

## ABSTRACT

Title of Thesis: THE RELATIONS AMONG DIFFERING FORMS OF  
PSYCHOPATHOLOGY SYMPTOMS, COUPLE  
COMMUNICATION, AND RELATIONSHIP SATISFACTION

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This study investigated the degree to which forms of psychopathology symptoms -- psychotic, mood/anxiety-based and trauma-based -- are associated with relationship satisfaction, the degrees to which positive and negative communication are related to satisfaction, and whether communication mediates the relation between psychopathology and satisfaction. The sample was 83 couples who sought therapy at a university-based clinic. The findings indicated no relation between psychopathology symptoms and relationship satisfaction. There was an association between females' psychoticism symptoms and males' negative communication, as well as between females' psychoticism and mood/anxiety symptoms and males' positive communication. More positive communication was associated with greater relationship satisfaction for both partners, and males' negative communication was associated with lower satisfaction for female partners. Communication was not tested as a mediator between symptoms and satisfaction because no association between psychopathology symptoms and relationship satisfaction was found.

THE RELATIONS AMONG DIFFERING FORMS OF PSYCHOPATHOLOGY  
SYMPTOMS, COUPLE COMMUNICATION, AND RELATIONSHIP  
SATISFACTION

By

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## CHAPTER 1: INTRODUCTION

### Statement of Problem

Although considerable research has indicated a consistent association between individuals' psychopathology and their intimate relationship problems, there is limited research regarding whether different types of psychiatric disorders have different impacts on relationships. Knowledge about such an association between individual and relationship functioning is important because treatments that focus on one of these commonly co-occurring areas without taking into account the other may be inappropriate and ineffective. Furthermore, little is yet known about the processes through which individual psychopathology and couple and family relationship problems are linked. Identifying mediators of the relation between individual and relationship functioning is crucial not only for our theoretical understanding of the development of problems in both areas, but also for the design and implementation of effective treatments. Consequently, the present study will investigate the associations of different types of psychopathology symptoms, overall reported relationship satisfaction, and a possible mediating factor of partners' communication behavior.

Recent studies regarding relationships between people with mental illnesses and their families find that such relationships are often severely strained. (Burke, 2003; Heene, Buysse, & Van Oost, 2005; Heru, Ryan, & Madrid, 2005; Hinrichsen & Emery, 2005; Hooley, Richters, Weintraub, & Neale, 1987; Lukens, Thorning, & Lohrer, 2004; Ostman, 2004; Peisah, Brodaty, Luscombe, & Anstey, 2004; Teichman, Bar-El, Shor, & Elizur, 2003; Vaddadi, Gilleard, & Fryer, 2002; Whisman, Uebelacker, & Weinstock, 2004; Zlotnick, Kohn, Keitner, & Della Grotta, 2000). Furthermore, overall quality of

life for people living with and caring for people with mental illnesses is also impaired. Caregivers report suffering from verbal and physical abuse, challenges in creating and maintaining their own intimate relationships, and development of symptoms of their own mental illnesses, as a result of interactions with their family members who have a mental illness (Burke, 2003; Hinrichsen & Emery, 2005; Lukens et al., 2004; Ostman, 2004; Peisah et al., 2004; Vaddadi et al., 2002).

Additionally, the people who are suffering from the mental illness report low satisfaction with all aspects of their lives regarding interpersonal relationships – spanning intimate relationships, relationships with relatives, relationships with friends, and relationships with roommates (Tempier, Caron, Mercier, & Leoffre, 1998). As such, the link between relationship satisfaction and psychopathology symptoms appears to point in two directions – the family members of people with mental illness are suffering strained relations due to their relationship with someone with a mental illness, and the person with the mental illness is reporting low satisfaction with interpersonal relationships as well.

Overall levels of relationship satisfaction as affected by the severity and type of psychopathology symptoms is one area in which there is a dearth of relevant literature. Studies reported in the literature tend to focus on a specific set of symptoms and the resulting relationship strains, or on the effects of mental illness in general on a family or for the person with the mental illness (Burke, 2003; Heene et al., 2005; Heru et al., 2005; Hinrichsen & Emery, 2005; Hooley et al., 1987; Lukens et al., 2004; Ostman, 2004; Peisah et al., 2004; Teichman et al., 2003; Tempier et al., 1998; Vaddadi et al., 2002; Whisman et al., 2004; Zlotnick et al., 2000). Furthermore, many studies focus on caregiver or family effects rather than the effects of the psychopathology on intimate

partner relationships. This study is unique in its attempt to focus on partner relationships specifically and to consider the spectrum of psychopathology symptoms, ranging from anxiety and depression to hallucinations and delusions, and also trauma symptoms, such as dissociation and defensive avoidance, as they relate to relationship satisfaction.

One aspect of relationships that has been clearly linked to relationship satisfaction is that of communication. Both positive and negative communication interactions have been studied intensively, and findings typically reveal that couples who display frequent negative interactions, including criticism, avoidance and defensiveness, are more likely to experience strained relationships (Christensen & Shenk, 1991; Gottman & Krokoff, 1989; Gottman & Levensohn, 1992; Johnson & Bradbury, 1999; Vanzetti, Notarius, & NeeSmith, 1992). In fact a “balance theory” that has been suggested by Gottman and Levenson posits that for relationships to remain solvent a high ratio of positive to negative interactions is necessary.

The reasons why people with mental illness and their families have strained relations have not been clearly determined, although a number of authors (Brummet et al., 2000; Casbon, Burns, Bradbury & Joiner, 2005; Christensen & Shenk, 1991; Hooley, 2004; Koenig, Sach-Ericsson, & Miklowitz, 1997; Marchand & Hock, 2003; Teichman et al., 2003; Tompson, Rea, Goldstein, Miklowitz, & Weisman, 2000) have hypothesized that communication may be related to the link between relationship satisfaction and mental illness. Prior research findings provide some support for this idea, although more research clearly is needed. Studies have found that communication is frequently strained and highly negative in families in which psychopathology is present (Brummet et al., 2000; Casbon et al., 2005; Christensen & Shenk, 1991; Hooley, 2004; Lukens et al.,

2004; Marchand & Hock, 2003; Teichman et al., 2003; Thompson et al., 2000 ). In fact, many interventions for families in which a member has psychopathology symptoms include training in communication skills and problem-solving as a hallmark of treatment. These studies all find a clear link between improved family communication and improved outcomes for family satisfaction (Hooley, 2004; Lukens et al., 2004; Thompson et al., 2000).

In order to improve relationship outcomes for people with mental illnesses, determinations must be made regarding more specific details of the interaction between psychopathology symptoms, communication, and relationship satisfaction. The components all seem to interplay on some level; however, their interrelationships have yet to be studied adequately in terms of differing severity of psychopathology symptoms, both negative and positive partner communication, and the partners' levels of relationship satisfaction. Without identification of the precise interactions of all of these connected characteristics, treatment protocols can not be designed appropriately, and people with mental illnesses and their loved ones will continue to suffer the undue additional burden of relationship distress in conjunction with the already heavy burden of managing their challenging psychopathology symptoms.

#### Purpose

Links between psychopathology symptoms and relationship satisfaction have been made in various studies, as have links between communication behaviors and relationship satisfaction and psychopathology symptoms and communication. Gaps remain, however, in literature considering the range of degrees of psychopathology symptoms and their varying impacts on satisfaction as mediated by positive and negative communication

behaviors. As such, this study will investigate the association between degrees of two different types of psychopathology symptoms, partners' communication behavior, and their overall reported relationship satisfaction.

Consequently, using data concerning the individual and relationship functioning of a sample of couples who sought therapy for relationship problems, this study aims to:

- determine the degrees to which different types of psychopathology symptoms of one member of the couple are associated with the degrees to which he or she communicates in constructive and destructive ways with a partner when discussing a relationship issue
- test whether the relationship between psychopathology symptoms and couple communication differs according to the type (psychotic, mood/anxiety or trauma-based) of the psychopathology symptoms
- test the association between partners' general relationship satisfaction and their constructive and destructive communication when discussing a relationship issue
- provide information about the degree to which psychopathology symptoms account for variance in the partners' relationship satisfaction over and above the variance in satisfaction accounted for by partners' communication behavior

By determining the links among various forms of psychopathology symptoms, both positive and negative communication within a couple in which symptoms are present, and partners' overall relationship satisfaction, a heightened understanding of the impact of each of these variables on one another will be achieved. By improving knowledge regarding these interactions, treatment protocols can be designed and shaped to better

assist couples who are dealing with the challenges of mental illness and its impact on their relationship.

People with psychotic forms of mental illness in their lives may require different relationship-level interventions than those with more mild forms of symptoms. Precisely tailored protocols, based on specific symptom clusters or communication behaviors may be better designed based on research findings. Furthermore, precise communication behaviors and their impact will ideally be targeted so that treatment protocols for couples who are struggling to communicate well and whose skills are further challenged due to the presence of psychopathology symptoms in a partner, can be fine-tuned and optimally effective.

#### Theoretical Base for the Study

The most widely used theoretical model of family stress and coping is the ABC-X model originally developed by Hill (1949) and further refined and applied by a variety of family researchers (Boss, 1988; Epstein & Schlesinger, 2000; Ingoldsby, Smith, & Miller, 2004; McCubbin & McCubbin, 1989). In this model, “A” represents stressful events that a family experiences from either internal or external sources, “B” is the resources that the family has available to help them cope with the stressors, and “C” is the family’s perspective on the event – how they interpret and give meaning to its occurrence. The family’s ultimate reaction to the stress is the “X” component, the potential crisis state of disequilibrium and deterioration that occurs if the family can not properly enact resources effectively to deal with the stressors (Ingoldsby et al., 2004).

Consistent with family stress theory, this study is based on a hypothesis that partners’ psychopathology symptoms may serve as a stressor (“A”) for a couple or family. The

couple's ability to clearly communicate with each other despite the challenges in communication that are posed by the psychopathology symptoms are the family resources, or "B" in the ABC-X model. The couple's perception of the stressor – in this case the psychopathology symptoms - serves as the "C" component of the model. Finally, the reaction to the psychopathology – whether or not it is viewed as something that disrupts couple functioning, is the "X" factor in the model, which is measured via reported overall relationship satisfaction.

This study further hypothesizes that severity of symptoms ("A") may affect overall relationship satisfaction. It is hypothesized that partners with more severe forms of symptoms will be less satisfied with their marriages than those with less severe forms of symptoms. As such, "B" - or family resources- in this case the ability to communicate effectively despite the presence of psychopathology symptoms- is a pivotal piece of this model. The communication resources ("B") may be less impaired by the symptoms ("A") if the symptoms are less severe. As such, the potential crisis or "X" that may occur is largely based on the ability of the communication resources to remain intact. If they are strained by severe stressors, then it is more likely that relationship satisfaction will be impacted negatively, contributing to the occurrence of a crisis ("X") in the relationship. As such, "B" serves as a mediator between "A" and "X".

