. After controlling for marital satisfaction, the association between type of couple and partner-demand/patient-withdraw interaction remained significant, F (1, 86) = 2.683, $p = .05$. Thus, even when controlling for marital satisfaction, SAD couples reported more patient-demand/partner-withdraw interaction than control couples.

Table 11. Analysis of Variance for Demand/Withdraw Subscale with Patient in Demanding Role and Partner in Withdrawing Role.

Source	*df*	*F*	*p*
Couple (C)	1	4.96*	.015
Respondent (R)	1	2.15	.074
C X R	1	.579	.385
Error	87	(30.19)	

Note. Values enclosed in parentheses represent mean square errors. *$p < .05$, **$p < .01$ (one-tailed).

Table 12. Analysis of Covariance for Demand/Withdraw Subscale with Patient in Demanding Role and Partner in Withdrawing Role.

Source	*df*	*F*	*p*
DAS Total	1	1.37	.12
Couple (C)	1	2.68*	.05
Respondent (R)	1	2.58	.06
C X R	1	.09	.39
Error	86	(30.06)	

Note. Values enclosed in parentheses represent mean square errors. DAS = Dyadic Adjustment Scale, which was used as a covariate. *$p < .05$, **$p < .01$ (one-tailed).

Exploratory studies were conducted to examine if gender of the SAD patient impacts ratings of marital satisfaction. In other words, are there differences in overall marital satisfaction depending on if the patient is male or female? A 2 by 2 factorial design (Gender of Patient by Type of Respondent) was used to examine this question. A 2 by 2 ANOVA was used to analyze the results. The independent variables were patient's gender (male or female) and type of respondent (patient or partner). The dependent variable was overall marital satisfaction. Levene's test was not significant, $F(3, 38) = .652$, $p > .05$, thus meeting the assumption of the homogeneity of the variances. There was no significant main effect for gender of the patient, $F(1, 38) = .086$, $p > .05$, or for respondent $F(1, 38) = .453$, $p > .05$. The interaction between gender and respondent was also not significant, $F(1, 38) = .511$, $p > .05$.

Based on the correlation between depression and marital satisfaction, $r = -.33$, $p = .001$, the analysis was repeated using depression (BDI score) as a covariate. Again, Levene's test was not significant, $F(3, 38) = .641$, $p > .05$, thus meeting the assumption of the homogeneity of the variance of the dependent variables between groups. Similarly, no significant main effects or interaction were found.

6: OVERVIEW AND PURPOSE: STUDY 2

Study 2 focused on the relationship between marital status and SAD. This study examined potential differences in degree of impairment and psychopathology between married and single patients with a primary diagnosis of SAD. Married and single patients with SAD were compared in terms of (a) degree of avoidance of social situations, (b) symptom severity, and (c) comorbid depression in order to determine if these variables are related to marital status in socially anxious patients. Because single patients with social anxiety disorder were significantly younger than married patients, analyses of covariance, with age as the covariate, were also conducted. In addition, the proposed study evaluated whether marital status had differential effects on response to treatment in patients with SAD undergoing cognitive behavior therapy for SAD. In order to control for different levels of depressive symptoms in the married and single patients that may affect treatment response, repeated measures ANCOVAs were conducted with level of depression as the covariate.

Consistent with previous findings (Hart, Heimberg, & Turk, 1998), it was predicted that relative to married patients with SAD, single patients with SAD would exhibit greater degrees of avoidance of social situations, greater symptom severity, and would be more likely to have comorbid depressive symptoms. In addition, it was predicted that married patients with SAD would show greater response to treatment in terms of reduction in SAD symptoms and general disability, relative to single patients with SAD.

7: METHOD: STUDY 2

7.1: Predicted Hypothesis: Study 2

In this study the following hypotheses were predicted:

(1) Relative to married patients with SAD, single patients with SAD would report greater avoidance of social interactions.

(2) Relative to married patients with SAD, single patients with SAD would report greater symptom severity.

(3) Relative to married patients with SAD, single patients with SAD would report greater depressive symptoms.

(4) Relative to non-married patients with SAD, married patients with social phobia would report greater response to treatment in terms of reduction in social phobic symptoms.

7.2: Variables: Study 2

This study proposed to examine the independent variable of marital status in order to determine its effect on the dependent variables of (1) social interaction; (2) symptom severity; (3) comorbid depression; and (4) treatment response.

7.3: Participants: Study 2

A total of 177 participants were involved in this study. The data for this study were derived from several other studies (Herbert, Rheingold, & Goldstein, 2002; Herbert, Gaudiano, Rheingold, Myers, Dalrymple, & Nolan, in press; Herbert, Rheingold, Gaudiano, & Harwell, 2004) as well as an on-going treatment outcome study of SAD at Drexel University. Descriptive data on the participants' demographics are outlined in Tables 13 and 14. Of the 177 participants, 129 (73%) were single and 48 (27%) were

married. The mean age of the sample was 33.4 (*SD* = 10.74). There was a significant difference, t (172) = -5.31, $p < .001$, between the mean age of the single patients (*M* = 30.75; *SD* = 10.72) and the mean age of the married patients (*M* = 39.67; *SD* = 7.26). Seventy-one percent of the patients were Caucasian, 20% were African American, 2% were Hispanic, 2% were Asian, and 5% were classified as other. With regards to education, 2% of the patients had some high school education, 10% had a high school degree, 36% had some college education, 31% had a college degree, and 21% attended graduate or professional school. In terms of employment status, 18% were unemployed, 52% were working full-time, 15% were working part-time, 14% were students, and 1% was retired.

The same inclusion/exclusion criteria used for the SAD group in Study 1 were employed in Study 2, with the exception of the marital status criterion and the criteria regarding patients' partners, as this study involved both married and single patients with a primary DSM-IV diagnosis of SAD and did not involve partner participation. In addition, only married participants were included in the married group in this study. All other participants were classified as single.

Table 13. Age of Participants: Study 2

	Overall Sample		Single Patients		Married Patients				
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*
Age	33.40	10.74	30.7	10.72	39.6	7.62	125.18	-6.29**	.0001

Note. Equal variances not assumed. *$p < .05$, **$p < .01$ (two-tailed).

Table 14. Gender, Race, Education, and Marital Status of Participants: Study 2

Variable	*f* (%)
Gender	
Male	86 (48.6)
Female	90 (50.8)
Race	
Caucasian	126 (71.2)
African American	35 (19.8)
Hispanic	3 (1.7)
Other	9 (5.1)
Education	
Some High School	4 (2.3)
High School Degree	17 (9.6)
Some College	63 (35.6)
College	55 (31.1)
Graduate/ Professional School	37 (20.9)
GED	0 (0)
Marital Status	
Single	129 (72.9)
Married	48 (27.1)

7.4: Procedure: Study 2

The same screening, diagnostic, and assessment procedures that were used for the individuals in the SAD group in Study 1 were used in Study 2. In addition, Study 2 used a self-report measure of avoidance of social situations and a clinician-rated scale of overall symptom severity (see descriptions below). As part as the larger studies from which these data was derived, participants underwent either a manualized group or individual cognitive-behavior therapy (CBT) program for SAD. Although some patients received group CBT (G-CBT) and others received individual (I-CBT), three recent studies that have evaluated the efficacy of group versus individual CBT treatment among adults with SAD found no significant difference in effectiveness. Scholing and Emmelkamp (1993) found no differences between individual and group delivery of exposure or exposure plus CBT. Likewise, Lucas and Telch (1993) found individual delivery of Heimberg's CBT to be as effective as group therapy. Finally, Wlalzo, Schroeder-Hartwig, & Hand (1990) found group and individual programs to be equally effective.

The overall format of the G-CBT program and the exposure and cognitive restructuring components were derived largely from the Cognitive Behavioral Group Therapy for Social Phobia manual developed by Heimberg (1991) and Heimberg and Becker (2002). The treatment program involved three major intervention components: Exposure to phobic stimuli, cognitive restructuring, and social skills training. The G-CBT program will was delivered by two co-therapists to groups of approximately 6-8 patients. Group sessions were held for either 6 or 12 consecutive weeks, with each group lasting approximately two hours.

The I-CBT program followed the same format and included the same intervention components as the G-CBT program. That is, the topics to be covered and the order and the timing of their presentation were the same. However, the individual treatment involved only one therapist and, whereas group sessions were two hours long, individual sessions were one hour in length.

7.5: Measures: Study 2

Screening and Diagnostic Evaluation: The same screening and diagnostic assessment measures used in Study 1 (telephone screening, SCID) to determine eligibility for the SAD patients was also used in Study 2.

Clinical Global Impression Scale: The Clinical Global Impression Scale (CGI; National Institute of Mental Health, 1985) consists of two 7-point, clinician-rated scales, one assessing overall symptom severity and the other assessing overall improvement. The scale is widely used in treatment outcome studies of anxiety disorders.

Liebowitz Social Anxiety Scale: The Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987) consists of 24-items that are divided into two subscales: social interaction (11 items) and performance situations (13 items) and is one of the most commonly used scales for the assessment of SAD. Each item is rated on fear and avoidance during the past week on a 0-3 Likert-type scale. The LSAS provides six subscale scores: (1) total fear, (2) fear of social interaction, (3) fear of performance, (4) total avoidance, (5) avoidance of social interaction, and (6) avoidance of performance. The LSAS appears to be a reliable, valid, and treatment sensitive measure of SAD (Heimberg, et al., 1999). For the purposes of this study, the total avoidance subscale was used to assess SAD-related avoidance of social interaction.

In Study 2 the BDI and the SPAI were also administered. These self-report measures were described previously in Study 1. The Social Phobia subscale of the SPAI was used as a measure of SAD symptom severity and as the treatment response measure. The BDI was used to assess comorbid symptoms of depression.

8: RESULTS: STUDY 2

8.1: Hypotheses and Results: Study 2

The results of the statistical analyses are discussed in relation to the predicted hypotheses:

Hypothesis 1: Relative to married patients with SAD, single patients with SAD will report greater avoidance of social interactions.

The hypothesis that single patients with SAD would report greater avoidance of social interaction than married patients with SAD was not supported by the data. A t-test conducted on patients' LSAS (Avoidance of Social Interaction subscale) scores indicated that there was no significant difference between married and single patients with SAD in terms of avoidance of social interaction, t (165) = .923, $p > .05$.

Because single patients (M = 30.75 years) were significantly younger than married patients (M = 39.67), analyses of covariance (ANCOVAs) with age as a covariate were also conducted to test this hypothesis and the hypotheses that follow. An ANCOVA with age as the covariate yielded similar non-significant results, F (2, 161) = .493, $p > .05$. Thus, when controlling for differences in age, there was no significant difference between married and single patients in terms of avoidance of social interaction.

Hypothesis 2: Relative to married patients with SAD, single patients with SAD will report greater symptom severity.

The hypothesis that single patients with SAD would report greater symptom severity than married patients with SAD was not supported by the data. A t-test conducted on patients' SPAI (Social Phobia subscale) scores indicated that there was no

significant difference between married and single patients with SAD in terms of self-reported symptom severity, t (175) = .393, $p > .05$. An ANCOVA with age as the covariate yielded similar non-significant results, F (2, 172) = .119, $p > .05$. Thus, when controlling for differences in age, there was no significant difference between married and single patients in terms of self-reported symptom severity.

Similarly, comparisons between married and single patients' CGI scores revealed that there was no significant difference between the two groups in terms of observer-rated symptom severity, t (166) = -.132, $p > .05$. An ANCOVA with age as the covariate yielded similar non-significant results, F (2, 160) = .084, $p > .05$. Thus, when controlling for differences in age, there was no significant difference between married and single patients in terms of observer-rated symptom severity.

Hypothesis 3: Relative to married patients with SAD, single patients with SAD will report greater comorbid depressive symptoms.