Furthermore, while communication serves as the mediator in this study within a family stress theory framework, communication interactions are broken down into the categories of positive and negative communication. The couple's interpretation of their circumstances or the "C" factor in the model serves as the final predictor of the "X" outcome. Couples that are able to effectively cope with the stressful symptoms and to

employ their resource of communication to help deal with the stressor are more likely to perceive the symptoms as something with which they can deal and that they are able to confront effectively. As such, their perception (“C”) will be more positive and will result in more positive and effective communication. In couples that are having a hard time dealing with the symptoms and view them and/or their ability to cope with them via communication in a negative light, it is more likely that their perception will be less effective and fueled with anger and contempt. The less equipped a couple feels in working through a problem, the more likely that negative exchanges and communication will occur. As such, the negative perceptual responses of these couples will contribute to negative communication and relationship distress. This study will examine communication resources of couples who are experiencing the stressors of psychopathology but will not investigate the partners’ perceptions or “C” component of the ABC-X model.

Overall, family stress theory posits that people’s coping with life events or stressors depends not only on the severity and challenges involved in the stressors themselves, but also on the couple or family’s ability to cope with the stressors that they experience, through appropriate and effective resources and positive perceptions. This study aims to determine if varying degrees of psychopathology symptoms are associated with variation in couples’ relationship satisfaction, and if this association is mediated by partner interactions in terms of both positive and negative communication.



## Literature Review

### *Introduction*

For the purposes of this study, various forms of mental illness have been divided into three categories – psychotic, mood/anxiety, and trauma-based psychopathology and symptoms. These categories were devised by this researcher but are based on major categories of disorders identified in the diagnostic manual of the American Psychiatric Association (DSM-IV; American Psychiatric Association, 1994).

Psychotic forms of mental illness are defined in this study as disorders with symptoms that are statistically and qualitatively highly unusual and involve marked distortions in individuals' basic information processing, not experienced by the average normally functioning person. For example, the severe perceptual distortions of hallucinations and severe distortions of logic involved in delusions that frequently accompany schizophrenia and schizoaffective disorder categorize these symptoms and disorders, for the purpose of this study, as psychotic. Psychotic mental illnesses are also commonly grouped under the umbrella term of "major mental illness."

Mood/anxiety disorders, for the purpose of this study, refer to forms of psychopathology that are more commonly occurring forms of psychopathology such as anxiety, depression, somatization, and obsessive-compulsive behavior. The symptoms involved in these disorders are often defined by the individual's tendency towards emotional reactivity. These symptoms vary from the aforementioned psychotic symptoms in that they are often experienced on some level by people within the mainstream population; yet, they do not always severely impair functioning nor do they always persist long-term. When the symptoms remain present and affect daily functioning, they

are diagnosable as a form of mental illness. When the symptoms are brief and people are able to function in a fairly normal manner despite their presence, the symptoms are viewed as parts of the ups and downs of life, and do not require treatment through therapy or medication.

Trauma-based symptoms are delineated from other symptoms in this study in that they have been found to develop as a result of a specific highly stressful life event and comprise aspects of a syndrome referred to as post traumatic stress disorder (PTSD). In this study, defensive avoidance and dissociation are specific forms of trauma symptoms that are considered, based on their tendencies to remove the individually emotionally, if not physically, from significant others and thus potentially interfere with intimate relationships. PTSD symptoms commonly occur due to an individual directly or vicariously experiencing a life-threatening experience; for example witnessing or being the victim of violence or a natural disaster. Although PTSD commonly has a major anxiety component to it, in the present study the impact of defensive avoidance and dissociation trauma symptoms on couple relationships was examined separately from mood/anxiety disorder symptoms due to their tendency to disengage the individuals from those around him or her. Even though depression and some forms of anxiety also can contribute to an individual being preoccupied and disengaged, the form of emotional cutoff common in trauma responses seems sufficiently different to be examined separately in a study of the relation between psychopathology and relationship satisfaction.

## *Psychopathology and Relationship Satisfaction*

### *Psychotic Mental Illness and Relationship Satisfaction*

According to findings of a study by Tempier et al. (1998), the presence of psychopathology symptoms in an individual may result in a myriad of challenges on many levels – infringing largely on day to day living including financial, emotional and social aspects of one’s life. In their study, Tempier et al. compared the subjective quality of life (SQOL) of 59 mentally ill patients in outlying cities near Northwest Quebec, Canada, who were recipients of local support services with that of two other groups of subjects – 253 members of the general population and 79 welfare recipients. Schizophrenia was the primary diagnosis for 63% of the patients in the sample, 15% of the sample was diagnosed with schizoaffective disorder and major affective disorder, and depression and delusional disorder were diagnoses for the remainder of the sample. Using data from the Satisfaction with Life Domain Scale (Baker & Intagliata, 1982), in-person interviews for the population with mental illness and welfare recipients and mail-in questionnaires to survey the general population, the study compared findings regarding feelings about a number of topics including satisfaction with one’s home, finances, health, interpersonal relationships and daily activities.

The study’s findings revealed that people with mental illnesses with psychotic symptoms were as satisfied as the general population in certain aspects of their lives, such as where they lived, their clothing, their day-to-day activities, the use of their leisure time, and their personal finances. That said, people with mental illness in the study were less satisfied than the general population with their “love life”, relationships with other

family members, the people with whom they were living, their interpersonal relationship skills, and their current friendships.

Overall, these findings support the notion that for people with mental illness with psychotic symptoms, their overall quality of life is lower than that of the general population (Mercier, Tempier, & Renaud, 1992; Sullivan, Wells, & Leake, 1991). This study in particular, however, highlights the reality that while their overall quality of life is lower, people with psychotic mental illness are least satisfied with all aspects of their lives that involve relationships with others – including not only friends and roommates, but also family members and romantic partners.

A study by Hooley et al. (1987) that drew married couples from a prospective long-term study of patients with schizophrenia, unipolar depression, and bipolar disorder, also found that relationship satisfaction is low in couples in which a major mental illness is present. The study included 199 patient families and 60 control families that did not have a family member with a mental illness. Participants' symptoms were assessed by trained interviewers via the Current and Past Psychopathology Scales (CAPPS; Endicott & Spitzer, 1972, Spitzer & Endicott, 1968), which includes a structured interview and psychiatric history. Assessors classified patients into groups based on symptom ratings for 19 items represented on the negative, positive and impulse-control symptom scales. Furthermore, each patient in the study was evaluated by two to three experienced diagnosticians who based their diagnoses on DSM-III (American Psychiatric Association, 1980) criteria. Marital satisfaction in this study was assessed via the Marital Adjustment Test (MAT; Locke & Wallace, 1959), which includes items measuring happiness in the

relationship, agreement between spouses across a variety of topics and questions regarding commitment and decision making behaviors (Hooley et al., 1987).

The study found that in general, members of relationships in which psychopathology symptoms are present have lower relationship satisfaction than those in which no symptoms are present, regardless of the type of diagnosis. However, there was a difference in satisfaction in terms of the presence of “negative” and “positive” symptoms. “Negative symptoms” of psychopathology are symptoms of absence, such as a lack of motivation or energy. “Positive symptoms” of psychopathology are those that are noticeable and unusual, such as delusions or impulsivity. In Hooley et al.’s (1987) study, the presence of negative symptoms was more likely to result in lower relationship satisfaction reported by the member of the couple without symptoms of mental illness than the presence of positive symptoms. This may be due to the partner failing to be aware that the individual’s negative symptoms are attributable to a mental illness, rather than reflections of intentional behavior such as laziness in neglecting chores around the house.

A longitudinal study by Daley et al. (2000) regarding Borderline Personality Disorder (BPD), which included a sample of 155 students from Los Angeles County schools, found that it may not be the disorder itself that impacts the individual’s close relationships; rather it may be particular types of symptoms that occur with the disorder that have the greatest impact. Study participants were all female, an average of 18.3 years old, and mostly middle-class. In terms of the racial composition of the sample, 2% were African American, 9% were Asian American, 46% were Caucasian, 21% were Hispanic, and 22% identified as an ethnicity not listed or as a combination of ethnicities. In this

study, symptoms were assessed based on responses to the Personality Diagnostic Questionnaire (PDQ; Hyler, Rieder, Spitzer & Williams, 1982) and the PDQ-Revised (PDQ-R; Hyler & Reider, 1987), in conjunction with diagnostic criteria from the DSM-III (American Psychiatric Association, 1980) and DSM-III-R (American Psychiatric Association, 1987). Also, depressive symptoms were assessed via the Structured Clinical Interview for DSM-III-R (SCID-NP; Spitzer, Williams, Gibbon & First, 1990). Additionally, episodic and chronic romantic stress were measured via specially developed interviews, and partner satisfaction was measured with Spanier's (1976) Dyadic Adjustment Scale.

The study broke symptoms into three clusters: Cluster A – paranoid, schizoid and schizotypal, Cluster B – antisocial, borderline personality disorder (BPD), histrionic and narcissistic and Cluster C - avoidant, dependent and obsessive-compulsive. Findings indicate that when controlling for depression, Cluster B symptoms- which include BPD - most consistently correlated with dysfunction in intimate relationships compared to Clusters A and C, which were less consistently predictive of relationship dysfunction and not predictive at all, respectively. These symptom-specific findings on relationship satisfaction highlight the possibility that certain types of psychopathology symptoms, though severe in nature, may not have an impact on partners' relationship satisfaction at all (Daley et al., 2000).

That said, other studies find that people with mental illness with psychotic features and their partners report dissatisfaction with their interpersonal relationships and other family members also report that they face a variety of problems in their lives due to having a family member with mental illness (Vaddadi et al., 2002). In Vaddadi et al.'s

study of family caregivers of people with mental illness, they found that verbal and physical abuse were frequently present in the relationship between the caregivers and the person with a severe mental illness. Family caregivers were most frequently the victims of the abuse. The study consisted of interviews with clients who used community mental health services and were regularly in contact with their family caregiver. Interviews were also conducted with the family caregivers. A total of 101 patients of the community mental health center and their families were interviewed for the study. The majority of interviewed patients had been diagnosed with schizophrenia or schizoaffective disorder. The 65 males and 36 females were an average of 36 years old. The majority of caregivers interviewed were parents of the patients. Most primary caregivers were women – 44 were mothers, three were fathers and 28 primary caregivers were identified as both mothers and fathers. Nine caregivers were the child of the patient, 13 were partners, and four were other relatives. The average caregiver age was 57 years old. Interviews that were conducted were based on the Burden on Family Interview (Pai & Kapur, 1981) and supplemented with questions regarding family abuse.