As predicted, single patients with SAD reported greater comorbid depressive symptoms than married patients with SAD. A t-test comparing patients' BDI scores indicated that there was significant difference between married and single patients in terms of comorbid depressive symptoms, t (105.57) = .1.98, $p = .05$. It should be noted, however, that on this particular analysis, Levene's Test for Equality of Variances was significant, $F = 4.021$, $p < .05$, thus rejecting the assumption of homogeneity of the variances. The results listed above pertain to equal variances not being assumed. When equal variances were assumed, the difference was no longer significant, t (174) = .1.76, $p > .05$. An ANCOVA with age as the covariate also yielded non-significant results, F (2, 172) = 2.03, $p > .05$. Thus, when controlling for differences in age, there was no

significant difference between married and single patients in terms comorbid symptoms of depression.

Table 15. Descriptive Statistics and T-Tests of Self-Report Measures: Study 2

	Single Patients		Married Patients				
Measure	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*
BDI	13.75	10.11	10.89	7.79	105.57	1.98*	.05
SPAI-SP	136.37	28.57	134.53	25.40	94.01	.415	.68
SAS							
FS	20.73	6.46	20.83	6.08	85.95	-.09	.93
AS	19.47	6.79	18.37	7.16	77.67	.90	.37
GGI	4.78	.79	4.80	.79	67.82	-.14	.89

Note. BDI = Beck Depression Inventory. SPAI-SP = Social Phobia and Anxiety Inventory, Social Phobia subscale. SAS-FS = Liebowitz Social Anxiety Scale, Fear of Social Interaction subscale. SAS-AS = Liebowitz Social Anxiety Scale, Avoidance of Social Interaction subscale. CGI = Clinical Global Impression Scale. Equal variances not assumed. *p = .05, (two-tailed).

Table 16. Pearson Correlation for Participant's Age and Marital Status

	Marital Status	
Variable	*r*	*p*
Age	.402**	.0001

Note. *p < .05, **p < .01 (one-tailed).

Hypothesis 4: Relative to non-married patients with SAD, married patients with social phobia will show greater response to treatment in terms of reduction in social phobic symptoms and general disability.

This analysis was based on a 2 by 2 (Marital Status x Time) mixed factorial design and the results were analyzed by means of a repeated measures ANOVA. The independent variables were the patient's marital status (married or single) at pretreatment and time of assessment (pre or post). The dependent variable was treatment response, as measured by the Social Phobia subscale of the SPAI. Because all participants did not complete treatment, the data was analyzed in two ways: (1) completers only and (2) intent-to-treat (i.e., last observation carried forward method). In both cases, any missing data on subjects' questionnaires was replaced by the subject's mean on that questionnaire.

In order to control for different levels of depressive symptoms in the married and single patients that may affect treatment response, repeated measures ANCOVAs were conducted with BDI score as the covariate. The value for Box's M was not significant across all analyses, thus meeting the assumption of homogeneity of the covariance matrices.

A repeated measures ANOVA was conducted as described above using completers only. A significant main effect was found for time, F (1, 116) = 123.53, $p <$ .0001, but no significant main effect was found for marital status or interaction between time and marital status. A repeated measures ANCOVA with BDI as the covariate yielded similar results. Again, a significant main effect was found for time, F (1, 115) =

38.63, $p < .0001$, but no significant main effect was found for marital status or interaction between time and marital status. Thus, all groups reported significant improvement from pre-treatment to post-treatment, with no differences between groups in rates of improvement.

Table 17. Means and Standard Deviations for Participants' Pre- and Post-Treatment SPAI Scores

	Single Patients				Married Patients			
	Pretreatment		Posttreatment		Preatreatment		Posttreament	
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
SPAI-SP								
Completers Only	136.04	28.77	101.90	34.61	137.08	22.62	105.88	28.37
Intent to Treat	136.37	28.56	114.41	36.57	134.53	25.40	111.78	30.58
Replacement With Mean	136.37	28.56	101.90	27.70	134.53	25.40	105.88	24.13

Note. SPAI-SP = Social Phobia and Anxiety Inventory, Social Phobia Subscale.

Table 18. Analysis of Covariance for Treatment Outcome by Marital Status (Completers Only)

Source	*df*	*F*	*p*
	Between Subjects		
BDI Total	1	17.21**	.0001
Marital Status (MS)	1	.59	.45
Error	115	(1221.63)	
	Within Subjects		
Time (T)	1	38.63**	.0001
T X BDI	1	1.68	.198
T X MS	1	.176	.676
Error	115	(422.89)	

Note. Values enclosed in parentheses represent mean square errors. BDI = Beck Depression Inventory, which was used as a covariate. *$p < .05$, **$p < .01$ (two-tailed).

A second repeated measures ANOVA was conducted using the intent-to-treat method to account for non-completers. Again, a significant main effect was found for time, F (1, 175) = 85.95, $p < .0001$, but no significant main effect was found for marital status or interaction between time and marital status. A repeated measures ANCOVA with BDI as the covariate yielded similar results. Once more, a significant main effect was found for time, F (1, 174) = 38.21, $p < .0001$, but no significant main effect was found for marital status or interaction between time and marital status.

Table 19. Analysis of Covariance for Treatment Outcome by Marital Status (Intent to Treat)

Source	*df*	*F*	*p*
	Between Subjects		
BDI Total	1	31.38**	.0001
Marital Status (MS)	1	.092	.761
Error	174	(1356.81)	
	Within Subjects		
Time (T)	1	38.21**	.0001
T X BDI	1	.03	.865
T X MS	1	.018	.892
Error	174	(409.14)	

Note. Values enclosed in parentheses represent mean square errors. BDI = Beck Depression Inventory, which was used as a covariate. *$p < .05$, **$p < .01$ (two-tailed).

9: DISCUSSION

9.1: Marital Satisfaction

As predicted, couples with a SAD partner reported significantly lower ratings of overall marital satisfaction than normal control couples, even when controlling for depression. There was no significant effect for respondent, indicating that patients and their partners shared similar viewpoints with regards to relationship satisfaction. It is important to note, however, that although SAD couples' ratings of marital satisfaction were significantly lower than those of control couples, their mean level of satisfaction fell in the non-distressed range compared to standard norms of married couples. The mean score for married couples is 114.8 (*SD* = 17.8, Spanier, 1976). Similarly, mean DAS scores for SAD patients and their partners in this sample were 110.65 (*SD* = 13.95) and 113.69 (*SD* = 11.66), respectively. In light of the previously discussed strong association between psychopathology and marital distress, this finding is very interesting, especially given the treatment-seeking status of the SAD sample. The fact that the magnitude of overall marital distress in SAD couples was not highly different then the standard norms of married couples adds further support to the idea that the other findings regarding communication style differences are not just artifacts of marital distress or treatment-seeking status.

With regard to the impact of gender of the SAD partner, there were no significant differences in marital satisfaction between couples in which the SAD patient was female and couples in which the SAD patient was male. Therefore, gender of the patient does not appear to significantly impact ratings of marital satisfaction in couples with a SAD partner.

9.2: Positive Communication

As predicted, SAD couples reported engaging in less overall positive communication than control couples. This finding, however, did not remain significant after controlling for marital satisfaction. Not surprisingly, marital satisfaction was highly correlated with positive communication. Although SAD diagnosis is not independently predictive of low levels of positive communication, it is reasonable to conclude that a persistent pattern of social avoidance may contribute to inadequate development of interpersonal skills that are important for constructive communication, such as those needed for discussing problematic issues, expressing one's feelings, or negotiating with one's partner.

9.3: Demand/Withdraw Communication

As predicted, SAD couples reported more demand/withdraw interaction, with the patient in the demanding role and their partner in the withdrawing role, than control couples. This finding remained significant even after controlling for marital satisfaction, suggesting that this difference in communication patterns can not simply be dismissed as an artifact of marital distress. The findings regarding demand-withdraw interaction, with the patient in the demanding role and their partner in the withdrawing role, were not consistent with predictions. In contrast to what was expected, SAD couples also reported significantly more patient-demand/partner-withdraw interaction than control couples. This finding remained significant even after controlling for marital satisfaction. Thus, over and above differences in marital satisfaction, SAD couples reported both more partner-demand/patient-withdraw and more patient-demand/partner-withdraw interaction during conflict, relative to normal control couples. In addition, there was no significant

effect for respondent (patient or partner) or interaction between respondent and type of couple, suggesting that both partners perceive communication patterns in their relationships similarly.

There are several reasons why patients with SAD may be more likely to assume a withdrawing role during conflict. First, as previously discussed, individuals with SAD generally have a strong tendency to avoid or withdrawal from interpersonal interactions. Secondly, because these individuals are extremely concerned about the impressions they make on others and deeply fear negative evaluation by others, they are less likely to voice disagreement or express their feelings. In fact, a moderate inverse correlation has been shown between complaining and social anxiety (Kowalski & Cantrell, 1994). Additionally, a previous study found that individuals who experience anxiety in interpersonal interactions are less likely to behave assertively during confrontations (Zimbardo, 1977).

Another explanation for why individuals with SAD are likely to withdraw from conflict emerges from the research of Gottman and Levenson (1988) regarding individual differences between men and women with regards to the roles they adopt during conflict. These researchers suggested that gender differences in physiological stress reactivity, rather than socialization, is the cause of the discrepancies in men's and women's interaction patterns. They summarized evidence showing that men are more physiologically reactive to stressful stimuli than women and suggested that men's avoidance and withdrawal from conflict result from men's greater arousal, and accompanying discomfort, during conflict. Heavey et al (1993) tested the hypothesis that anxiety level is related to withdrawal by examining the relationship of reported anxiety

and the extent of withdrawal during discussions of problems. They found that observer ratings of husbands' withdrawal during discussion of wives' issues correlated with husbands' post-discussion report of anxiety. Thus, it is reasonable to hypothesize that individuals with SAD may be generally more physiologically reactive to stressful situations, and therefore experience intense uneasiness during conflict, which results in their tendency to withdrawal from or avoid conflict.

In light of the preceding information, it seems counterintuitive that individuals with SAD would also be more likely than others to assume the demanding role in demand/withdraw interactions. However, this finding may be understood if interpreted in terms of previous research suggesting that demand/withdraw interaction reflects the amount of intimacy that each partner wants in the relationship (Christensen, 1987, 1988; Jacobson, 1989). Partners in the demanding role have generally been found to want more closeness, whereas those in the withdrawing role typically express a greater desire for autonomy and independence. Previous research has also suggested that demanding is associated with a lack of power in the relationship, and those in the demanding role are often considered "one down," while those trying to reduce the level of intimacy are frequently the dominant partner in the relationship (Jacobson, 1989; Jacobson & Gottman, 1998). To the extent that individuals with SAD are emotionally dependent on their partners, desire greater closeness, and perceive themselves in a "one down" position, they are likely to be in the demanding role. Thus, it may be that individuals with SAD manifest high levels of demanding behavior because they do not perceive themselves as being in a position of power in the relationship and are very dependent on their partners. The partners of SAD patients, on the other hand, may assume the

demanding role due to wanting change from their spouse, and assume the withdrawing role to the extent that they dominate the relationship and desire independence. Taken together, the overall pattern of results suggest that both SAD patients and their spouses put high levels of pressure and demands on their partners, yet simultaneously respond to these pressures by withdrawing.

To date, characterizations of SAD have primarily focused on avoidance of interpersonal interactions. The findings of this study regarding patterns of withdrawal are consistent with this conceptualization; however, the findings also suggest that socially anxious individuals are demanding and dependent on their partners. These results are consistent with previous research regarding the comoridity of SAD and dependent personality disorder (Bornstein, 1995). Perhaps married individuals with SAD are more likely to be excessively demanding of their spouses, as compared to other acquaintances, because they have less intense fears of negative evaluation by their partners. This remains empirical question for future studies to address.

Alternatively, the high level of demand/withdraw interaction found in SAD couples may be a result of deficits in social skills that are commonly associated with SAD. Individuals with SAD may not be proficient in negotiating intimacy and resolving conflict in their marital relationships, and therefore, resort to this coercive pattern of interaction. Previous research examining the interpersonal styles that are common in people with social anxiety found that higher levels of social anxiety were associated with less assertion, more conflict avoidance, more avoidance of expressing emotion, more fear of rejection, and greater interpersonal dependency (Davila & Beck, 2002). These associations held when controlling for depression and were associated with chronic stress

within close relationships. Consistent with the results of this investigation, Davila and Beck (2002) also found that social anxiety was associated with both avoidant (i.e., lack of assertion) and dependent (i.e., over-reliance on others) interpersonal styles. Increased focus on interpersonal interaction can greatly expand our conceptualization of SAD and inform current treatments.

9:4: Relation of Marital Status to Severity of Social Anxiety Disorder

A principal purpose of this study was to examine the relationship between marital status and overall psychopathology and impairment within a sample of patients with SAD. It was predicted that non-married patients with SAD would have more severe symptoms or greater impairment than married patients. Contrary to the investigator's hypotheses, there were no significant differences between married and non-married patients with SAD with regards to measures of self-reported SAD severity or avoidance of social interaction. Consistent with these findings, there were also no differences between the two groups on a clinician-rated measure of symptom severity. There was a significant difference between married and single patients with respect to self-reported symptoms of depression, with single patients reporting higher levels of depressive symptoms. However, because the assumption of the equality of variances was violated, this finding should be interpreted with caution.

Because single patients were significantly younger than married patients, analyses of covariance were also conducted with age as the covariate. These analyses produced a similar pattern of results. However, after controlling for age, the difference between single and married patients with regard to depression did not remain significant.

The findings of this study were surprising given the impact of SAD on the interpersonal skills necessary for forming and sustaining marital relationships. Furthermore, the results were not consistent with previous research examining differences between married and single patients with SAD. Hart et al. (1998) found that single patients with SAD were more likely to have an additional diagnosis of avoidant personality disorder or a mood disorder. Single patients were also rated as more severe by clinicians on four of six measures of SAD severity and single patients rated themselves as more severe than married patients on social interaction anxiety. However, similar to the present study, Hart and colleagues also found no difference between the two groups on measures of self-reported depression, after controlling for age. One reason for the discrepancy in results between the present study and the previous study may be that present study relied more on self-report measures and used less clinician-rated measures, as the previous study found no differences between groups on other self-report measures of fear of negative evaluation and performance anxiety.

9.5: Relation of Marital Status to Treatment Response

It was hypothesized that married patients with SAD would show greater response to cognitive behavior therapy for SAD than single patients, as single individuals with SAD may have fewer sources of social support and fewer opportunities for exposure to social situations. Contrary to predictions, there was no difference between married and single patients with SAD with respect to treatment response following CBT for SAD. Both married and single patients demonstrated significant improvement in terms of reduction of SAD symptoms, however there was no significant effect of marital status.

These findings remained even after controlling for differences in depression between the two groups.

It was predicted that married individuals would demonstrate greater improvement following CBT than unmarried persons with SAD for several reasons. First, since there is a large exposure component in cognitive-behavioral treatment for SAD, it was theorized that married patients with SAD would have more opportunities for exposure to social situations and for practicing new skills. Being that socially anxious individuals generally report having a very small, if any, social network, married patients may benefit by having someone available for social interaction, to facilitate the completion exposure homework assignments, and to help build social competence. Success has been demonstrated for partner-assisted interventions that utilize the patient's partner as a "coach" or "co-therapist" who encourages the completion of homework assignments and reinforces the use of techniques taught by the therapist with other anxiety disorders such as agoraphobia (Cobb et al., 1984; Emmelkamp et al., 1992; Cerny, Barlow, Craske, & Himaldi, 1987) and OCD (Emmelkamp & de Lange, 1983; Emmelkamp et al., 1990; Mehta, 1990). As reviewed by Baucom, Shoham, Muser, Diato, and Stickle (1998) partner-assisted interventions have been shown to be at least as effective as non-assisted interventions in the treatment of OCD and agoraphobia.

One of the reasons that married patients with SAD did not show greater response to treatment than single patients may be that the partners of SAD patients who are undergoing CBT are not actually helping the patients conduct assignments outside of the treatment sessions or reinforcing adherence to the treatment protocol as expected. In fact, it is even possible that partners of SAD patients may be unwittingly reinforcing avoidant

behavior in an effort to prevent their spouse from becoming too distressed. For example, they may make excuses for their spouses' absence at events or handle the bulk of the social interactions for the couple, providing little opportunity for the patient to confront exposure feared social situations. In addition, because of the high level of demand/withdraw interaction and low rate of positive communication during conflict in SAD couples, as described in Study 1, patients may have limited opportunity to practice effective communication skills at home. Spouses of SAD patients might also be reluctant to provide assistance to their partners because they may want to preserve the status quo in the relationship and fear their partner developing greater independence and autonomy. Or, it may be that patients are not actually utilizing their spouses outside of sessions as a resource for practicing assignments out of embarrassment, lack of perceived support, or simply because it is less anxiety producing for them to let their spouses negotiate social interactions for them.

Another reason that married patients with SAD were predicted to show greater response to treatment is that they are likely to have more sources of social support. Social support is known to have a direct, indirect, and/or interactive effect on physical and mental health (Mitchell et al., 1982). For example, there is overwhelming evidence that patients with supportive social relationships recover from their depression more quickly than those who lack such relationships (Beiser, 1976; Billings & Moos, 1985; Brown & Lewinsohn, 1984; Brugha, Bebbington, MacCarthy, Wykes, & Potter, 1990). In addition, McLeod, Kesslar, and Landis (1992) examined speed of recovery from major depressive episodes in a community sample of married men and women and found persons with depression whose spouses reported feeling warmth and compassion for the

depressed spouse's condition were much more likely to recover in any given time period than were depressed spouses whose spouses did not report those feelings. In contrast, spouses' reports of burden showed a consistent, but nonsignificant, pattern of relation to recovery and predicted less rapid recovery during all time periods.

In light of the documented positive effects of social support, it is reasonable to hypothesize that one reason why married patients with SAD do not show greater response to CBT for SAD than single patients may be that married patients with SAD do not perceive themselves as having more social support, that is, they do not perceive their spouses as supportive. Although this hypothesis has not been tested with SAD couples, Pyke and Roberts (1987) found that agoraphobic women perceived their husbands as less supportive, as compared to non-agoraphobic women. Whether or not partners of patients with SAD are actually supportive, patients with SAD may not perceive their partners as supportive due to the negative cognitive distortions that are associated with SAD. By including a pretreatment measure of perceived social support, it could be determined if married patients with SAD do, in fact, report greater perceived social support than single patients.

9.6: Limitations

One limitation of this study concerns the generalizability of findings in that it included only individuals seeking treatment for SAD. Epidemiological studies suggest that only approximately twenty percent of individuals with a recent or active (i.e., 6- or12-month) disorder obtain professional help for their disorder (Kessler et al., 1994). Therefore, it is unclear to what extent these findings reflect something unique about the treatment-seeking status of the participants versus the presence of the disorder per se.

For example, if higher proportions of people with psychiatric disorders and marital problems seek therapy than do people with disorders and no marital problems, perhaps because of insufficient support to cope with their problems (Halford & Bouma, 1997), then the association between marital dissatisfaction and SAD observed in this study may in part be an artifact of the sample studied. However, because the SAD couples in did not fall in the maritally distressed range, it unlikely that their treatment seeking status was due to marital distress.

Study 2 may also have been limited by the treatment-seeking status of the sample. It is possible that no significant differences in severity or avoidance were found between the married and single patients with SAD because the individuals with SAD who are seeking treatment are potentially more impaired than the individuals with SAD who are not seeking treatment.

Another limitation of this study was that the findings were predominantly based on self-report data, which are vulnerable to bias and distortion. However, because results were based on two sources (the patients and their partners) whose independent reports told a similar story (there were no significant main effects of reporter, and participant and spouse reports were significantly correlated), it may be argued that the results are likely to reflect relatively unbiased assessments of the interactions of the couples. In addition, previous research has shown similarity between observations and self-reports of demand/withdraw interaction (Christensen & Heavey, 1990).

In Study 2, only one clinician rated measure of overall symptom severity was included, although, similar to the self-report measures, it did not yield significant differences between the two groups. Perhaps, a clinician-rated measure of social skills

should be included in future research, as it is reasonable to hypothesize that differences between married and single patients with SAD do not lie in subjective ratings of internal anxiety, but in observable social skills.

Another potential limitation is that Study 1 used both married and cohabitating couples, rather than only married couples. It should be noted, however, that control couples were matched with SAD couples on marital status so there were an equal number of married and non-married couples in both groups. Furthermore, since not all couples included the study were married, the study did not incorporate a measure of length of time married. Therefore, it was not possible to determine if the couples in both groups had been married for equal lengths of time. The sample size of patients' partners was also smaller than anticipated, as only 16 of the 26 partners of the SAD patients participated in the study.

An additional potential limitation of Study 1 is that a non-socially anxious psychiatric control group was not included. Without a non-socially anxious psychiatric control group, it was not possible to determine the degree to which observed communication patterns were specific to SAD.

Although the present study found higher ratings of marital dissatisfaction and demand/withdraw interaction in patients with SAD than normal controls, it should be noted that these findings were based on cross-sectional data. Therefore, the etiological significance of these findings cannot be determined from this study. It may be that SAD increases the risk for marital dissatisfaction and negative communication patterns, vice-versa, or the relationship may be bi-directional. Longitudinal research is necessary to

evaluate the temporal association between marital quality, communication patterns, and social anxiety disorder.

It should also be noted that there is some evidence that spouses of individuals with psychiatric disorders are more likely to have a disorder themselves (e.g., McLeod, 1995). Thus, the presence of spouses' psychiatric disorders could, in turn, influence marital functioning of the target partner. Although this study did include measures of depression and SAD in spouses, future research would benefit from the inclusion of more comprehensive measures of spouses psychiatric functioning in research exploring the association between marital dissatisfaction and psychiatric disorders.

Another limitation of this Study 1 is that it did not include an assessment of the partners' role in married patients' treatment or perceived social support. As such, it cannot be determined if these variables impact in treatment response. Perhaps married patients are not actually engaging in more exposure exercises and do not have more social support as predicted. Future research examining the relationship between marital status and treatment outcome for SAD should include a comprehensive measure of social support, as well as other theoretically relevant relationship variables that might mediate or moderate treatment response, to determine if they do, in fact, play a role in treatment outcome.

Lastly, in Study 2, participants were only classified as married or non-married. Therefore, single patients who were involved in a serious relationship, engaged, or cohabitating were placed in the non-married group. Potentially, there could be differences between these patients and single patients that are not involved in a romantic relationship. As a result, categorizing the patients who are involved in serious

relationships as single could conceivably minimize differences between the two groups. For example, cohabitating patients might be less severe than other single patients with SAD and more similar to married patients in terms of severity, comorbidity, and treatment response. Thus, future research should assess and take into consideration patients' relationship status.

9.7: Recommendations for Future Research

Although the SAD couples reported significantly lower ratings of marital satisfaction than couples in the normal sample, their scores still fell within the non-distressed range for married couples as compared to standard norms (Spanier, 1976). This findings is especially surprising, given the treatment-seeking status and magnitude of demand/withdraw communication that was determined to be present in these couples. Future research should examine what qualities make these relationships succeed. Research should aim to explore the dynamics of SAD couples and should determine positive and protective factors in the marital relationships of individuals with SAD, so that these factors can be built upon should an SAD couple or individual present for treatment.

The present findings regarding communication patterns in SAD couples also have several implications for the assessment and treatment of married individuals with SAD. Given the high level of demand/withdraw communication in couples with a socially anxious partner, and the significant correlation between marital satisfaction and marital communication patterns, these findings point to the need to develop effective interventions for couples with a socially anxious partner who are experiencing high levels of demand/withdraw interaction and low levels of positive communication in their

relationships. Teaching patients with SAD effective communication skills may be beneficial in terms of both the patient's marital relationship and treatment response. It has been suggested that by addressing communication patterns, marital relationships in couples with an agoraphobic spouse are likely to improve with the implication that there will be a better response to treatment (Arnow, Taylor, Agras, & Telch (1985). Arnow et al. (1985) incorporated communication skills training that focused on constructive speaking, empathetic listening, and conflict resolution in their treatment of agoraphobia. These skills were taught to address marital issues that have the potential to interfere with treatment gains, as well as to minimize spouse behaviors that unintentionally maintain or exacerbate phobic symptoms by impeding the development of independence in the patient. Couples receiving partner-assisted exposure along with eight sessions of communication training were compared with couples receiving the same exposure therapy along with eight sessions of couple relaxation training. At posttest, patients in the exposure plus communication training group had significantly lower subjective anxiety, unaccompanied trips, and performed significantly better on a behavioral approach test than the exposure plus relaxation couples. As anticipated, the couples in the communication group also had significantly more positive communication and fewer negative communication behaviors after treatment. These results have also been replicated by Craske, Burton, & Barlow (1989). The results of these studies suggest that teaching couples to discuss and solve relationship problems can improve the effectiveness of exposure.