According to study findings, 42% of family caregivers had been yelled or sworn at regularly by their family member with severe mental illness, 24% had been physically hit by their relative, 22% had received threats of violent acts, and 4% had suffered a serious physical injury from their relative with severe mental illness, based on reports regarding the past year's events (Vaddadi et al., 2002). Family caregivers in this study reported that as a result of the abuse that they had suffered at the hands of their relatives with a severe mental illness, they experienced increased emotional distress and felt significantly

burdened by their caretaker position. Furthermore, relatives reported that their experiences of verbal abuse were correlated with their experiences of physical abuse.

Other studies of relatives of people with mental illness with psychotic symptoms have found similar results in terms of the effects of having a relative with a major mental illness in one's life (Lukens et al., 2004). Lukens et al. conducted focus group interviews with siblings of people with severe mental illness to obtain a heightened understanding of the impact of having someone with mental illness with psychotic symptoms in one's family. In total, 19 adult siblings of people with psychotic mental illness participated in the focus group interviews. Interviewed siblings were all mentally healthy, based on self-report. They were all residents of New York State, and the majority (16 out of 19) were female. In addition, 15 held college degrees, ten had never been married, and the racial breakdown was 16 Caucasians, two African Americans, and one Asian. The siblings' average household income ranged from \$15,000 to \$100,000, with eight earning between \$50,000 and \$75,000. The majority (17) of their mentally ill siblings about whom they were interviewed had been diagnosed with either bipolar disorder or schizophrenia/schizoaffective disorder. Fourteen of the diagnosed siblings were male, and five were female. Focus group meetings lasted approximately two hours each and were audiotaped and transcribed. They were then coded, and recurrent themes were grouped into categories.

According to the focus groups, the presence of mental illness in their lives affected them on a daily basis. Focus group participants repeatedly noted a range of negative emotions regarding having a sibling with a major mental illness, including anger and fear, as well as a sense of guilt, mourning and loss. Participants also frequently noted the



impact of the illness on the personality and development of their siblings (Lukens et al., 2004). The interpersonal relationships of the siblings in the focus groups were also affected as their experience of having a sibling with severe mental illness tainted their expectations for both friendships and romantic relationships. Overall, the siblings reported that they experienced many challenges in their attempts to create intimate relationships outside of their family of origin due to stigma and a general lack of understanding on the part of others. Siblings expressed intense despair and sadness as a result of their frequently failed attempts at creating meaningful interpersonal relationships with others.

Research by Ostman (2004), regarding the family burden of having a relative admitted to inpatient treatment for a psychiatric illness revealed findings similar to that of Lukens et al. (2004). In this study, 235 patients who were both voluntarily and involuntarily committed to a psychiatric unit were interviewed and asked if a relative could be contacted as well. Of relatives contacted to be interviewed, 162 chose to participate in the study. The majority (62%) of patients in the study were female, and their mean age was 43. Diagnoses for 31% of the sample included schizophrenia, delusional disorders, schizoaffective and schizophreniform disorders, and atypical psychoses. Affective mood disorder was the primary diagnosis for 44% of the patients in the sample, and another 25% of the sample had other diagnoses. Relatives of the patients who were interviewed ranged in age from 19 to over 60 years old, with the majority of relatives reporting that they were between 40-59 years old. Also, 78 relatives were male and 84 were female. Of the respondents who were spouses, 47 were male and 12 were female, and of those who were parents 10 were male and 42 were female. Other relationships that respondents

reported having to the patients included child, sibling and non-relative. The 95-question interview instrument used was created based on clinical experience and focused on the burdens experienced by relatives and their overall need for additional support in caring for a person with severe mental illness. Family members regularly reported that their relationships with the patients were impaired due to the patients' mental illnesses. Also, approximately 40% of interviewed family members reported suffering from mental health problems of their own resulting from caring for the person in their family with a mental illness with psychotic symptoms.

All family members in the aforementioned studies reported a negative impact on their lives due to having a family member with severe mental illness, (Lukens et al., 2004; Ostman, 2004; Vaddadi et al., 2002), and the people with the mental illness reported low satisfaction regarding their interpersonal relationships, (Tempier et al., 1998). That said, some positive aspects of the impact of the mental illness on family members surfaced in the Lukens et al. study. Despite reports of overwhelming sadness and anger regarding having a family member with a major mental illness, siblings noted that their experiences had altered their identity and had led them to believe that their lives had a heightened sense of meaning. Also, the presence of psychotic mental illness in their families strengthened some family relationships. In particular, married focus group respondents reported that their partner's support had been critical in helping them deal with the challenges that they faced due to their siblings' illnesses.

#### *Mood/Anxiety Symptoms and Relationship Satisfaction*

Depression (forms of which are classified as mood disorders in the DSM-IV) is one of the most prevalent psychiatric illnesses (Burke, 2003). A review of literature finds that it

negatively impacts relationships with families of origin, spouses and children (Burke, 2003; Heene et al., 2005; Heru et al., 2005; Hinrichsen & Emery, 2005; Peisah et al., 2004; Teichman et al., 2003; Whisman et al., 2004; Zlotnick et al., 2000). A classic model of depression developed by Coyne (1976) posits that people with depression engage in negative or aversive interactions with their partners that result in a negative social environment and an overall loss of support as well as negative reactions. Coyne (1976) finds that overall, the negativity is present in relationships in which depression is present and this negativity is a key dimension in interpersonal relationships of people with depression.

Heene et al. (2005) found a significant link between depression and decreased marital quality in a cross-sectional study regarding links between depressive symptoms, relationship distress and conflict communication, attributions and attachment style. The study included 415 married or cohabiting couples recruited from advertisements for those interested in participating in a study on relational functioning. Study participants came from a wide variety of socio-economic backgrounds. Males in the study ranged from 19 to 69 years old, with a mean age of 36, and females ranged from 19 to 71 years old with a mean age of 34. A total of 61% of the couples were married for at least one year, and the other 39% had been cohabiting for at least one year. Additionally, 61% had one or two children, 16% had three children, 5% had four children and 18% had no children. Self-report measures used to collect data include the Dyadic Adjustment Scale (DAS; Spanier, 1976), the Communication Patterns Questionnaire (CPQ; Christensen & Sullaway, 1984), the Relationship Attribution Measure (RAM; Fincham & Bradbury, 1992), and the Adult

Attachment Scale (AAS; Collins & Read, 1990). Also, the symptom checklist (SCL-90; Derogatis, 1977) was used to determine psychological symptoms of distress.

Study findings revealed that there was a significant correlation between depressive symptoms and marital adjustment for both male and female partners of couples in the study. Furthermore, "...self-reported demand-withdrawal and avoidance were significant mediators of women's levels of depressive symptoms and marital adjustment, whereas self-reported constructive communication was a significant mediator of men's level of depressive symptoms and marital adjustment" (Heene et al., 2005, p. 429). As such, demand-withdrawal and avoidance behavior were associated with greater levels of depression among women, and constructive communication was associated with lower levels of depressive symptoms and greater relationship satisfaction among men. This study clearly links depression, communication and marital satisfaction.

Depression was found to play a significant role in negatively impacting relationship satisfaction in a study by Zlotnick et al. (2000). In this study, results of the National Comorbidity Survey (NCS) were used to consider effects of major depressive disorder on the quality of interpersonal relationships. The NCS is a study of 8,098 people in the general population. NCS psychiatric diagnoses are based on the DSM-III (American Psychiatric Association, 1987), and episodes of major depression were studied in conjunction with quality of relationships, which were measured in the study based on the three categories of marital, friends, and relatives and the two dimensions of positive and negative interactions (Zlotnick et al., 2000). Findings of this study indicate that the relationship domain most impaired by depression is that of marital or live-in partner

relationships. Furthermore, the study results indicate that poor intimate relationships are characteristic of major depressive disorder more so than general mental illness.

More specific strains on spouses of people with depression were reported in Burke's (2003) review of literature on the topic of maternal depression and the impact on relationships within families. Burke's article relates that overall, depressed women are found to have higher rates of conflict within their marriage compared to women without depression, as well as higher divorce rates. Also, the spouses of people with depression are more likely to report that they are restricted in terms of their choices of activities in their leisure time and social interactions, that they have experienced a decrease in family income due to maternal depression, and that family relations are severely strained due to the presence of depression in a maternal figure in the family (Burke, 2003).

Furthermore, Karney and Bradbury (1997) conducted a study of neuroticism (negative emotional reactivity, including depression and anxiety symptoms) and marital interaction as it affects marital satisfaction. In this study, 60 couples who had been married for approximately 12 weeks were mailed questionnaires and completed live interviews and dyadic interaction tasks, which were audiotaped during 3-hour laboratory sessions. The average age of husbands in the sample was 25 years old, and their mean income ranged from \$20,000 to \$30,000. Wives in the sample were an average of 24 years old, with mean incomes ranging from \$10,000 to \$20,000. The majority of sample participants (75%) were white. Also, 70% of the sample had cohabited prior to marriage. Marital satisfaction in the study was measured via a variety of scales including the Marital Adjustment Test (MAT; Locke & Wallace, 1959), the Quality Marriage Index (QMI; Norton, 1983), the Kansas Marital Satisfaction Scale (KMS; Schumm et al., 1986), and

the Semantic Differential (SMD; Osgood, Suci & Tannenbaum, 1957). Neuroticism of participants was measured via the Neuroticism Scale of the Eysenck Personality Questionnaire (EPQN; Eysenck & Eysenck, 1978). The EPQN measures one's overall negative affectivity, with questions specific to feelings of depression and anxiety. Finally, marital interactions in the study were coded via the Verbal Tactics Coding Scheme (VTCS; Sillars, 1982; Sillars, Coletti, Parry, & Rogers, 1982). The results indicated that neuroticism was most strongly associated with marital satisfaction, in that spouses who scored high on neuroticism reported lower marital satisfaction at the outset of their marriages.

McLeod's (1994) study also considered symptoms of anxiety in relation to marital satisfaction. The study reported findings similar to those of couples in which depression is present. The study examined 611 married couples in the Detroit metropolitan area, in which either or both partners displayed symptoms of anxiety or related phobic disorders. To be included in this study, one spouse had to be between 18 and 64 years old, and the spouse in this age range could not be African American – to ensure appropriate representation of the genographic demographics of the area in the study. For this study, a modified form of the Diagnostic Interview Schedule Version III-A (DIS; Robins & Helzer, 1985) was used in conjunction with diagnostic criteria from the DSM-III-R (American Psychiatric Association, 1987) to identify lifetime cases of phobic disorder, panic disorder, and generalized anxiety disorder (GAD) and comorbid conditions. Marital quality was measured via a factor analysis of 11 self-report measures based on existing indices used for general population surveys conducted by the University of Michigan. These multi-item indices measure positive marital perceptions and negative

marital perceptions for each spouse filling out the survey based on their perception of their spouse.