In addition to examining the utility of involving the spouse in treatment, research should also address the impact of marital relationship satisfaction on treatment outcome

for SAD. Future research should investigate if there are differences between distressed and non-distressed couples with respect to treatment response. Although no studies have examined the relationship between the quality of marital interactions and the outcome of therapy in SAD, there is conflicting evidence regarding the relationship between pretreatment levels of marital satisfaction and treatment response for agoraphobics. In addition, gathering information about the personality characteristics of the spouses, such as desire for intimacy versus independence, the relative levels of commitment and power in the relationship, and levels of anxiety would provide additional insight into the causes of destructive patterns of interaction. This information would be useful in guiding interventions with couples who experience the harmful effects of such patterns.

Although this study did not find that gender of the SAD patient makes a difference in marital satisfaction ratings, future research should explore the role of gender and communication patterns in SAD couples. Previous research has established that there is no general demand/withdraw role differentiation between spouses when discussing problems raised by husbands, whereas there is a clear role differentiation in terms of gender when discussing issues raised by wives, with women being more demanding and men more likely to be withdrawing (Christensen & Heavey, 1990; Heavey et al., 1993). Future studies could examine if gender of the patient with SAD and conflict structure (who requested the change, patient or partner) similarly affects demand/withdraw communication patterns.

Finally, longitudinal studies will be necessary to better understand how marital satisfaction and communication patterns relate to the course of SAD, as well as how patterns of interaction relate to marital satisfaction over time. Previous research with

normal married couples has suggested that the cross-sectional associations of patterns of interaction with marital satisfaction may be quite difference from the longer term impact (Gottman & Krokoff, 1989; Heavey et al., 1993). That is, certain styles of interaction may cause pain in the short term but lead to improvement in the long run, while other patterns may be functional in the short term but be deleterious in the long run.

Future research should also focus on identifying what variables differentiate married from non-married individuals with SAD in order to determine what enables some socially anxious individuals to establish close, satisfying relationships and prohibits others from forming such important interpersonal connections. The findings of this study suggest that avoidance of social interaction, severity, and comorbid depression do not separate the two groups. Future studies should assess other variables associated with SAD, such as social skills, to determine what characteristics are important to focus on in treatment in order to improve the quality of life for individuals with SAD.

Although no significant differences were found between married and single patients with SAD with regard to treatment response, it may be because partners were not playing a constructive role in assisting the patient. Future research should explore the potential benefits of including married patients' spouses as coaches or surrogate therapists in treatment. As previously summarized, partner-assisted interventions have proved beneficial for other anxiety disorders, such as agoraphobia and OCD (Baucom et al., 1998). In fact, exposure interventions for agoraphobia may show enhanced benefit from involvement of the partner in some capacity (Arnow et al, 1985; Cerny et al., 1987). Partner-assisted approaches are typically developed from a cognitive behavior framework in which the patient has homework assignments outside of the therapy session. The

patient's partner helps and coaches the patient in conducting the homework assignments outside of the sessions. For example, a partner might accompany a patient with SAD to a company party and assist the patient with the use of coping self-statements as a means of offering support and reinforcement for adherence to the treatment protocol. Inclusion of the spouse might also help educate the spouse in how to provide appropriate support, without undermining treatment goals. The promising partner-assisted treatments previously identified for other psychological disorders give reason to expect that couple-based interventions will also prove beneficial for the treatment of social anxiety disorder. In addition to studying the utility of involving the spouse in the treatment procedure, investigation into the role that the marital relationship plays in the treatment outcome might provide information regarding the possible influence of interpersonal factors in the development and maintenance of SAD. It is recommended that future investigators attempt to assess theoretically relevant relationship variables that might impact treatment outcome.

LIST OF REFERENCES

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Amies, P.L., Gelder, M.G., & Shaw, P.M. (1983). Social phobia: A comparative clinical study. *British Journal of Psychiartry, 142,* 174-179.

Arkin, R.M., Lake, E.A., & Baumgardner, A.H. (1986). Shyness and self-presentation. In W.H. Jones, J.M. Cheek, & S.R. Briggs (Eds.), *Shyness: Perspectives on research and treatment* (pp. 189-204). New York: Plenum Press.

Arkowitz, H., Hinton, R., Perl, J., & Himaldi, W. (1987). Treatment strategies for dating anxiety in college men based on real-life practice. *Counseling Psychologist, 7,* 41-46.

Arkowitz, H., Lichtenstein, E., McGovern, K., & Hines, P. (1975). The behavioral assessment of social competence in males. *Behavior Therapy, 6,* 3-13.

Arnow, B.A., Taylor, C.B., Agras, W.S., & Telch, M.J. (1985). Enhancing agoraphobia treatment outcome by changing couple communication patterns. *Behavior Therapy, 16,* 452-467.

Arrindell, W.A., & Emmelkamp, P.M.G. (1986). Marital adjustment, intimacy and needs in female agoraphobics and their partners: A controlled study. *British Journal of Psychiarty, 149,* 592-602.

Arrindell, W.A., Emmelkamp, P.M.G., & Sanderman, R. (1986). Marital quality and general life adjustment in relation to treatment outcome in agoraphobia. *Advances in Behaviour Research and Therapy, 8,* 139-185.

Babcock, J.C., Waltz, J., Jacobson, N.S., & Gottman, J.M. (1993). Power and violence: The relation between communication patterns, power discrepancies, and domestic violence. *Journal of Consulting and Clinical Psychology, 61,* 40-50.

Bandura, A. (1973). *Social Learning Theory.* Englewood Cliffs, NJ: Prentice-Hall.

Barnet, P.R., & Gotlib, I.H. (1988). Psychological functioning in depression: Distinguishing among the antecedents, concomitants, and consequences. *Psychological Bulletin, 104,* 97-126.

Basco, M.R., Prager, K.J., Pita, J.M., Tamir, L.M., Stephens, J.J. (1992). Communication and intimacy in the marriages of depressed patients. *Journal of Family Psychology, 6,* 184-194.

Baucom, D.H., Shoham, V., Mueser, K.T., Diauto, A.D., & Stickle, T.R. (1998). Empirically supported couple and family interventions for marital distress and adult mental health problems. *Journal of Consulting and Clinical Psychology, 66,* 53-88.

Beach, S.H.R., Arias, I., & O'Leary, K.D. (1986). The relationship of marital satisfaction and social support to depressive symptomatology. *Journal of Psychopathology and Behavioral Assessment, 8,* 305-316.

Beach, S.R., & Cassidy, J.F. (1991). The marital discord model of depression. *Comprehensive Mental Healthcare, 1,* 119-136.

Beach, S.R.H., Jouriles, E.N., & O'Leary, K.D. (1985). Extramarital sex: Impact on depression and commitment in couples seeking marital therapy. *Journal of Sex and Marital Therapy, 11,* 99-108.

Beach, S.R., & O'Leary, K.D. (1993). Marital discord and dysphoria: For whom does the marital relationship predict depressive symtomatology? *Journal of Social and Personal Relationships, 10,* 405-420.

Beach, S.R.H., & O'Leary, K.D. (1986). The treatment of depression occurring in the context of marital discord. *Behavior Therapy, 17,* 43-49.

Bebbington, P.E. (1987a). Marital status and depression: a study of English national admission statistics. *Acta Psychiatrica Scandinavica, 75,* 640-650.

Bebbington, P.E. (1987b). The social epidemiology of clinical depression. In A.S. Henderson & G. Burrows (Eds.). *Handbook of Studies on Social Psychiatry.* Melbourne: Blackwell.

Beck, A.T., & Steer, R.A. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review, 8,* 77-100.

Beck, A.T., Ward, C.H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4,* 561-571.

Beidel, D.C., Borden, J.W., Turner, S.M., & Jacob, R.G. (1989). The Social Phobia and Anxiety Inventory: Concurrent validity with a clinical sample. *Behavioural Research and Therapy, 27,* 573-576.

Beidel, D.C., Turner, S.M., & Cooley, M.R. (1993). Assessing reliable and clinically significant change in social phobia: Validity of the Social Phobia and Anxiety Inventory. *Behavioural Research and Therapy, 31,* 331-337.

Beidel, D.C., Turner, S.M., Stanley, M.A., & Dancu, C.V. (1989). The Social Phobia and Anxiety Inventory: Concurrent and external validity. *Behavior Therapy, 20,* 417-427.

Beiser, M.(1976). Personal and social factors associated with the remission of psychiatric symptoms. *Archives of General Psychiatry, 33,* 941-945.

Bellack, A.S., & Hersen, M. (Eds.). (1979). *Research and practice in social skills training.* New York: Plenum Press.

Berns, S.B., Jacobson, N.S, & Gottman, J.M. (1999). Demand-withdraw interaction in couples with a violent husband. *Journal of Consulting and Clinical Psychology, 67* (5), 666-674.

Biglan, A., Hops, H., Sherman, L., Friedman, L., Arthur, J., & Osteen, V. (1985). Problem-solving interactions of depressed women and their husbands. *Behavior Therapy, 16,* 431-451.

Billings, A.G., & Moos, R.H. (1985). Life stressors and social resources affect posttreatment outcomes among depressed patients. *Journal of Abnormal Psychology, 94,* 140-153.

Bland, K., & Hallam, R.S. (1981). Relationship between response to graded exposure and marital satisfaction in agoraphobics. *Behaviour Research and Therapy, 19,* 335-338.

Blankfield, A., & Maritz, J.S. (1990). Female alcoholics IV. Admission problems and patterns. *Acta Psychiatrica Scandinavica, 82,* 445-450.

Blumberg, S.R., & Hokanson, J.E. (1983). The effects of another person's response style on interpersonal behavior in depression. *Journal of Abnormal Psychology, 92,* 196-209.

Borkovec, T.D., Fleischmann, D.J., & Caputo, J.A. (1973). The measurement of anxiety in an analogue social situation. *Journal of Consulting and Clinical Psychology, 44,* 157-161.

Borkovec, T.D, Stone, N., O'Brien, G., & Kaloupek, D. (1974). Identification and measurement of a clinically relevant target behavior for analogue outcome research. *Behavior Therapy, 5,* 503-513.

Bornstein, R.F. (1995). Comorbidity of dependent personality disorder and other psychological disorders: An integrative review. *Journal of Personality Disorders, 9,* 286-303.

Bradbury, T.N., & Karney, B.R. (1993). Longitudinal study of marital interaction and dysfunction: Review and analysis. *Clinical Psychology Review, 13,* 15-27.

Brown, R., & Lewinsohn, P.M. (1984). A psychoeducational approach to the treatment of depression: Comparison of group, individual, and minimal contact procedures. *Journal of Consulting and Clinical Psychology, 52,* 774-783.

Brugha, T.S., Bebbington, P.E., MacCarthy, B., Sturt, E., Wykes, T., & Potter, J. (1990). Gender, social support and recovery from depressive disorders: A prospective clinical study. *Psychological Medicine, 20,* 147-156.

Buglass, D., Clarke, J., Henderson, A.S., Krietman, N., & Presley, A.S. (1977). A study of agoraphobia housewives. *Psychological Medicine, 7,* 73-86.

Burgio, K.L., Glass, C.R., & Merluzzi, T.V. (1981). The effects of social anxiety and videotape performance feedback on cognitions and self-evaluations. *Behavioral Counseling Quarterly, 1,* 288-301.