Analyses examining marital quality as a function of the existence of anxiety disorders in the members of a couple indicated that the sex of the partner with the symptoms and the specific type of symptoms present alter overall relationship satisfaction. For example, marital quality actually was higher when both partners had symptoms of generalized anxiety disorders and was lower when both partners exhibited phobic symptoms. Interestingly, however, in marriages in which just the wife had phobic symptoms, marital quality was not affected. That said, husbands married to wives with panic disorder reported lower relationship satisfaction than those who were married to wives who did not have symptoms of panic disorder (McLeod, 1994). This study illustrates the importance of pinpointing specific symptoms and how they may impact relationship satisfaction. It also leads to the consideration of which partner has symptoms and how this may affect the relationship.

Whisman (1999) used the National Comorbidity Survey (NCS; Kessler et al., 1994), a study including 2,538 respondents who identified as married and who completed a two-phase research project conducted across the 48 states in the continental U.S., in his research regarding marital satisfaction and mental illness. Psychiatric diagnoses in the study are based on the Composite International Diagnostic Interview (CIDI) which is used in conjunction with the DSM-III-R (American Psychiatric Association, 1987) to assist in diagnosing mental illnesses. Marital dissatisfaction in the survey was based on answers to two items relating to relationship satisfaction that were incorporated into the NCS study.

Overall, Whisman (1999) found that post-traumatic stress disorder (PTSD) and major depression had the greatest negative impact on satisfaction for women, and dysthymia - a form of mild, long-lasting depression - had the greatest negative impact on marriage satisfaction for men who had the disorder.

A study by Whisman et al. (2004), which considered cross-sectional data from 841 heterosexual couples who were participants in the Minnesota Multiphasic Personality Inventory (MMPI) re-standardization project, found that depression is a stronger predictor of marital dissatisfaction than is anxiety. Study participants were typically married (91%) and had been together for an average of 16 years. Women in the study were an average of 40 years old, and men were an average of 43 years old. Women were mostly (88%) Caucasian, 7% were African American and 5% were either Hispanic or identified as another ethnicity. For men, 88% were Caucasian, 9% were African American, and 3% identified as either Hispanic or another ethnicity. Both men and women in the sample averaged approximately 15 years of education. The study used the MMPI-2 (Butcher, Graham, Williams, & Ben-Porath, 1990) scales for anxiety and depression to determine the presence of anxiety or depression in study participants. It also used the Dyadic Adjustment Scale (DAS; Spanier, 1976) to measure relationship satisfaction.

In this study, marital satisfaction as rated by the partner with the psychopathology symptoms was considered as well, and one's own depression had a stronger impact on one's marital satisfaction than did one's partner's depression – although this was also an important influence. In fact, the lowest possible relationship satisfaction was found in studies in which both partners were depressed (Whisman et al., 2004).



The aforementioned literature posits that marital relationships are clearly strained due to the existence of forms of mood disorders (depression) or anxiety disorders within the marital unit; however, children of people with depression suffer in terms of their overall relationship quality with family members and their overall quality of life as well (Burke, 2003; Peisah et al., 2004). The Peisah et al. study of children of parents with depression and their adult psychopathology and relationships found that parental depression may result in an increased risk for anxiety disorders, panic disorder and agoraphobic, and substance abuse disorders.

The Peisah et al. (2004) study is a 25-year follow-up of a group of patients with severe symptoms of depression who were admitted to a psychiatric wing of a hospital. A total of 71 patients participated in the follow-up study, and information was gathered on 94 of their children. Nineteen control parents were used in the study as well as 31 control children. Diagnoses of patients were based on the Composite International Diagnostic Interview schedule (CIDI version 1.1, World Health Organization, 1992), and psychological distress among the children of the patients was determined via the General Health Questionnaire (GHQ-30; Goldberg, Rickels, Downing, & Hesbacher, 1976). Information regarding the patients and their children was obtained via audiotaped interviews. Intimate relationship information from the children was supplemented by the Intimate Bond Measure (IBM; Willhelm & Parker, 1988).

In addition to being at increased risk for a variety of mental illnesses, as previously stated, the findings of the study were quite telling regarding the adult children's intimate relationships. Of all interviewed children of parents with depression 75% stated that they were making a deliberate effort to ensure that their intimate relationships were different

from those of their parents. This is in comparison to only 5% of the control children providing a similar response (Peisah et al., 2004).

Burke (2003) reported similar findings in that family strife is one of the negative effects of parental depression on children. This may be compounded by the finding that children with depression had poor self-concepts, negative self-schemas and negative attribution styles, compared to the general population (Burke, 2003). Finally, Burke further found that children of women with depression were impaired socially and psychologically, in addition to suffering from an increased risk for depression themselves.

Finally, in their study regarding psychoeducation for caregivers of people with chronic mood disorders, Heru et al. (2005) found that family functioning in families with people with chronic mood disorders (forms of depression) was reported to be poor overall – with scores in family functioning falling into the dysfunctional range. This study used the Family Assessment Device (Epstein, Baldwin, & Bishop, 1983) and the Caregiver Strain Scale (CSI; Robinson, 1983) to determine the strains on caregivers and the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) to determine caregivers' levels of depressive symptoms. In addition to the reports of poor family functioning, 74% of caregivers of people with chronic mood disorders in this study reported that they were experiencing depressive symptoms as well. Hinrichsen and Emery (2005) report similar findings – that the presence of a depressed member in a family results in an increased possibility that other family members will also experience depressive symptoms.

### *Trauma Symptoms and Relationship Satisfaction*

Symptoms such as dissociation and defensive avoidance may result from trauma experiences (Parson, 1999). These symptoms and others may affect the individual's intimate relationships significantly. For example, in Parson's review of literature regarding dissociation and trauma, he notes that early research on the experiences of war veterans found that they often experience a lasting tendency to be easily startled, enduring irritability, a tendency towards aggressive acts and explosive outbursts, a tendency to dwell on the trauma experienced, limitations in the functioning of their personality, and recurring unusual dreams. These symptoms are an example of the types of reactions to traumatic events that may lead to dissociative disorders. Many of these symptoms may impair daily functioning and relationships.

Commonly, the symptoms of a traumatic experience are referred to as comprising a diagnostic syndrome of Post-Traumatic Stress Disorder (PTSD). In his review of literature on the topic, Parson (1999) also notes that various studies have found that people suffering from dissociation and PTSD also experience higher rates of substance abuse, suicide attempts, depression, and overall reported lower qualities of life compared to the general population without post-traumatic symptoms.

Spasojevic, Heffer and Snyder (2000) conducted a study on the effects of posttraumatic stress and acculturation on the dyadic functioning of Bosnian refugee couples. In this study, they recruited 40 Bosnian refugee couples from Houston and Chicago who were together as a couple prior to war breaking out in Bosnia and who had lived in the United States for between one and five years. All study participants had been exposed to war-related traumatic events. Their average age was 36.3 and nearly all had

children. Measures used in the study included the PTSD Symptoms Scale – Self Report (PSS-SR; Foa, Riggs, Dancu, & Rothbaum, 1993), the Behavioral Acculturation Scale (BAS; Szapocznik, Scopetta, & Kurtines, 1978), and the Marital Satisfaction Inventory (MSI-R; Snyder, 1997), which was used to measure relationship functioning. Additionally, a demographic information questionnaire was used to identify characteristics of couples' relationships, such as length of marriage and number of children.

Overall, the study found correlations between PTSD symptoms and MSI-R scales. Interestingly, wives' marital distress was better predicted by their husbands' degree of PTSD-related symptoms than their own degree of PTSD symptoms. Overall, however, the study found that refugee couples displaying higher rates of PTSD symptoms were also more susceptible to increased occurrences of a variety of marital problems.

The findings in the aforementioned study reflect those of literature cited in the article. For example, one study (Riggs, Byrne, Weathers, & Litz, 1998) that is cited found that 70% of 26 veterans diagnosed with PTSD reported significant levels of marital distress compared to only 30% of veterans who did not exhibit PTSD symptoms. Furthermore, the study found that veterans with symptoms of PTSD had high scores on the MMPI family problems scale and scored high on clusters of problems regarding social abilities and intimacy.

Another study regarding the impact of Vietnam veterans' arousal and avoidance on their spouses' perceptions of family life (Hendrix, Erdmann, & Briggs, 1998) found that there were significant associations between the impact on the mental health of veterans due to their traumatic experiences and their spouses' perceptions of overall family

functioning and satisfaction. This study was based on the responses of 147 veterans and their families, with respondents ranging in age from 29 to 60 years old and relationships spanning between 2 and 36 years. Nearly all of the respondents had children, who were between the ages of 1 and 41. The Family Adaptability and Cohesion Evaluation Scale III (FACES III; Olson, Portner, & Lavee, 1985) and the Couple Communication Skills Scale (Olson, Fournier, & Druckman, 1987) were used along with the Kansas Parental Satisfaction Scale (James, Schumm, et al., 1985) and the Kansas Marital Satisfaction Scale (Schumm, et al., 1986) to survey family functioning and satisfaction. Additionally, the Purdue PTSD Scale was used to assess PTSD symptomology.

Overall, the study found significant negative correlations indicating that increased arousal within veterans was associated with lower levels of spouses' ratings of family functioning and satisfaction. Furthermore, higher veterans' arousal and avoidance was associated with lower assessment of all aspects of family life, according to spouse reports. More specifically, veterans' reports of war-related arousal predicted spouses' reports of low levels of family cohesion, adaptability and marital satisfaction. The study found that, "The greatest impact of veterans' arousal is likely to be on spouses' marital satisfaction, because the impact is both direct and indirect, acting through the spouses' family cohesion" (Hendrix et al., 1998, p. 116). Study findings echo those reported in the literature on which the study is based, that indicates that veterans' preoccupation with their traumatic experiences in Vietnam impairs family life on many levels, including family cohesion, communication and adaptability.

Finally, another review of literature on the effects of PTSD on interpersonal relationships - specifically those of emergency service workers (McFarlane & Bookless,

2001) - noted results similar to those of the aforementioned studies. This review of literature attempted to find explanations for the existence of strained interpersonal relationships due to trauma-related psychological symptoms. The review cites irritability as one of the symptoms that plays the most disruptive role in family and social relationship functioning.

The literature review (McFarlane & Bookless, 2001) also notes that a cycle of sorts develops for people suffering from post-traumatic stress, in that increasing family conflict due to PTSD symptoms is reinforced by losses in social contacts and a diminishing social circle that results from displays of symptomology. As social relationships that may have actually served to buffer the disruptions caused by the PTSD symptoms diminish, the homeostasis of family life is thrown further off balance.

Other findings in literature, according to McFarlane and Bookless (2001), point to increased incidences of domestic violence and child abuse following disasters, which is likely linked with post-traumatic stress. The literature review cites specifically studies of fire fighters who fought the 1983 Ash Wednesday bushfires in Australia. These studies found that 80% of the firefighters reported increased irritability with the family eight months after the fires and 50% reported spending less time with their families after the fires, feeling more withdrawn from their family and fighting more with their family than they had prior to fighting the fires. This illustrates the impact that exposure to traumatic events may have on the entire family.