Burns, D.D., Sayers, S.L., & Moras, K. (1994). Intimate relationships and depression: Is there a causal connection? *Journal of Consulting and Clinical Psychology, 62,* 1033-1043.

Cacioppo, J.T., Glass, C.R., & Merluzzi, T.V. (1979). Self-statements and self-evaluations: a cognitive response analysis of heterosexual anxiety. *Cognitive Therapy and Research, 3,* 249-262.

Cerny, J.A., Barlow, D.H., Craske, M.G., & Himaldi, W.G. (1987). Couples treatment of agoraphobia: A two-year follow-up. *Behavior Therapy, 18,* 401-415.

Chakrabarti, S., Kulhara, P., & Verma, S.K. (1993). The pattern of burden in families of neurotic patients. *Social Psychiatry and Psychiatric Epidemiology, 28,* 172-177.

Cheek, J.M., & Buss, A.H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology, 41,* 330-339.

Christensen, A. (1987). Detection of conflict patterns in couples. In K. Hahlweg & M.J. Goldstein (Eds.), *Understanding major mental disorders: The contribution of family interaction research* (pp. 250-265). New York: Family Process Press.

Christensen, A. (1988). Dysfunctional interaction patterns in couples. In P. Noller & M.A. Fitzpatrick (Eds.), *Perspectives on marital interaction* (pp. 31-52). Clevedon, England: Multilingual Matters.

Christensen, A. & Heavey, C.L. (1993). Gender differences in marital conflict: The demand/withdraw interaction pattern. (In S. Oskamp & M. Costanzo (Eds.), *Gender issues in contemporary society* (pp. 113-141). Newbury Park, CA: Sage.)

Christensen, A., & Shenk, J.L. (1991). Communication, conflict, and psychological distance in nondistressed, clinic, and divorcing couples. *Journal of Consulting and Clinical Psychology, 59,* 458-463.

Christensen, A., & Sullway, M. (1984). *Communication Patterns Questionnaire.* Unpublished manuscript, University of California, Los Angeles.

Clark, J.V., & Arkowitz, H. (1974). Social anxiety and self-evaluation of interpersonal performance. *Psychological Report, 36,* 211-221.

Clausen, J.A., & Yarrow, M.R. (1955). Introduction: Mental illness and the family. *Journal of Social Issues, 4,* 3-5.

Cobb, J.P., Matthew, A.M., Childs-Clarke, A., & Blowers, C.M. (1984). The spouse as cotherapist in the treatment of agoraphobia. *British Journal of Psychiatry, 144,* 282-287.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112,* 155-159.

Cohen, S., & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. In A. Baum, J.E. Singer, & S.E. Taylor (Eds.), *Handbook of psychology and health. Vol. 4* (pp. 253-268). Hillsdale, NJ: Erlbaum.

Coleman, R.E., & Miller, A.G. (1975). Relationship between depression and marital adjustment in a clinic population: A multitrait-multimethod study. *Journal of Consulting and Clinical Psychology, 43,* 647-651.

Coyne, J.C. (1976). Depression and the response of others. *Journal of Abnormal Psychology, 89,* 186-193.

Craske, M.G., Burton, T., & Barlow, D.H. (1989). Relationships among measures of communication, marital satisfaction, and exposure during couples treatment of agoraphobia. *Behaviour Research and Therapy, 27,* 131-140.

Curran, J.P. (1977). Social skills training as an approach to the treatment of heterosexual anxiety: a review. *Psychological Bulletin, 84,* 140-157.

Daly, J.A., & McCroskey, J.C. (1984). *Avoiding communication: Shyness, reticence, and communication apprehension.* Beverly Hills, CA: Sage.

Davila. J., & Beck, J.G. (2002). Is social anxiety associated with impairment in close relationships? A preliminary investigation. *Behavior Therapy, 33,* 427-446.

Dean, A., & Lin, N. (1977). The stress buffering role of social support. *Journal of Nervous and Mental Disease, 165,* 403-417.

Dehle, C., & Weiss, R.L. (1998, November). *Sweaty palms and racing hearts: Prospective associations between husband and wife anxiety and subsequent marital adjustment.* Poster session presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Washington, DC.

DePaulo, B.M., Epstein, J.A., & LeMay, C.S. (1990). Responses of the socially anxious to the prospect of interpersonal evaluation. *Journal of Personality, 58,* 623-640.

Dodge, C.S., Heimberg, R.G., Nyman, D., & O'Brien, G.T. (1987). Daily heterosexual interaction of high and low socially anxious college students: a diary study. *Behavior Therapy, 18,* 90-96.

Dutton, S.S. (2002). Marital relationship functioning in a clinical sample of generalized anxiety disorder patients. *Dissertation Abstracts International: Section B: the Sciences and Engineering, 62(9-B),* 4216.

Emmelkamp, P.M.G., de Haan, E., & Hoogduin, C.A.L. (1990). Marital adjustment and obsessive-compulsive disorder. *British Journal of Psychiatry, 156,* 55-60.

Emmelkamp, P.M.G., & de Lange, I. (1983). Spouse involvement in the treatment of obsessive-compulsive patients. *Behaviour Research and Therapy, 21,* 341-*346.*

Emmelkamp, P.M.G., & Gerlsma, C. (1994). Marital functioning and the anxiety disorders. *Behavior Therapy, 25,* 407-429

Emmelkamp, P.M.G., & van der Hout, A. (1983). Failure in treating agoraphobia. In E.B. Foa & P.M.G. Emmelkamp (Eds.), *Failures in behavior therapy*. New York: Wiley.

Emmelkamp, P.M.G., van Dyck, R., Bitter, M., Heins, R., Onstein, E.J., & Eisen, B. (1992). Spouse-aided therapy with agoraphobics. *British Journal of Psychiatry, 160,* 51-56.

Epstein, N. (1985). Depression and Marital Dysfunction: Cognitive and behavioral linkages. *International Journal of Mental Health, 13* (3-4), 86-104.

Fincham, F.D. & Bradbury, T.N. (1993). Marital satisfaction, depression, and attributions: A longitudinal analysis. *Journal of Personality and Social Psychology, 64,* 442-452.

Fincham, F.D., Beach, S.R.H., Harold, G.T., & Osborne, L.N. (1997). Marital satisfaction and depression: Different causal relationships for men and women? *Psychological Science, 8,* 351-357.

First, M.B., Spitzer, R.L., Gibbon, M., & Williams, J.B.W. (1995). *Structured Clinical Interview for DSM-IV Axis I Disorders – Patient Edition (SCID-I/P, Version 2.0).* New York State Psychiatric Institute.

Fogarty, T.F. (1976). Marital Crisis. (In P.J. Guerin (Ed.), *Family therapy: Theory and practice* (pp. 325-334). New York: Gardner Press.)

Fokias, D., & Tyler, P. (1995). Social support and agoraphobia: A review. *Clinical Psychology Review, 15* (4), 347-366.

Friedman, S. (1990). Assessing the marital environment of agoraphobics. *Journal of Anxiety Disorders, 4,* 335-340.

Fry, W.F. (1962). The marital context of anxiety syndrome. *Family Process, 1,* 245-252.

Glasgow, R., & Arkowitz, H. (1975). The behavioral assessment of male and female social competence in dyadic heterosexual interactions. *Behavior Therapy, 6,* 488-498.

Goldstein, A.J. (1973). Learning theory insufficiency in understanding agoraphobia-A plea for empiricism. In J. Brengelmann & W. Tunner (Eds.), *Behaviour Therapy-Velhaltenstherapie.* Munich: Urban & Schwarzenberg.

Goldstein, A.J., & Chambless, D.L. (1978). A reanalysis of agoraphobia. *Behavior Therapy, 9,* 47-59.

Goldstein, A.J., & Swift, K. (1977). Psychotherapy with phobic patients: the marriage relationship as the source of symptoms and focus of treatment. *American Journal of Psychotherapy, 31,* 284-293.

Gottman, J.M. (1979). *Empirical investigations of marriage.* (New York: Academic Press)

Gottman, J.M. (1993). The roles of conflict engagement, escalation, and avoidance in marital interaction: A longitudinal view of five types of couples. *Journal of Consulting and Clinical Psychology, 61* (1), 6-15.

Gottman, J.M., Coan, J., Carrere, S., & Swanson, C. (1988). Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and the Family, 60*, 5-22.

Gottman, J.M., & Krokoff, L.J. (1989). Marital interaction and satisfaction: A longitudinal view. *Journal of Consulting and Clinical Psychology, 57(1),* 47-52.

Gottman, J.M., Markman, H., & Notarius, C. (1977). The typography of marital conflict: a sequential analysis of verbal and nonverbal behavior. *Journal of Marriage and the Family, 37*, 502-512.

Hafner, J.R. (1976). Fresh symptom emergence after intensive behaviour therapy. *British Journal of Psychiatry, 129*, 378-383.

Hafner, J.R. (1982). The marital context of agoraphobic syndrome. In D.L. Chambless & A.J. Goldstein (Eds.), *Agoraphobia: Multiple perspectives on theory and treatment.* New York: Wiley.

Hafner, J.R. (1986). *Marriage and mental illness: a sex roles perspective.* New York: Guilford.

Halford, K.W., & Bouma, R. (1997). Individual psychopathology and marital distress. In K.W. Halford & H.J. Markman (Eds.), *Clinical handbook of marriage and couples interventions* (pp. 537-554). Chichester, England UK: John Wiley & Sons, Inc.

Halford, W.K., & Osgarby, S.M. (1993). Alcohol abuse in clients presenting with marital problems. *Journal of Family Psychology, 6,* 1-11.

Halweg, K., Markman, H.J., Thurmaier, F., Engl, J., & Eckert, V. (1998). Prevention of marital distress: Results of a German prospective-longitudinal study. *Journal of Family Psychology, 12*, 543-556.

Hart, T.A., Heimberg, R.G., & Turk, C.L. (1998, November). *The relation of marital status to severity of social phobia.* Poster session presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Washington, DC.

Hatfield, A.B. (1987). Coping and adaptation: a conceptual framework for understanding families. In A.B. Hatfield & H.D. Lefley (Eds.), *Families of the Mentally Ill* (pp.60-84). New York: Guilford.

Hautzinger, M., Linden, M., & Hoffman, N. (1982). Distressed couples with and without a depressed partner: An analysis of their verbal interaction. *Journal of Behavior Therapy and Experimental Psychiatry, 13,* 307-314.

Hays, W.L. (1994). *Statistics* (5th Ed). Fort Worth: Harcourt Brace.

Heavey, C.L., Christensen, A., & Malamuth, N.M. (1995). The longitudinal impact of demand and withdraw during marital conflict. *Journal of Consulting and Clinical Psychology, 63,* 797-801.

Heavey, C.L., Layne, C., & Christensen, A. (1993). Gender and conflict structure in marital interaction: A replication and extension. *Journal of Consulting and Clinical Psychology, 61,* 16-27.

Heimberg, R.G. (1991). *Cognitive behavioral treatment of social phobia in a group setting: A treatment manual.* Unpublished manuscript, The State University of New York, at Albany.

Heimberg, R. G., & Becker, R. E. (2002). *Cognitive-behavioral group therapy for social phobia: Basic mechanisms and clinical strategies.* New York: Guilford.

Heimberg, R.G., Harrison, D.F., Montgomery, D., Madsen, C.H., & Sherfey, J.A. (1980). Psychometric and behavioral analysis of a social anxiety inventory: The Situation Questionnaire. *Behavioral Assessment, 2,* 403-415.

Heimberg, R.G., Horner, K.J., Juster, S.A., Safren, S.A., Brown, E.J., Schneier, F.R., & Liebowitz, M.R. (1999). *Psychological Medicine, 29,* 199-212.

Heller, K. (1979). The effects of social support: Prevention and treatment implications. In A.P. Goldstein & F.H. Kanfer (Eds.), *Maximizing treatment gains: Transfer enhancement in psychotherapy* (pp. 353-382). New York: Academic Press.

Heller, K., & Swindle, R.W. (1983). Social networks, perceived social support, and coping with stress. In R.D. Felner, L.A. Jason, J.N. Moritsugu, & S.S. Farber (Eds.), *Preventive psychology: Theory, research, and practice* (pp. 87-103). New York: Pergamon.