Within couple relationships specifically, symptoms appear to have the greatest impact on couple relationships in which one partner is experiencing trauma-related symptoms and the other is not sharing the experiences of exhibiting similar symptoms. For

example, if both partners experience a trauma, they may not share the same reactions. One may become preoccupied with traumatic images and experiences, whereas the other may enact avoidance strategies and behaviors, resulting in significant couple conflict and strain at an already stressful time in the couple's relationship. As noted in other studies, this review of literature also found that war veterans report difficulty in maintaining intimate relationships and experiencing high negative emotionality that is directed towards spouses (McFarlane & Bookless, 2001). Although a number of studies' findings suggest that the irritability and anxiety-related symptoms of PTSD have negative impacts on individuals' couple and family relationships, in the present study the focus was on the defensive avoidance and dissociation symptoms. This decision was based on the fact that the impact of anxiety symptoms already was assessed within the mood/anxiety disorders cluster of symptoms and the fact that it was important to examine the impact of the disengagement associated with defensive avoidance and dissociation.

#### *Communication and Relationship Satisfaction*

Deficiencies in communication skills, especially those related to couple problem-solving conversations, are found to be major causal links to intimate relationship distress (Christensen & Shenk, 1991; Gottman & Krokoff, 1989). Christensen and Shenk's (1991) study included 22 divorcing couples, 15 couples who were seeking marriage therapy and 25 couples who reported that they had happy, healthy relationships. All couples in the sample had both a husband and wife between the ages of 25-50 years old, had been married for at least two years, and had at least one child between the ages of 6-13 living in their home with them. The majority of the sample was Caucasian, although 19 husbands and 18 wives were either African American or Hispanic. The measure of

perception of communication was the Communication Patterns Questionnaire (CPQ; Christensen, 1987, 1988; Christensen & Sullaway, 1984). Measures of marital discord included the Relationship Issues Questionnaire (RIS; Christensen, 1987, 1988; Christensen & Sullaway, 1984), and the Dyadic Adjustment Scale (DAS; Spanier, 1976). Only distressed couples were instructed to complete the DAS; however, all couples completed the CPQ and RIS. Partners completed the assessment tools independently from one another.

The study (Christensen & Shenk, 1991) compared communication and conflict in couples who are not distressed, couples who are in treatment for relationship distress and couples who are divorcing, they found that the divorcing and distressed groups had lower instances of mutual constructive communication than the non-distressed couples. They also found that the distressed couples displayed higher instances of demand/withdraw communication patterns, and avoidance communication than non-distressed couples. Another interesting finding was that divorcing couples had the lowest instances of mutual constructive communication and tended toward more conflict regarding psychological distance than the other couple groups.

In light of the findings of the Christensen and Shenk (1991) study that distressed couples display heightened conflict and negative interaction patterns as well as fewer instances of mutual constructive communication, Gottman and Levenson's (1992) assertion that marital stability requires a balance of negative to positive interactions, appears to be relevant. In Gottman and Levenson's study data were collected from 79 couples who had discussions conducted in a laboratory setting and who had been instructed to engage in an 8-hour period of silence prior to talking in the lab. In the



sample, the mean age of the husband was 32 and the mean age of the wife was 29 years old. Also, sample couples were married an average of 5 years. Couples completed the Couple's Problem Inventory (CPI; Gottman, Markman, & Notarius, 1977), to identify a contentious topic. They then discussed a general topic, a contentious topic, and a pleasant topic for 15 minutes each. Only data from the discussion of the contentious topic were used in the study. Follow-up samples regarding marital satisfaction and psychological health were obtained four years after the initial study. Five physiological measures were used when spouses viewed their recording several days after the initial discussion occurred, and conversations were coded using the Rapid Couples Interaction Scoring System (RCISS; Krokoff, Gottman, & Hass, 1989) – which divided couples into categories of regulated and non-regulated based on their ratio of positive to negative RCISS codes. The Marital Interaction Coding System (Weiss & Summers, 1983) was used in the coding process as well, to code positive and negative couple communication. Specific affects expressed by each partner were also coded with the Specific Affect Coding System (SPAFF; Gottman & Krokoff, 1989).

Based on a four-year longitudinal study in which couples' amounts of positive and negative communication at time one were examined as predictors of subsequent relationship dissolution, Gottman and Levenson (1992) propose a balance theory of interaction requiring a high ratio of positive to negative interactions to ensure marriage stability: "we suggest a parsimonious theory that may account for dissolution: It is a balance theory that proposes that marital stability requires regulation of interactive behavior and a high set point ratio of positive to negative codes of [interactions] (p. 232)." This means that couples in which both members displayed more positive

communication relative to negative communication were less likely to report the development of marital problems and dissatisfaction, whereas those with at least one partner displaying higher proportions of negative communication were more likely to report more marital problems and dissatisfaction. As such, it was found that positive interactions between partners are vital for relationship stability and satisfaction.

A more recent study of marital satisfaction and interaction among newlyweds found that acknowledgement of a partner's feelings was also an important aspect of relationship satisfaction, in addition to levels of positive or negative communication (Johnson & Bradbury, 1999). In this study, 60 newlywed couples reported their relationship satisfaction and also had a problem-solving discussion for 15 minutes. They then reported marital satisfaction again in both a 6- and a 12-month follow-up session. To be eligible for the study, both spouses had to be literate in the English language, had to have completed at least the 10<sup>th</sup> grade, be in their first marriage, have no children, and the wife had to be no older than 35 years old. In the sample, wives had a mean age of 24 and had a mean of 15.5 years of education. Husbands had a mean age of 25.5 years old and had a mean of 15 years of education. The majority of study participants were Caucasian (75%), and the individual incomes for the sample ranged from \$11,000 to \$20,000. For the study, the Inventory of Marital Problems (IMP; Geiss & O'Leary, 1981) was used to identify a topic for the 15-minute discussion. Marital satisfaction in the study was measured via the Marital Adjustment Test (MAT; Locke & Wallace, 1959), the Quality Marriage Index (QMI; Norton, 1983), and the Semantic Differential (SMD; Osgood et al., 1957). Additionally, the Verbal Tactics Coding Scheme (VTCS; Sillars, 1981) was

used to assess various forms of communication within the communication sample, including avoidant, positive and negative behaviors.

Outcomes regarding couples' interaction patterns as related to satisfaction include the finding that couples gauge their level of relationship satisfaction via their interactions. The study also found that asymmetrical behavior interaction patterns, may lead to negative feelings and behaviors that are detrimental to relationships long-term (Johnson & Bradbury, 1999). Another poignant finding of the study is that in couples in which one spouse discussed emotions regarding the problem in the communication sample and the other spouse did not acknowledge those emotions during the discussion, marital satisfaction was rated significantly lower. As such, it was concluded that, "...the ability to recognize and acknowledge the other person's affective state, especially frustration, in the course of the problem-solving discussion is an important developmental factor in marriage" (Johnson & Bradbury, 1999, p.36). This may pose particular challenges for couples in which mental illness is clouding one partner's ability to empathize with the other partner's emotions.

Another study that considers interaction patterns in terms of relationship functioning is Gottman and Krokoff's (1989) longitudinal study of marital interaction and satisfaction. The study used 25 couples who reported varying degrees of marital satisfaction, and an additional sample of 30 couples – who also varied greatly in their reported degrees of marital satisfaction. Satisfaction scores were determined using the Locke-Wallace (Locke & Wallace, 1959) and the Locke-Williamson (Burgess, Locke, &Thomes,1971) scales, which were administered during an initial assessment session. Couples were also videotaped having a 15-minute discussion regarding a contentious topic in the laboratory

and audiotaped having a similar discussion at home. The Couples Interaction Scoring System (CISS; Gottman, 1979) was used to code the tapes for positive, neutral, and negative behavior. The MICS (Weiss & Summers, 1983) and SPAFF (Gottman & Krokoff, 1989) were used to code taped interaction as well.

Findings from the study indicate that interaction patterns that were found to be dysfunctional for relationships included displays of defensiveness, stubbornness and withdrawal from the conversation. Also, husbands' negative interactions with their wives were predictive of current relationship distress. Concurrent relationship distress was also predicted by conflict engagement – a negative interaction for both partners in the relationship. In terms of positive interaction, the wives' positive behaviors were predictive of concurrent marital satisfaction (Gottman & Krokoff, 1989).

Vanzetti et al. (1992) conducted a study regarding relationship satisfaction and partners' expectancies regarding each other's future actions in marital interactions. In this study, 40 married couples took part in two different laboratory interactions. The couples completed the Locke-Wallace Marital Adjustment Test (MAT; Locke-Wallace, 1959) and the Marital Agendas Protocol (MAP; Notarius & Vanzetti, 1983). Assessment tools measured the valence of the behaviors predicted and perceived by each spouse in interactions that occurred following the visualization of a situation during which a couple is discussing a problem issue (Vanzetti et al., 1992). Study participants were married for an average of seven years and had average incomes ranging from \$20,000 to \$25,000 per year. Also, wives were an average of 33 years old and husbands were an average of 36 years old. Study participants typically reported having a minimum of a college education and in most cases at least some post-college education as well. The results indicated that

distressed spouses have expectancies of more negative and fewer positive behaviors from their spouses compared to spouses in couples that are not distressed (Vanzetti et al., 1992). The investigators concluded that the study demonstrated “sentiment override” in that “distressed couples, compared with their non-distressed counterparts, are more likely to have negative expectations of interactions, tasks or outings that are intended to generate positive feelings” (Vanzetti et al., 1992, p. 180). As such, partners’ cognitions about couple interactions are also important influences on relationship satisfaction, in addition to the positive or negative quality of the interactions themselves.

### *Psychopathology and Communication*

#### *Psychoticism and Communication*

The aforementioned Christensen and Shenk (1991) article notes that marital discord is frequently impacted by factors such as individual psychopathology, which affects couple incompatibility and heightens communication deficiencies. The authors explain, “Because individual psychopathology and external stress may increase one’s needs while simultaneously reducing one’s ability to meet the needs of others, these factors may maximize incompatibility between partners. Because cognitive distortions may lead to blaming and accusations, they may reduce communication effectiveness” (Christensen & Shenk, 1991, p. 462). As such, communication is frequently impacted by psychopathology on a variety of levels, which in turn impacts relationship satisfaction.

Overall, general communication skills may be varied for people with psychotic symptoms (Christensen & Shenk, 1991; Docherty et al., 1996; Miklowitz et al., 1991). Docherty et al.’s study of 48 people with schizophrenia, 24 people with bipolar disorder and 23 control individuals who did not have a mental illness included a collection of 10-

minute speech samples, a measure of speech coherence (Rochester & Martin, 1979), and tests of working memory, such as the Trails B test (Reitan & Davidson, 1974) and the Task Set test. Additionally, an auditory Continuous Performance Test (CPT; Strubb & Black, 1988) was used to assess participants' capacity for sustained attention, an intelligence test – the Wechsler Adult Intelligence Scale – Revised (WAIS-R; Wechsler, 1981) was used to test concept formation, and verbal fluency was measured via the Boston Naming Test (Kaplan, Goodglass, & Weintraub, 1983) and the Verbal Fluency Test (Lezak, 1983).