Herbert, J. D., & Dalrymple, K. (in press). Social anxiety disorder. In A. Freeman & S. Felgoise (Eds.), *Encyclopedia of Cognitive Behavior Therapy*. Norwell, MA: Kluwer.

Herbert, J.D., Gaudiano, B.A., Myers, V.H., Dalrymple, K., & Nolan, B.A. (in press). Social skills training augments the effectiveness of cognitive behavioral therapy for social anxiety disorder. *Behavior Therapy*.

Herbert, J.D., Rheingold, A.A., Gaudiano, B.A., & Harwell, V.D. (2004). Standard versus extended cognitive behavior therapy for social anxiety disorder: A randomized controlled trial. *Behavioural and Cognitive Psychotherpy, 32*, 1-17.

Herbert, J.D., Rheingold, A.A., & Goldstein. (2002). Brief cognitive behavioral therapy for social anxiety disorder. *Cognitive and Behavioral Practice, 9,* 1-8.

Himaldi, W., Arkowitz, H., Hinton, R., & Perl, J. (1980). Minimal dating and its relationship to other social problems and general adjustment. *Behavior Therapy, 11,* 345-352.

Himaldi, W.G., Cerny, J.A., Barlow, D.W., Cohen, & O'Brien, G.T. (1986). The relationship of marital adjustment to agoraphobia treatment outcome. *Behaviour Research and Therapy, 24,* 107-115.

Hinchliffe, M., Hopper, D., Roberts, F.J., & Vaughan, P.W. (1975). A study of the interaction between depressed patients and their spouses. *British Journal of Psychiatry, 126,* 164-172.

Holmes, J. (1982). Phobia and counterphobia: family aspects of agoraphobia. *Journal of Family Therapy, 4,* 133-152.

Hooley, J.M., Orely, J., & Teasdale, J.D. (1986). Levels of expressed emotion and relapse in depressed patients. *British Journal of Psychiatry, 148,* 642-647.

Hooley, J.M., & Teasdale, J.D. (1989). Predictors of relapse in unipolar depressives: Expressed emotion, marital distress, and perceived criticism. *Journal of Abnormal Psychology, 98,* 229-235.

Horneffer, K.J., & Fincham, F.D. (1995). Construct of attributional style in depression and marital distress. *Journal of Family Psychology, 9,* 186-195.

Holtzworth-Munroe, A., & Smutzler, N., & Stuart, G.L. (1998). Deamnd and withdraw communication among couples experiencing husband violence. *Journal of Consulting and Clinical Psychology, 66,* 731-743.

Jacob. T., & Krahn, G.L. (1988). Marital interactions of alcoholic couples: Comparison with depressed and nondistressed couples. *Journal of Consulting and Clinical Psychology, 56,* 73-79.

Jacob, T., & Leonard, K. (1992). Sequential analysis of marital interactions involving alcoholic, depressed, and nondistressed men. *Jouranal of Abnormal Psychology, 101,* 647-656.

Jacob, T., Ritchey, D., Cvitkovic, J.E., & Blane, H.T. (1981). Communication styles of alcoholic and non-alcoholic families when drinking and not drinking. *Journal of Studies on Alcohol, 42,* 466-482.

Jacobson, N.S. (1984). Marital therapy and the cognitive behavioral treatment of depression. *The Behavior Therapist, 7,* 143-147.

Jacobson, N.S. (1989). The politics of intimacy. *Behavior Therapist, 12,* 29-32.

Jacobsob, N.S. & Gottman, J.M. (1998). *When men batter women: New insights into ending abusive relationships.* New York: Simon & Shuster.

Johnson, S.L., & Jacob, T. (1997). Marital interactions of depressed men and women. *Journal of Consulting and Clinical Psychology, 65* (1), 15-23.

Jones, W.H., & Carpenter, B.N. (1986). Shyness, social behavior, and relationships. *Shyness: Perspectives on research and treatment* (pp. 227-238). New York: Plenum Press.

Jordan, B.K., Marmar, C.R., Fairbank, J.A., & Schlenger, W.E. (1992). Problems in families of male Vietnam veterans with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 60,* 916-926.

Karney, B.R., & Bradbury, T.N. (1997). Neuroticism, marital interaction, and the trajectory of marital satisfaction. *Journal of Personality and Social Psychology, 72,* 1075-1092.

Kessler, R.C., McGonagle, K.A., Zhao, S., Nelson, C.B., Hughes, M., Eshleman, S., Wittchen, H., & Kendler, K.S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archives of General Psychiatry, 51,* 8-19.

Kleiner, L., Marshall, W.L., & Spevack, M. (1987). Training and problem-solving and exposure treatment for agoraphobics with panic attacks. *Journal of Anxiety Disorders, 1,* 219-238.

Kowalik, D.L., & Gotlib, I.H. (1987). Depression and marital interaction: concordance between intent and perception of communication. *Journal of Abnormal Psychology, 43,* 127-134.

Kowalski, R. M., & Cantrell, C.C. (1994). *Individual differences in the propensity to complain.* Unpublished manuscript, Western Carolina University.

Lange, A., & van Dyck, R. (1992). The function of agoraphobia in the marital relationship: a research note. *Acta Psychiatrica Scandinavica, 85,* 89-93.

Leary, M.R., & Dobbins, S.E. (1983). Social anxiety, sexual behavior, and contraceptive use. *Journal of Personality and Social Psychology, 45,* 1347-1354.

Leary, M.R., Knight, P.D., & Johnson, K.A. (1987). Social anxiety and dyadic conversation: a verbal response analysis. *Journal of Social and Clinical Psychology, 5,* 34-50.

Leary, M.R. & Kowalski, R.M. (1995). *Social Anxiety.* New York: The Guilford Press.

Levenson, R.W. & Gottman, J.M. (1985). Physiological and affective predictors of change in relationship satisfaction. *Journal of Personality and Social Psychology, 49,* 85-94.

Liebowitz, M.R. (1987). Social Phobia. *Modern Problems of Pharmacopsychiatry, 22,* 141-173.

Linden, M., Hautzinger, M., & Hoffman, N. (1983). Discriminant analysis of depressive interactions. *Behavior Modification, 7,* 403-422.

Lowenthal, M.F., & Haven, C. (1968). Interaction and adaptation: Intimacy as a critical variable. *American Sociological Review, 33,* 20-33.

Lucas, R.A., & Telch, M.J. (1993, November). *Group versus individual treatment of social phobia.* Paper presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Atlanta.

Markman, H.J., Floyd, F.J., Stanley, S.M., & Storaasli, R. D. (1988). Prevention of Marital Distress. A longitudinal investigation. *Journal of Consulting and Clinical Psychology, 56* (2), 210-217.

Markman, H.J. (1981). Prediction of marital distress: A 5-year follow-up. *Journal of Consulting and Clinical Psychology, 49,* 760-762.

Markowitz, J.S., Weissman, M.M., Ouellette, R., Lish, J.D., & Klerman, G.L. (1989). Quality of life in panic disoder. *Archives of General Psychiatry, 46,* 984-992.

McCroskey, J.C., & Leppard, T. (1975). *The effects of communication apprehension on nonverbal behavior.* Paper presented at the annual convention of the Eastern Communication Association, New York.

McLeod, J.D. (1994). Anxiety Disorders and Marital Quality. *Journal of Abnormal Psychology, 103* (4), 767-776.

McLeod, J.D., Kessler, R.C., & Landis, K.R. (1992). Speed of recovery from major depressive episodes in a community sample of married men and women. *Journal of Abnormal Psychology, 101* (2), 277-286.

McNeil, D.W., Reis, B.J., & Turk, C.L. (1995). Behavioral assessment: self-report, physiology, and overt behavior. In R.G. Heimberg, M.R., Liebowitz, D.A. Hope, & F.R. Schneier (Eds.), *Social phobia* (pp. 202-231). New York: Guilford Press.

Mehta, M. (1990). A comparative study of family-based and patient-based behavioural management in obsessive-compulsive disorder. *British Journal of Psychiatry, 157,* 133-135.

Milton, F., & Hafner, R.J. (1979). The outcome of behavior therapy for agoraphobia in relation to marital adjustment. *Archives of General Psychiatry, 36,* 807-811.

Mitchell, R.E., Billings, A.G., & Moos, R.H. (1982). Social support and well-being: Implications for prevention programs. *Journal of Primary Prevention, 3* (2), 77-98.

Monteiro, W., Marks, I. M., & Raam, E. (1985). Marital adjustment and treatment outcome in agoraphobia. *British Journal of Psychiatry, 146,* 383-390.

Murray, D.C. (1971). Talk, silence, and anxiety. *Psychological Bulletin, 75,* 244-260.

Nace, E.P. (1982). Therapeutic approaches to the alcoholic marriage. *Psychiatric Clinics of North America, 5,* 543-561.

Napier, A.Y. (1978). The rejection-intrusion pattern: A central family dymamic. *Journal of Marriage and Family Counseling, 4,* 5-12.

Natale, M., Entin, E., & Jaffe, J. (1979). Vocal interruptions in dyadic communication as a function of speech and social anxiety. *Journal of Personality and Social Psychology, 37,* 865-878.

National Institute of Mental Health (1985). Clinical Global Impressions Scale. *Psychopharmacology Bulletin, 21,* 839-843.

Nelson, G.M., & Beach, S.R.H. (1990). Sequential interaction in depression: Effects of depressive behavior on spouse aggression. *Behavior Therapy, 21,* 167-182.

Notarius, C.I., & Pellegrini, D.S. (1987). Differences between husband and wives: Implications for understanding marital discord. In K. Hahlweg & M.J. Goldstein (Eds.), *Understanding major mental disorder: The contribution of family interaction research* (pp. 231-249). New York: Family Process Press.

O'Leary, K.D., & Beach, S.R.H. (1990). Marital therapy: a viable treatment for depression and marital discord. *American Journal of Psychiatry, 147,* 183-186.

O'Leary, K.D., Chritstian, J.L., & Mendell, N.R. (1994). A closer look at the link between marital discord and depressive symtomatology. *Journal of Social and Clinical Psychology, 13,* 33-41.

Paykel, E.S., Myers, J.K., Dienelt, M.N., Klerman, G.L., Lindenthal, J.J., & Pepper, M.P. (1969). Life events and depression: a controlled study. *Archives of General Psychiatry, 21,* 753-760.

Paykel, E.S., & Weissman, M.M. (1973). Social adjustment and depression: a longitudinal study. *Archives of General Psychiatry, 28,* 659-663.

Peterson, D.R. (1979). Assessing interpersonal relationships by means of interaction records. *Behavioral Assessment, 1,* 221-236.

Peterson, C.D., Baucom, D.H., Elliot, M.J., & Farr, P.A. (1989). The relationship between sex role identity and marital adjustment. *Sex Roles, 21,* 775-787.

Pilkonis, P.A. (1977) The behavioral consequences of shyness. *Journal of Personality, 45,* 596-611.

Pyke, J., & Roberts, J. (1987). Social support and married agoraphobia women. *Canadian Journal of Psychiatry, 32,* 100-104.

Raush, H.L., Barry, W.A., Hertel, R.K., & Swain, M.E. (1974). *Communication, conflict, and marriage.* San Francisco: Jossey-Bass.

Reich, J., & Thompson, W.D. (1985). Marital status of schizophrenic and alcoholic patients. *Journal of Nervous and Mental Disease, 173,* 499-502.

Riggs, D.S., Hiss, H., & Foa., E.B. (1992). Marital distress and the treatment of obsessive-compulsive disorder. *Behavior Therapy, 23,* 585-597.

Roy, A. (1978). Vulnerability factors and depression in women. *British Journal of Psychiatry, 133,* 106-110.

Rosenfield, S. (1982). Sex roles and societal reaction to mental illness: the labeling of "deviant" deviance. *Journal of Health and Social Behavior, 23,* 18-24.

Rounsaville, B.J., Weissman, M.M., Prusoff, B.A., & Herceg-Baron, R.L. (1979). Marital disputes and treatment outcome in depressed women. *Comprehensive Psychiatry, 20,* 483-490.