Findings from the study indicate that speech of patients with schizophrenia frequently goes off topic. This is likely due to an abnormal tendency for the individual to notice associations in words with other words that are not relevant to the topic at hand. As such, speakers with schizophrenia often begin a conversation but are derailed by associations that occur in their mind and are not necessarily shared by the listener. The associations result in disruption to the original planned discourse and the speaker's point, as a result, becomes incoherent. As a result of these disruptions, people with schizophrenia displayed severely compromised communication abilities, compared to others in the study (Docherty et al., 1996).

Miklowitz et al. (1991) reported similar findings from their study of communication deviance in families with members who have schizophrenia or mania. The study included 55 inpatients – 39 were diagnosed with either schizophrenia or schizoaffective disorder and 16 were diagnosed with mania at the time of the study, based on DSM-III (American Psychiatric Association, 1980) and Research Diagnostic Criteria (RDC; Spitzer, Endicott, & Robins, 1978). Inpatients in the sample were predominantly (93%)

Caucasian, and 5% were Hispanic. They had a mean age of 21.5 years old and were predominantly male – 39 were male and 16 were female. Families were assessed approximately five weeks after patient discharge to identify two current areas of conflict with the patient. Patients were also interviewed and asked about areas of conflict with their parents. Patients and parents responded to the conflict cues on audiotape. Communication deviance (CD) was subsequently scored using Thematic Apperception Test (TAT) protocols (Doane, 1978), which contained 27 speech deviance categories. Additionally, the Interactional Communication Deviance system (ICD; Velligan, Christensen, Goldstein, & Margolin, 1988) was used to code transcripts of the audiotapes.

Findings of the study echo those of Docherty et al. (1996). They reveal that schizophrenic patients have a tendency to make ambiguous references and speak in a disorganized manner that illustrated an inability to share discourse with and focus on a topic with a listener (Miklowitz et al., 1991). Furthermore, the study revealed that patients with mania were more likely to use “odd” words in their conversations and sentences that were constructed in a manner that differed greatly from typical sentence construction.

Interestingly, these traits of speech usage for both patients with mania or schizophrenia were frequently shared by their parents (Miklowitz et al., 1991). As such, eccentricities in speech may not be recognized by people suffering from psychotic symptoms, as they are representative of speech within their family of origin. This may cause increased frustration with CD within an intimate relationship. Furthermore, these findings indicate that it is possible that, “...marked levels of CD among parents may serve as generic stressors that may shape the severity of psychopathology in offspring”

(Miklowitz et al., 1991, p. 171). These findings illustrate that communication habits may have an enormous impact on family members' well-being.

According to Hooley's (2004) review of research on the topic of expressed emotion (EE), family relationships and communication are also correlated with outcomes for people suffering from mental illness with psychotic symptoms. Two forms of negative communication contribute to the definition of expressed emotion (EE) – criticism and hostility. EE has been shown to impact relapse rates of people with a major mental illness – in fact patients with a major mental illness who live in a family with high rates of EE have relapse rates that are two to three times higher than those of patients in families that do not display these negative forms of communication (Hooley, 2004). Other communication characteristics that were found in high-EE families include the tendency to speak more and listen less than families with relatives who are low in EE, and an increased level of criticism, disagreement and unaccepting behavior. The communication cycle that is most common in high-EE families is a pattern of negative behavior by a relative, which results in negative behavior by the person with mental illness, which leads to more negative behavior by the relative, and the cycle continues (Hooley, 2004). This finding does not indicate that family's communication patterns cause schizophrenia, rather that frequent negative interactions within families in which a person is already suffering from schizophrenia may serve to aggravate symptoms.

Hooley's (2004) research also reveals that between 45% and 75% of relatives of patients with schizophrenia were rated as high in EE. That said, it is believed that the roots of EE may be the family members' desires to help "heal" their family members who are suffering from a mental illness (Hooley, 2004). Overall, however, harsh criticisms,



which are a component of EE serve to actually indicate that families are not supportive. In Koenig, Sachs-Ericsson, and Miklowitz's (1997) study of psychiatric patients' interactions with relatives, the patients viewed their relatives as being more supportive of them when harsh criticism or negative communication was rated as low.

Destructive communication and its impact on the well-being of people with mental illness with psychotic symptoms was also considered in a Thompson et al. (2000) study on family interventions for bipolar disorder. In this study, 26 participants who were involved in another study regarding the efficacy of family psychoeducation and mood stabilizers for treating bipolar disorder were assessed using a variety of measures to determine the overall difficulty in implementing family psychoeducation therapy for families of people with bipolar disorder. Patients in the study ranged in age from 18 to 46 years old with a mean age of 26. They also had a mean of 14 years of education and were predominantly Caucasian (65%); 27% were African American and 8% identified as Asian American. A total of 33 relatives were identified as participating in psychoeducation with the patients in the sample. These relatives were mostly parents – 12 mothers and 13 fathers were working with patients in the sample. Additionally, five spouses, an aunt, a cousin, and a grandmother were identified as relatives working with the patients. Diagnoses of bipolar disorder were based on chart reviews, the Structured Clinical Interview for the DSM-III-R (SCID; Spitzer et al., 1990) and the Brief Psychiatric Rating Scale (BPRS; Lukoff, Nuechterlein, & Ventura, 1986). Family members also received the Camberwell Family Interview (CFI; Vaughn & Leff, 1976), which determined family members' levels of EE. A family interaction task was also used

and coded for family's affective styles (AS). Additionally, a Family Therapist Questionnaire was developed for the study (Tompson et al., 2000).

According to study findings, relatives' communication styles had a significant impact on the course of treatment for bipolar disorder. The authors report that "The strongest predictor of relative's treatment difficulties was the tendency to use the most destructive forms of communication, particularly harsh/personal criticisms" (Tompson et al., 2000, p. 117). The authors also emphasized the importance of strong communication skills within a family in which a person has a mental illness such as bipolar disorder. They noted that interventions for treating bipolar disorder tend to focus on building communication and problem-solving skills within the family.

The importance of communication in working with patients with schizophrenia is also highlighted in the Hooley (2004) review of literature, which finds that family-based treatment approaches for severe mental illness most commonly include a focus on improving interaction patterns within the family and facilitating improved problem-solving skills. Hooley notes that people with schizophrenia whose families undergo communication skills training have relapse rates of 10% compared to 50% for those who are not in treatment. The aforementioned Lukens et al. (2004) study had similar findings, "By bridging and strengthening communication among family members and between formal and informal caregivers, the likelihood of improved outcomes for both the family and the person with illness can only increase" (p. 498). As such, the importance of the link between severe mental illness and communication is further displayed.

### *Mood/Anxiety Disorders and Communication*

The impact of depression on family members and relationship satisfaction was documented in a previous section of this literature review. The interplay of communication and psychopathology symptoms was previously noted as well. Literature shows that severe psychopathology, such as bipolar disorder and schizophrenia, clearly impacts language abilities and communication effectiveness (Christensen & Shenk, 1991; Docherty et al., 1996; Miklowitz et al., 1991). Forms of psychopathology symptoms involving depression or anxiety are found to have a profound impact on communication within families as well (Brummet, et al., 2000; Casbon et al., 2005; Marchand & Hock, 2003; Teichman et al., 2003;).

For example, the Marchand and Hock (2003) study of parents' depressive symptoms and conflict-resolution strategies in marriage and the impact on children's behavior found that depressive symptoms in adults may result in destructive problem-solving behavior, including withdrawal behavior and the use of verbal aggression by parents with depression. The study of 41 families and their children's teachers included a packet of questionnaires and a child behavior checklist. The sample was from a Caucasian population and their first born children – 28 children were female and 23 were male. Mothers in the sample were a mean 35 years old and had a mean of 15 years of education. Fathers in the sample were a mean 38 years old and also had a mean of 15 years of education. Family income ranged from \$12,500 to \$200,000, with a mean of \$56,263. A few fathers chose to not participate in the study, although all families were intact at the time of the study. Specific instruments that were used in the study included the CES-D (Radloff, 1977) to assess for depressive symptoms in parents, the Conflict-

Resolution Behavior Questionnaire (CRBQ; Rubenstein & Feldman, 1993), which was used to assess conflict resolution styles, and the Child Behavior Checklist (CBCL; Achenbach, 1991) to assess child behaviors (Marchand & Hock, 2003). Depressive symptoms in parents in the study were found to be related to the parent's typical style of handling conflict. Parents who reported more depressive symptoms also reported more avoidance and attacking tendencies in the marriage when attempting to work together to resolve a problem.

Negative communication behavior was also a key finding in the Casbon et al. (2005) study regarding negative feedback and individuals with depression. Two studies were conducted for this project, with findings from Study 2 serving as the most relevant. Study 2 included 60 couples who participated in a laboratory session in which three discussions occurred – one discussion for 15-minutes regarding an agreed upon problem in the marriage and two 10-minute discussions that were used to determine behaviors that partners enact when soliciting and offering social support. Coders were trained to identify negative feedback seeking on audiotapes of the discussions, based on negative feedback scales that were created for the study. Also, the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979; Beck & Steer, 1987) was used to assess for depressive symptoms in study participants.

Couples were eligible to participate in Study 2 if they were both in their first marriage, had been married for less than six months, had no children, were 18 years old or older with wives no older than 35, spoke English, had at least a 10<sup>th</sup> grade education, and were not planning on leaving the area in the near future. Husbands in the sample averaged 24.5 years of age and 15 years of education, as well as incomes from \$11,000 to \$20,000.

Wives were an average of 24 years old, had a mean of 16 years of education, and had the same reported income as the husbands. Only 30% of the sample had not cohabited prior to marriage. Finally, 75% of the sample was Caucasian, 10% was Hispanic, 7% was Asian, 5% was African American, and 3% of the sample marked “other” for the question regarding race (Casbon et al, 2005).

Negative feedback from a spouse fuels a spouse with symptoms of depression to seek further negative feedback, according to study findings (Casbon et al., 2005). The interpretation of these results is that, “...depressed individuals are likely to respond to negative evaluations and feedback from others with behaviors that could place them at risk for further rejection and continuing, if not worsening problems with depression” (Casbon et al., 2005, p. 485). This means that individuals with depression respond to criticism – or negative communication – with potentially self-damaging behavior that is likely to increase not only their depressive symptoms, but also their interpersonal troubles in the relationship as well.