Ruscher, S.M., & Gotlib, I.H. (1988). Marital interaction patterns of couples with and without a depressed partner. *Behavior Therapy, 19,* 455-470.

Sanderson, W.C., Rapee, R.M. & Barlow, D.H. (1987, November). *The DSM-III-R revised anxiety disorder categories: Descriptions and patterns of comorbidity.* Paper presented at the annual meeting of the Association of Behavior Therapy, Boston.

Sarason, I.G., & Sarason, B.R. (Eds.). (1984). *Social support: Theory, research and application.* The Hague: Martinus Nijhof.

Schilling, E.A. (1999). Prevention of marital distress: A follow-up investigation of a modified version of the Prevention and Relationship Enhancement Program (PREP). *Dissertation Abstracts International, 60,* 3578.

Schilling, E.A., Baucom, D.H., Burnett, C.K., Allen, E.S., & Ragland, L. (2003). Altering the course of marriage. The effect of PREP communication skills acquisition on couples' risk of becoming maritally distressed. *Journal of Family Psychology, 17* (1), 41-53.

Schmaling, K.B. & Jacobson, N.S. (1990). Marital interaction and depression. *Journal of Abnormal Psychology, 99* (3), 229-236.

Schneier, F.R., Johnson, J., Hornig, C.D., Liebowitz, M.R., & Weissman, M.M. (1992). Social phobia: Comorbidity and morbidity in an epidemiological sample. *Archives of General Psychiatry, 49,* 282-287.

Scholing, A., & Emmelkamp, P.M.G. (1993). Exposure with and without cognitive therapy for generalized social phobia: Effects of individual and group treatment. *Behaviour Research and Therapy, 31,* 667-681.

Sher, T.G. & Baucom, D.H., (1993). Marital communication: Differences among maritally distressed, depressed, and nondistressed-nondepressed couples. *Journal of Family Psychology, 7* (1), 148-153.

Solymon, L., Ledwidge, B., & Solymon, C. (1986). Delineating social phobia. *British Journal of Psychiatry, 149,* 464-470.

Spainer, G.B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38,* 15-28.

Steinglass, P. (1976). Experimenting with treatment approached to alcoholism. Family Process, 15, 97-123.

Turner, S.M., Beidel, D.C., Dancu, C.V., & Stanley, M.A. (1989). An empirically derived inventory to measure social fears and anxiety: The Social Phobia and Anxiety Inventory. *Psychological Assessment, 1,* 35-40.

Turner, S.M., Stanley, M.A., Beidel, D.C., & Bond, L. (1989). The Social Phobia and Anxiety Inventory: Construct validity. *Journal of Psychopathology and Behavioral Assessment, 11,* 221-234.

Twentyman, C.T., & McFall, R.M. (1975). Behavioral training of social skills in shy males. *Journal of Consulting and Clinical Psychology, 43,* 384-395.

Vitaliano, P.P., Katon, W., Russo, J., Maiuro, R.D., Anderson, K., & Jones, M. (1987). Coping as an index of illness behavior in panic disorder. *The Journal of Nervous and Mental Disease, 175,* 78-84.

Vollrath, M., & Angst, J. (1993). Coping and illness behavior among young adults with panic. *Journal of Consulting and Clinical Psychology, 181,* 303-308.

Wallston, B.S., Alagna, S.W., DeVellis, B.M., & DeVellis, R.F. (1983). Social support and physical health. *Health Psychology, 2,* 367-391.

Watzalawick, P., Beavin, J.H., & Jackson, D.D. (1967). *Pragmatics of human communication: A study of interactional patterns, pathologies, and paradoxes.* New York: Norton.

Weiss, R.L., & Aved, B.M. (1987). Marital satisfaction and depression as predictors of physical health status. *Journal of Consulting and Clinical Psychology, 46,* 1379-1384).

Weissman, M.M. (1987). Advances in psychiatric epidemiology: rates and risk for major depression. *American Journal of Public Health, 77,* 445-451.

Whisman, M.A. (1999). Marital dissatisfaction and psychiatric disorders. Results from the national comorbidity survey. *Journal of Abnormal Psychology, 108,* 701-706.

Whisman, M.A. & Bruce, M.L. (1999). Marital dissatisfaction and incidence of major depressive episode in a community sample. *Journal of Abnormal Psychology, 108,* 674-678.

Whisman, M.A. (2000). Psychiatric disorders and dissatisfaction with social relationships. Does type of relationship matter? *Journal of Abnormal Psychology, 109,* 803-808.

Wittchen, H.U., Fuetsch, M., Sonntag, H., Muller, N., & Liebowitz, M. (2000). Disability and quality of life in pure and comorbid social phobia. Findings from a controlled study. *European Psychiatry, 15,* 46-58.

Wlalzo, Z., Schroeder-Hartwig, K., & Hand, I. (1990). Exposure in vivo versus social skills training for social phobia: Long-term outcome and differential effects. *Behavior Research and Therapy, 28,* 181-193.

Yarrow, M.R., Clausen, J.A., & Robbins, P.R. (1955). The social meaning of mental illness. *Journal of Social Issues, 4,* 33-48.

Yarrow, M.R., Schwartz, C.G., Murphy, H.S., & Deasy, L.C. (1955). The psychological meaning of mental illness in the family. *Journal of Social Issues, 4,* 12-24.

Zimbardo, P.G. (1977). *Shyness: What it is and what to do about it.* New York: Jove.

Zweben, A. (1986). Problem drinking and marital adjustment. *Journal of Studies on Alcohol, 47,* 167-173.

APPENDIX A: BECK DEPRESSION INVENTORY, 2ND EDITION (BDI-II)

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
    - 0 I do not feel sad.
    - 1 I feel sad much of the time.
    - 2 I am sad all the time.
    - 3 I am so sad or unhappy that I can't stand it.

2. Pessimism
    - 0 I am not discourages about my future.
    - 1 I feel more discouraged about my future than I used to be.
    - 2 I do not expect things to work out for me.
    - 3 I feel my future is hopeless and will only get worse.

3. Past Failure
    - 0 I do not feel like a failure.
    - 1 I have failed more than I should have.
    - 2 As I look back, I see a lot of failures.
    - 3 I feel I am a total failure as a person.

4. Loss of Pleasure
    - 0 I get as much pleasure as I ever did from the things I enjoy.
    - 1 I don't enjoy things as much as I used to.
    - 2 I get very little pleasure from the things I used to enjoy.
    - 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
    - 0 I don't feel particularly guilty.
    - 1 I feel guilty over many things I have done or should have done.
    - 2 I feel quite guilty most of the time.
    - 3 I feel guilty all of the time.

6. Punishment Feelings
    0 I don't feel I am being punished.
    1 I feel I may be punished.
    2 I expect to be punished.
    3 I feel I am being punished.

7. Self-Dislike
    0 I feel the same about myself as ever.
    1 I have lost confidence in myself.
    2 I am disappointed in myself.
    3 I dislike myself.

8. Self-Criticalness
    0 I don't criticize or blame myself more than usual.
    1 I am more critical of myself than I used to be.
    2 I criticize myself for all my faults.
    3 I blame myself for everything bad that happens.

9. Suicidal thoughts or Wishes
    0 I don't have any thoughts of killing myself.
    1 I have thoughts of killing myself, but I would not carry them out.
    2 I would like to kill myself.
    3 I would kill myself if I had the chance.

10. Crying
    0 I don't cry anymore than I use to.
    1 I cry more than I used to.
    2 I cry over every little thing.
    3 I feel like crying, but I can't.

11. Agitation
    0 I am no more restless or wound up than usual.
    1 I feel more restless or wound up than usual.
    2 I am so restless or agitated that it's hard to stay still.
    3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest
    0 I have not lost interest in other people or activities.
    1 I am less interested in other people or things than before.
    2 I have lost most of my interest in other people or things.
    3 It's hard to get interested in anything.

13. Indecisiveness
    0 I make decisions about as well as ever.
    1 I find it more difficult to make decisions than usual.
    2 I have much greater difficulty in making decisions than I used to.
    3 I have trouble making any decisions.

14. Worthlessness
    0 I do not feel I am worthless.
    1 I don't consider myself as worthwhile and useful as I used to.
    2 I feel more worthless as compared to other people.
    3 I feel utterly worthless.

15. Loss of energy
    0 I have as much energy as ever.
    1 I have les energy than I used to have.
    2 I don't have enough energy to do very much.
    3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern
    0 I have not experienced any change in my sleeping pattern.
    1a I sleep somewhat more than usual.
    1b I sleep somewhat less than usual.
    2a I sleep a lot more than usual.
    2b I sleep a lot less than usual.
    3a I sleep most of the day.
    3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritablility
    0 I am no more irritable than usual.
    1 I am more irritable than usual.
    2 I am much more irritable than usual.
    3 I am irritable all the time.

18. Changes in Appetite
    0 I have not experienced any change in my appetite.
    1a My appetite is somewhat less than usual.
    1b My appetite is somewhat greater than usual.
    2a My appetite is much greater than usual.
    3a I have no appetite at all.
    3b I crave food all the time.

19. Concentration Difficulty
    0 I can concentrate as well as ever.
    1 I can't concentrate as well as usual.
    2 It's hard to keep my mind on anything for very long.
    3 I find I can't concentrate on anything.

20. Tiredness or Fatigue
    0 I am no more tired or fatigued than usual.
    1 I get more tired or fatigued more easily than usual.
    2 I am too tired or fatigued to do a lot of the things I used to do.
    3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex
    0 I have not noticed any recent change in my interest in sex.
    1 I am less interested in sex than I used to be.
    2 I am much less interested in sex now.
    3 I have lost interest in sex completely.

APPENDIX B: SOCIAL PHOBIA AND ANXIETY INVENTORY (SPAI)

Below is a list of behaviors that may or may not be relevant for you. Based on your personal experience, please indicate how frequently you experience these feelings and thoughts in social situations. A social situation is defined as a gathering of two or more people. For example: A meeting; a lecture; a party; bar or restaurant; conversing with one other person or group of people, etc. Feeling anxious is a measure of how tense, nervous, or uncomfortable you are during social encounters. Please use the scale listed below and circle the number which best reflects hoe frequently you experience these responses.

Never	**Very Infrequent**	**Infrequent**	**Sometimes**	**Frequent**	**Very Frequent**	**Always**
1	**2**	**3**	**4**	**5**	**6**	**7**

1. I feel anxious when entering social situations where there is a small group. 1 2 3 4 5 6 7

2. I feel anxious when entering social situations where there is a large group. 1 2 3 4 5 6 7

3. I feel anxious when I am in a social situation and I become the center of attention. 1 2 3 4 5 6 7

4. I feel anxious when I am in a social situation and I am expected to engage in some activity. 1 2 3 4 5 6 7

5. I feel anxious when making a speech in front of an audience. 1 2 3 4 5 6 7

6. I feel anxious when speaking in a small informal meeting. 1 2 3 4 5 6 7

7. I feel so anxious about attending social gatherings that I avoid these situations. 1 2 3 4 5 6 7

8. I feel so anxious in social situations that I leave the social gathering. 1 2 3 4 5 6 7

9. I feel anxious when in a small gathering with:

    a. Strangers 1 2 3 4 5 6 7

    b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

10. I feel anxious when in a large gathering with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

11. I feel anxious when in a bar or restaurant with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

12. I feel anxious and I do not know what to do when in a new situation with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

13. I feel anxious and I do not know what to do when in a situation involving confrontation with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

14. I feel anxious and I do not know what to do when in an embarrassing situation with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

15. I feel anxious when discussing intimate feelings with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

16. I feel anxious when stating an opinion to:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

17. I feel anxious when talking about business with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

18. I feel anxious when approaching and/or initiating a conversation with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

19. I feel anxious when having to interact for longer than a few minutes with:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

20. I feel anxious when drinking (any type of beverage) and/or eating in front of:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