The aforementioned Zlotnick et al. (2000) article yielded similar results in that past major depressive disorder in that study was significantly associated with more negative interactions with family members, including spouses and live-in partners. Additionally, major depressive disorder in the study was also related to fewer positive and more negative interactions across all interpersonal relationships, compared to individuals without a mental illness.

Jackman-Cram, Dobson, and Martin’s (2006) study examined the link between depression and couple communication broken down by the sexes of the partners. The study sample included 68 married couples recruited from newspaper advertisements and

an outpatient psychiatric clinic in Calgary, Canada. Participants included couples in which partners were not distressed or depressed, and couples in which at least one partner met criteria for depression or for being in a distressed relationship. All participants were between 18 and 60 years old, spoke fluent English, were currently living with their spouses, and had been married for at least one year. Couples in the sample were married for an average of 10 years and had an average of two children. Husbands were an average age of 40 with 14.5 years of education. Wives were an average age of 38 years old and had an average of nearly 14 years of education.

A number of assessment measures were used in the study, including the Dyadic Adjustment Scale (DAS; Spanier, 1976) to measure relationship satisfaction, the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) to measure symptoms of depression, the Structured Clinical Interview for DSM (SCID-P; Spitzer et al., 1990) to determine the presence of other psychiatric illnesses, and the Marital Interaction Coding System (MICS-IV; Weiss, 1992) to code interactions during a videotaped problem-solving discussion (Jackman-Cram et al., 2006). Regarding the findings, the authors note that “Differences in aggressive, facilitative, and resolution-oriented behaviors were not related to the presence of a depressed wife. These results suggest the possibility that previous findings of dysfunctional interactional patterns in depressed couples may be because of marital distress rather than depression, *per se*” (Jackman-Cram et al., 2006, p. 383). This study’s findings contradict some studies that find that depression results in negative feedback loops, leading to poor marital satisfaction. Instead, it posits that dysfunctional interaction in couples in which depression is present may instead be the result of marital distress, rather than depression.

Hostility, which is defined as a combination of cynicism, aggressive responding and hostile affect – all negative communication styles – may also be associated with depression. In one study by Brummet et al. (2000), self-ratings of hostility of 898 married couples were examined to determine if they were predictors of depression. Self-rated hostility information was obtained via information from an abbreviated version of the Cook-Medley Hostility Scale (Cook & Medley, 1954), which was shortened to a scale with subsets of cynicism, hostile affect and aggressive responding. Depression was determined via the CESD (Radloff, 1977). Self-ratings of hostile affect were positively correlated with depressive symptoms in both male and female study participants. Additionally, all three hostility components in one's spouse were positively related to one's self-reported symptoms of depression for women – although this was not the case for men. Study findings reveal that over time the negative social environment that surrounds people who engage in hostile interpersonal interactions – or forms of negative communication - may result in feelings of distress or depression for the recipients of the hostile communication in the relationship.

Teichman et al. (2003) studied cognitive, interpersonal and behavioral predictors of depression for both depression suffers and their spouses. Their study included 134 married people with depression and their spouses. Patients who were in the sample ranged in age from 25 to 64 years old, with a mean age of 43. Spouses of the patients in the sample ranged in age from 24 to 75 years old, with a mean age of 44. Marriages of sample participants were between 3 and 49 years, with a mean length of 18 years. Depression was assessed in this study via the BDI (Beck, et al., 1961). Self-concept was assessed via a subscale of the Tennessee Self-Concept Scale (Fitts, 1965), hostility for

people with depression and their spouses was measured via three subscales of the Hostility-Guilt Inventory (Buss & Durkee, 1957), and involvement in home activities was measured via a special questionnaire created by Mann-Kanovitz (1977). Study findings reveal that there is a significant relationship between spouses' hostility and spouses' depression in a relationship. Hostile feelings affect spouses' well-being in particular when men in a relationship are depressed. Furthermore, the authors explain that, "...regardless of gender, patients' [with depression] self-concept was significantly lower than that of spouses and the self and spouse ascribed hostility were significantly higher" (Teichman et al., 2003, p. 253). Finally, findings from the study reveal that experiencing a spouse as hostile may lead to reciprocity in interaction in the system –with negative communication fueling negative communication in couples in which depression is present. Interestingly, however, perceived hostility was only associated with both spouses' levels of depression in couples in which the husband had the most depressive symptoms. Overall, however, the cycle of hostility or negative communication and depression within couples is illustrated by this study as well.

Furthermore, Goldman Sher, Baucom, and Larus (1990) conducted a cross-sectional study of 12 wait listed control couples and 35 treatment couples participating in a larger marriage therapy outcome project at the University of North Carolina, regarding communication patterns in distressed couples both with and without the presence of depression. The study used the Dyadic Adjustment Scale (DAS: Spanier, 1976) to measure levels of marital distress, and the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinnley, 1951) to determine the presence of psychopathology in study participants. Additionally, Marital Interaction Coding System III (MICS III; Weiss



& Sommers, 1983) was used to code interactions in the couple based on a 7-minute problem-solving interaction. Positive and negative communication behaviors, relative to typical behaviors comprising EE were differentiated to assist with interaction coding.

Overall, the study found that couples in which depression was present had the lowest satisfaction and the highest degree of negative communication. According to the authors, negative communication is a hallmark of marital distress. In terms of positive communication however, findings clearly indicate that it plays a weaker role in relationship satisfaction than negative communication – although its impact is still quite significant (Goldman Sher et al., 1990).

#### *Trauma Symptoms and Communication*

Communication regarding traumatic events may help some people suffering from PTSD symptoms, such as dissociation and defensive avoidance, better deal with their experiences. A study specific to gender, social support and communication related to victims of violent crime experiencing PTSD found benefits of positive social support (Andrews, Brewin, & Rose, 2003). In this study, 157 men and women who had been victims of a violent crime were interviewed. They average 35 years old. Approximately 45% of the sample was married or cohabiting with a partner and nearly 30% had a college degree. The study took place in the United Kingdom (UK) and 86% of participants were born in the UK. 118 men and 39 women comprised the total sample.

The measure of social support that was administered to study participants was the Crisis Support Scale (Joseph, Andrews, Williams, & Yule, 1992), which largely measures social support in terms of communication – such as the ability to confide in others, and

negative responses from others. PTSD symptoms were determined by the Posttraumatic Stress Disorder Symptom Scale-Self Report (PSS-SR; Foa et al., 1993).

Andrews et al. (2003) found that PTSD symptoms six months post-crime were explained by the differences in levels of negative responses reported by victims. Interestingly, the benefits of support satisfaction and the impact of the negative responses reported on the ultimate course of the PTSD symptoms were significantly greater for women than for men in the study. An absence of negative responses was a significantly stronger signifier of support satisfaction than the presence of positive support, overall. However, although there were equal reports of positive support from both male and female victims of violent crime in the study, women were more likely to report negative responses from their family and friends, in terms of offered support. Based on these findings the study concludes that , "...routine assessment of negative support and attempts to counter it, for example by including partners and relatives in the therapeutic process, could significantly improve PTSD outcomes, particularly for women. Consistent with this, critical attitudes by partners have been found to predict a poorer response to treatment for PTSD" (Andrews, et al., 2003, p. 426). As such, it was found that partner communication, especially for women, may play a role in recovery from the psychological damage of a traumatic event – in this case being the victim of a violent crime.

Another study of communication and trauma symptoms involved police supervisors and their peers and considered whether communication served to buffer traumatic stress that resulted from daily duties (Stephens & Long, 2000). The study included a sample of 527 police officers in New Zealand. Only 11% of respondents were female, officers were

between 21 and 62 years old and had been working as police officers for between 1 and 38 years. A number of measures were used in this study, including a civilian version of the Mississippi PTSD Scale (Keane, Caddell, & Taylor, 1986) and the Pennebaker Inventory of Limbic Languidness (PILL; Pennebaker, 1994), which measured physical symptoms experienced by the officers. Additionally, the traumatic stress schedule (Norris, 1990) was used to determine types of trauma experienced. Also, the content of communication and ease of talking about trauma were considered measures of social support and were determined by measures created based on others developed by Beehr, King, and King (1990) and Fenlason and Beehr (1994).

Study findings revealed that the more social support resources reported by the officers, the less likely they were to exhibit long-term health problems following exposure to traumatic events. Particularly, perceptions of the ease of talking about the traumatic events experienced at work and communications about the disturbing experiences that they had were notably effective at buffering negative physical and psychological effects of the trauma, as were both positive and negative communications about their work, overall, with peers. As such, the ability to communicate in both a positive and negative manner about experiences helped officers avoid some negative outcomes of their traumatic experiences.

Many studies that focused on relationship satisfaction and PTSD symptoms also noted the impact that the symptoms have on communication skills or the impact that communication has on helping people deal with their PTSD symptoms. For example, the McFarlane and Bookless (2001) literature review on PTSD and interpersonal relationships noted that PTSD often results in neurological changes that disrupt

communication. Examples of this are found in the loss of mirroring humor and attunement in people with PTSD in their relationships with others. The Spasojevic et al. (2000) article regarding Bosnian refugees reports that, “Couples communication distress (problem solving communication and affective communication ) showed the strongest correlation with PTSD...Family members, each with his or her own trauma, often become isolated from one another, which can result in communication breakdown and marital distress” (p. 213). Finally, Hendrix et al. (1998) reported that in their study of Vietnam veterans’ arousal and avoidance and its impact on spouses’ perceptions of functioning, higher levels of war-related avoidance in veterans predicted lower levels of spousal ratings on issues regarding family communication.

#### *Literature Review Conclusion*

Overall, according to literature, people with mental illnesses – including those with psychotic symptoms, mood/anxiety symptoms and trauma-based symptoms, experience increased challenges in relationships with their families of origin and their partners (Burke, 2003; Daley et al., 2000; Heene et al., 2005; Hendrix et al., 1998; Heru et al., 2005; Hooley et al., 1987; Karney & Bradbury, 1997; McFarlane & Bookless, 2001; Spasojevic et al., 2000; Tempier et al., 1998; Vaddadi et al., 2002; Whisman, 1999; Whisman et al., 2004; Zlotnick et al., 2000). Also, psychopathology symptoms may impact one’s ability to communicate effectively with others (Casabon et al., 2005; Christensen & Shenk, 1991; Docherty et al., 1996; Goldman Sher, et al., 1990; McFarlane & Bookless, 2001; Marchand & Hock, 2003; Miklowitz et al., 1991; Zlotnick et al., 2000). Furthermore, relationship satisfaction is associated with the presence of effective, or more positive and less negative communication (Christensen & Shenk, 1991;

Gottman & Krokoff, 1989; Gottman & Levenson, 1992). As such, this study explores the interplay of various psychopathology symptoms – psychoticism, mood/anxiety symptoms and trauma-based symptoms in relation to couple distress and aims to determine if communication within the couple is part of with this association as well.