21. I feel anxious when writing or typing in front of:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

22. I feel anxious when speaking in front of:

a. Strangers 1 2 3 4 5 6 7

b. Authority Figures 1 2 3 4 5 6 7

c. Opposite sex 1 2 3 4 5 6 7

d. People in general 1 2 3 4 5 6 7

23. I feel anxious when being criticized or rejected by:

    a. Strangers 1 2 3 4 5 6 7

    b. Authority Figures 1 2 3 4 5 6 7

    c. Opposite sex 1 2 3 4 5 6 7

    d. People in general 1 2 3 4 5 6 7

24. I attempt to avoid social situations where there are:

    a. Strangers 1 2 3 4 5 6 7

    b. Authority Figures 1 2 3 4 5 6 7

    c. Opposite sex 1 2 3 4 5 6 7

    d. People in general 1 2 3 4 5 6 7

25. I leave social situations where there are:

    a. Strangers 1 2 3 4 5 6 7

    b. Authority Figures 1 2 3 4 5 6 7

    c. Opposite sex 1 2 3 4 5 6 7

    d. People in general 1 2 3 4 5 6 7

26. Before entering a social situation I think about all the things that can go wrong. The types of thoughts I experience are:

    a. Will I be dressed properly? 1 2 3 4 5 6 7

    b. I will probably make a mistake and look foolish. 1 2 3 4 5 6 7

    c. What if no one speaks to me? 1 2 3 4 5 6 7

    d. If there is a lag in the conversation what can I talk about? 1 2 3 4 5 6 7

27. I feel anxious before entering a social situation. 1 2 3 4 5 6 7

28. My voice leaves me or changes when I am talking in a social situation. 1 2 3 4 5 6 7

29. I am not likely to speak to people until they speak to me. 1 2 3 4 5 6 7

30. I experience troublesome thoughts when I am in a social setting. For example:

    a. I wish I could leave and avoid the whole situation. 1 2 3 4 5 6 7

    b. If I mess up again I will really lose my confidence. 1 2 3 4 5 6 7

    c. What kind of impression am I making? 1 2 3 4 5 6 7

    d. Whatever I say it will probably sound stupid. 1 2 3 4 5 6 7

31. I experience the following prior to entering a social situation:

    a. Sweating 1 2 3 4 5 6 7

    b. Blushing 1 2 3 4 5 6 7

    c. Shaking 1 2 3 4 5 6 7

    d. Frequent urge to urinate 1 2 3 4 5 6 7

    e. Heart palpitations 1 2 3 4 5 6 7

32. I experience the following in a social situation:

    a. Sweating 1 2 3 4 5 6 7

    b. Blushing 1 2 3 4 5 6 7

    c. Shaking 1 2 3 4 5 6 7

    d. Frequent urge to urinate 1 2 3 4 5 6 7

    e. Heart palpitations 1 2 3 4 5 6 7

33. I feel anxious when I am home alone. 1 2 3 4 5 6 7

34. I feel anxious when I am in a strange place. 1 2 3 4 5 6 7

35. I feel anxious when I am on any form of public transportation (i.e., bus, train, airplane). 1 2 3 4 5 6 7

36. I feel anxious when crossing streets. 1 2 3 4 5 6 7

37. I feel anxious when I am in crowed places (i.e., stores, church, movies, restaurants, etc.). 1 2 3 4 5 6 7

38. Being in large open spaces makes me feel anxious. 1 2 3 4 5 6 7

39. I feel anxious when I am in enclosed places (elevators, tunnels, etc.). 1 2 3 4 5 6 7

40. Being in high places make me feel anxious (i.e., tall buildings). 1 2 3 4 5 6 7

41. I feel anxious when waiting in a long line. 1 2 3 4 5 6 7

42. There are times when I feel like I have to hold on to things because I am afraid I will fall. 1 2 3 4 5 6 7

43. When I leave home and go to various public places, I go with a family member or friend. 1 2 3 4 5 6 7

44. I feel anxious when riding in a car. 1 2 3 4 5 6 7

45. There are certain places I do not go because I may feel trapped. 1 2 3 4 5 6 7

APPENDIX C: DYADIC ADJUSTEMENT SCALE (DAS)

Directions: Most persons have disagreements in their relationships. Circle the number below that indicates the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Always Disagree	Almost Always Disagree
1. Handling family finances	5	4	3	2	1	0
2. Matters of recreation	5	4	3	2	1	0
3. Religious matters	5	4	3	2	1	0
4. Demonstrations of affection	5	4	3	2	1	0
5. Friends	5	4	3	2	1	0
6. Sex relations	5	4	3	2	1	0
7. Conventionality (correct or proper behavior)	5	4	3	2	1	0
8. Philosophy of life	5	4	3	2	1	0
9. Ways of dealing with parents or in-laws	5	4	3	2	1	0
10. Aims, goals, and things believed important	5	4	3	2	1	0
11. Amount of time spent together	5	4	3	2	1	0
12. Making major decisions	5	4	3	2	1	0
13. Household tasks	5	4	3	2	1	0
14. Leisure time and interests and activities	5	4	3	2	1	0
15. Career decisions	5	4	3	2	1	0

	All the time	Most of the time	More often than not	Occasionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation or terminating your relationship?	0	1	2	3	4	5
17. How often do you or your mate leave the house after a fight?	0	1	2	3	4	5
18. In general, how often do you think that things between you and your partner are going well?	5	4	3	2	1	0
19. Do you confide in your mate?	5	4	3	2	1	0
20. Do you ever regret that you married? (or lived together?)	0	1	2	3	4	5
21. How often do you and your partner quarrel?	0	1	2	3	4	5
22. How often do you and your mate "get on each other's nerves?"	0	1	2	3	4	5

	Every Day	Almost Every Day	Occasionally	Rarely	Never
23. Do you kiss your mate?	4	3	2	1	0

	All of them	Most of them	Some of them	Very few of them	None of them
24. Do you and your mate engage in outside interests together?	4	3	2	1	0

How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
25. Have a stimulating exchange of ideas	0	1	2	3	4	5
26. Laugh together	0	1	2	3	4	5
27. Calmly discuss something	0	1	2	3	4	5
28. Work together on a project	0	1	2	3	4	5

These are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Circle YES or NO)

	YES	NO	
29.	0	1	Being too tired for sex.
30.	0	1	Not showing love

31. The dots on the following line represent different degrees of happiness in your relationship. The middle point "happy," represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.

0	1	2	3	4	5	6
Extremely Unhappy	**Fairly Unhappy**	**A little Unhappy**	**Happy**	**Very Happy**	**Extremely Happy**	**Perfect**

32. Which of the following statements best describes how you feel about the future of your relationship (Circle one)

5 I want desperately for my relationship to succeed, and <u>would go to almost any length</u> to see that it does.

4 I want very much for my relationship to succeed, and <u>will do all I can</u> to see that it does.

3 I want very much for my relationship to succeed, and <u>will do my fair share</u> to see that it does.

2 It would be nice if my relationship succeeded, but <u>I can't do much more than I am doing now</u> to help it succeed.

1 It would be nice if it succeeded, but <u>I refuse to do any more than I am doing now</u> to help it succeed.

0 My relationship can never succeed, and <u>there is no more that I can do</u> to keep the relationship going.

APPENDIX D: COMMUNICATION PATTERNS QUESTIONNAIRE, SHORT FORM (CPQSF)

Directions: We are interested in how you and your partner deal with problems in your relationship. Please rate each item on a scale of 1 (= very unlikely) to 9 (= very likely). Circle the appropriate number.

A. When some problem in the relationship arises:	**Very Unlikely**								**Very Likely**
1. Both you and your partner avoid discussing the problem.	1	2	3	4	5	6	7	8	9
2. Both you and your partner try to discuss the problem.	1	2	3	4	5	6	7	8	9
3. (a) You try to start a discussion while your partner tries to avoid a discussion.	1	2	3	4	5	6	7	8	9
(b) Your partner tries to start a discussion while you try to avoid a discussion.	1	2	3	4	5	6	7	8	9

B. During a discussion of a relationship problem:									
4. Both you and your partner express your feelings to each other.	1	2	3	4	5	6	7	8	9
5. Both you and your partner blame, accuse, and criticize each other.	1	2	3	4	5	6	7	8	9
6. Both you and your partner suggest possible solutions and compromises.	1	2	3	4	5	6	7	8	9
7. (a) You pressure, nag, or demand while your partner withdraws, becomes silent, or refuses to discuss the matter further.	1	2	3	4	5	6	7	8	9
(b) Your partner pressures, nags, or demands while you withdraw, become silent, or refuse to discuss the matter further.	1	2	3	4	5	6	7	8	9
8. (a) You criticize while your partner defends him/herself.	1	2	3	4	5	6	7	8	9
(b) Your partner criticizes while you try to defend yourself.	1	2	3	4	5	6	7	8	9

VITA

KIRCIA MARIE CASTEN

EDUCATION:
Drexel University (formerly MCP Hahnemann University), Philadelphia, PA. Master of Arts in Clinical Psychology, May 1999
Drexel University, Philadelphia, PA. Doctor of Philosophy in Clinical Psychology, March 2004
University of Delaware, Newark, DE. Bachelor of Arts in Psychology, Summa Cum Laude, May 1995

PROFESSIONAL EXPERIENCE:
October 2003 – March 2004, **Staff Clinician, Community Treatment Solutions,** Woodbury, NJ.
September 2002 - August 2003, **Psychology Fellow, Friends Hospital,** Philadelphia, PA.
September 2001-August 2002, **Psychology Intern, Friends Hospital,** Philadelphia, PA.
December 1999 – August 2000, **Adjunct Instructor, Department of Psychology, Sociology, and Anthropology, Drexel University,** Philadelphia, PA.
September 1998 – August 2000, **Extern, Penn Council for Relationships,** Department of Psychiatry, Thomas Jefferson University, Philadelphia, PA
August 1997 – August 1998, **Psychological Evaluator and Group Therapist, Children's Hospital of Philadelphia, Children's Seashore House,** ADHD/School Problems Program, Philadelphia, PA.
December 1998 – March 2000, **Staff Therapist, Marriage and Family Resource Center,** Newtown, PA.
September 1996 – August 2002, **Research Associate and Staff Therapist, Social Anxiety Program, MCP Hahnemann University,** Philadelphia, PA
September 1996 – January 2000, **Therapeutic Staff Support**, **Central Montgomery Mental Health/ Mental Retardation Center**, Norristown, PA
August 1995 - August 1996, **Behavior Therapist/Team Leader**, **Bancroft**, Haddonfield, NJ.
October 1994 - June 1995, **Recreational/Instructional Aide, Delaware Autistic Program**, Newark, DE.
September 1993 - August 1995, **Research Assistant**, **University of Delaware**, Newark, DE.

HONORS AND DISTINCTIONS:
Phi Beta Kappa National Honor Society, *University of Delaware*, 1995; **Phi Kappa Phi National Honor Society**, *University of Delaware* 1995; **Psi Chi National Honor Society in Psychology**, *University of Delaware* 1995; **Golden Key National Honor Society**, *University of Delaware* 1995; **The Psychology Faculty Award**, *University of Delaware*, 1995

PROFESSIONAL MEMBERSHIPS:
Association for the Advancement in Behavioral Therapy, Student Member
American Psychological Association, Student Member

PRESENTATIONS:
Maffie, K.M., Herbert J.D., Rheingold, A.A., Dalrymple, K., Goldstein, S.G., Greenberg, R., Darze, F., Harwell, V., & Sharp, I. (1999, November). Cognition and Social Skills in Adult Social Phobia. Poster session presented at annual meeting of the Association for Advancement of Behavior Therapy, Toronto, Canada.

Herbert, J.D., Goldstein, S.G., Rheingold, A.A., Christian, R., Hartfield, C.R., ***Maffie, K.M.***, Brandsma, L., & Hope, D. (1998, November). Brief Treatment for Social Phobia. Poster session presented at annual meeting of the Association for Advancement of Behavior Therapy, Washington, DC.

Hartfield, C.R., Herbert, J.D., Goldstein, S.G., Kadish, D.A., Nordman, J.E., & ***Maffie, K.M.*** (1997, November). Self-Efficacy in Social Phobia. Poster session presented at annual meeting of the Association for Advancement of Behavior Therapy, New York.