### Hypotheses

Based on the literature on prior research on psychopathology and relationship adjustment, the following hypotheses were tested in this study:

#### *Hypothesis 1*

*The greater one partner's level of psychopathology symptoms, the lower the other partner's level of relationship satisfaction will be.* This association will be tested for both male and female partners in the relationship. It will also be tested both together for the three types of psychopathology considered in this study and separately for the three types of psychopathology considered in this study – mood/anxiety disorder symptoms, psychoticism symptoms, and trauma-based symptoms.

#### *Hypothesis 2*

*The greater one partner's level of psychopathology symptoms, the more that each member of the couple will exhibit negative communication toward the other member.* This association will be tested for both male and female partners in the relationship. It will also be tested both together for the three types of psychopathology considered in this study and separately for the three types of psychopathology considered in this study – mood/anxiety disorder symptoms, psychoticism symptoms, and trauma-based symptoms.

### *Hypothesis 3*

*The greater one partner's level of psychopathology symptoms, the less that each member of the couple will exhibit positive communication toward the other.* This association will be tested for both male and female partners in the relationship. It will also be tested both together for the three types of psychopathology considered in this study and separately for the three types of psychopathology considered in this study – mood/anxiety disorder symptoms, psychoticism symptoms, and trauma-based symptoms.

### *Hypothesis 4*

*More positive communication by each partner will be associated with the other partner's greater relationship satisfaction.*

### *Hypothesis 5*

*More negative communication by each partner will be associated with the other partner's lower relationship satisfaction.*

### *Hypothesis 6*

*The relation between partner 1's psychopathology symptoms and partner 2's level of relationship satisfaction will be mediated by partner 1's level of negative communication toward partner 2.* This will be tested for both male and female partners in the relationship. It will be tested only for symptoms in which a relationship between psychopathology symptoms and relationship satisfaction is found.

### *Hypothesis 7*

*The relation between partner 1's psychopathology symptoms and partner 2's level of relationship satisfaction will be mediated by partner 1's level of positive communication toward partner 2.* This will be tested for both male and female partners in the

relationship. It will be tested only for symptoms in which a relationship between psychopathology symptoms and relationship satisfaction is found.

### Research Questions

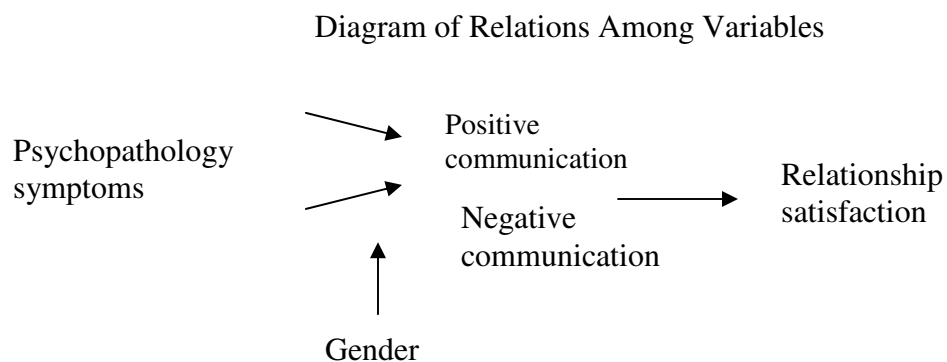
In addition to the above hypotheses, research questions were posed regarding (a) possible gender differences in relations between psychopathology and relationship functioning and (b) possible differences among the three types of psychopathology in their relations with couple communication and relationship satisfaction:

#### *Research Question 1*

*Is there a gender difference in the association between level of psychopathology symptoms and degrees of partners' positive communication, negative communication, and relationship satisfaction?*

#### *Research Question 2*

*Are there differences among the three types of psychopathology symptoms examined in this study – mood/anxiety disorder symptoms, psychoticism symptoms, and trauma-based symptoms -- in their associations with both communication and relationship satisfaction?*



*Figure 1.* Hypotheses design model.

## CHAPTER 2: METHODS

### Definitions of Variables

#### *Forms of Psychopathology Symptoms*

Independent variables in this study include degrees of severity of three forms of psychopathology symptoms. Psychopathology symptoms are the noted effects of a possible mental illness. People may experience some symptoms of a mental illness without receiving a specific diagnosis – the presence of a certain number of symptoms is typically necessary for a diagnosis. However, the symptoms themselves may be bothersome and may impact the person's daily functioning. Some types of symptoms are considered to be potentially more bothersome and disruptive of functioning than others. For example, it is not unusual for people to experience depression or anxiety symptoms at some point in their lives, when dealing with certain stressful life situations. Whereas lower levels of these relatively mild forms of psychopathology are within the normal range, higher levels are considered clinically significant and may be forms of mental illness. In contrast, paranoia and other delusional thinking, as well as hallucinations or major distortions in perceptions are more extreme psychopathology symptoms and are more consistently indicative of the presence of a major mental illness or psychoticism. Finally, mental illnesses such as generalized anxiety disorder, major depressive disorder, bipolar disorder and schizophrenia can not be attributed to a certain event or situation that sparked their development. However, symptoms of trauma-based disorders, such as Post-Traumatic Stress Disorder (PTSD) tend to have a clear beginning point – typically the experiencing or witnessing of a traumatic event. Consequently, varying forms of psychopathology symptoms have been broken into categories for this study –



mood/anxiety disorder symptoms, psychoticism symptoms, and trauma-based symptoms, to aid in the understanding of their impact on partners' negative and positive communication, as well as relationship satisfaction.

To measure the presence of mood/anxiety and psychotic psychopathology symptoms, this study used the Brief Symptom Inventory (BSI; Derogatis, 1993), which considers psychopathology symptoms in terms of nine subscales: somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. It also measures three indices of distress – the Positive Symptom Total, the Positive Symptom Distress Index and the Global Severity Index (Boulet & Boss, 1991; Hayes, 1997; Morlan & Tan, 1998). Symptoms included in the mood/anxiety symptom category, for the purposes of this study include somatization, obsessive-compulsive symptoms, depression, anxiety and phobic anxiety. Symptoms included in the psychotic symptom category, for the purposes of this study include paranoid ideation and psychoticism. Finally, to measure the presence of trauma-based symptoms, this study used the Trauma Symptom Inventory - Adapted (TSI-A; Briere, 1995). Trauma-based symptoms that were considered in this study are defensive avoidance and dissociation.

#### *Negative and Positive Communication*

This study assessed the communication between members of a couple as they discuss a mildly to moderately contentious issue in their relationship. The language, tone, and positive and negative behaviors of the two partners during the discussion were used to assess communication quality. Communication was divided into categories of positive communication -- partners' acts that contribute toward solving the problem together and

understanding one another, and negative communication – acts that are adversarial, conflictual, or avoidant.

As Epstein and Baucom (2002) summarize in their book on enhanced cognitive behavioral therapy for couples, some examples of positive interactions and communication between couples include communication of assent, approval and caring, empathy, humor, smiling, kind physical touch, laughing, and effective problem solving. Similarly, negative communication and interactions can take on a wide variety of formats. Some examples of negative interactions include communication of hostility, criticism, and contempt. The commonly noted “demand/withdraw” interaction pattern is also a form of negative interaction as it likely serves to maintain a sense of power or control over a situation.

Specifically, in this study, communication behavior was divided into categories of positive and negative interaction. Using the Marital Interaction Coding System-Global (MICS-G; Weiss & Tolman, 1990), a 5-point scale was used to rate partners’ interaction behaviors – both positive and negative -- from “none” to “very high.” Categories that are rated include conflict communication, problem-solving acts, validation of the partner’s messages, invalidation of the partner, facilitation, and withdrawal from the conversation. Nonverbal cues that extend beyond word content are considered with this system and are incorporated into the coding of positive and negative communication. Such cues include indices of affect, posture, and the tone of voice used to make statements (Epstein & Baucom, 2002).

### *Relationship Satisfaction*

In this study, each partner's relationship satisfaction was assessed with the Dyadic Adjustment Scale (DAS; Spanier, 1976). The DAS assesses the individual's overall level of satisfaction versus distress within the couple relationship, including the degree to which he or she has contemplated termination of the relationship.

### *Research Design*

#### *Design/Method*

One independent variable explored in this study was the type of psychopathology symptoms as reported on the Brief Symptom Inventory (BSI; Derogatis, 1993) – mood/anxiety symptoms and psychoticism symptoms -- and the Trauma Symptom Inventory - Adapted (TSI-A; Briere, 1995) - trauma-based symptoms of defensive avoidance and dissociation. The dependent variables in this study were the degrees of the two partners' relationship satisfaction, as measured by responses to the Dyadic Adjustment Scale (DAS), as well as the partners' positive and negative couple communication, which were determined based on coding of communication behavior, using the Marital Interaction Coding System – Global (MICS-G; Weiss & Tolman, 1990), using videotaped samples collected from couples' discussions of actual topics of conflict in their relationships.

The sample in this study was drawn from the Couples Abuse Prevention Program (CAPP) study in the Family Service Center outpatient couple and family therapy clinic at the University of Maryland, College Park. Partners' constructive and destructive forms of communication were examined as possible mediators of the relation between psychopathology symptoms and relationship satisfaction level.

Previously collected CAPP data were used in this study. To date, the CAPP data available to assess all of the variables for this study consist of information collected from 83 couples who have sought therapy at the FSC for a variety of issues affecting their relationships. Collected data include information from self-report questionnaires, such as the Brief Symptom Inventory (BSI; Derogatis, 1993) and Dyadic Adjustment Scale (DAS; Spanier, 1976). CAPP data also include a sample of each couple's communication as they discuss an issue within their relationship on which they experience mild to moderate disagreement, which was coded by trained undergraduate coders with the Marital Interaction Coding System-Global (MICS-G; Weiss & Tolman, 1990). Couples who qualified for the CAPP study have reported some form of psychological and/or physical abuse within their relationship and a mutual desire to continue the relationship.

### *Sample*

For this study, secondary analyses were used to examine data from the larger ongoing six-year study, referred to as CAPP (Couples Abuse Prevention Program), which focuses on assessment and treatment of abusive behavior in couples and is conducted by researchers in the Department of Family Studies at the University of Maryland, College Park. The existing sample consists of 83 heterosexual couples who sought couple therapy at the university-based clinic between 2000 and 2006 and voluntarily participated in the CAPP treatment outcome study that has compared various couple therapy models in treating psychological and/or physical abuse.

Participants' eligibility for the CAPP study was determined by responses on a variety of self-report measures, which determined the presence of psychological or physical

abuse within a couple. Couples who qualified for the study also indicated a desire to stay in the relationship. Couples in which physical violence was severe to the point that medical attention was sought or needed were deemed ineligible for the study. Couples in which untreated alcohol or substance abuse was present were also not eligible to participate.

CAPP study participants contacted the University of Maryland's Family Service Center (FSC) requesting couples therapy. Couples were randomly assigned to treatment groups on intake and given uniform assessment measures upon their initial meeting with therapists. Based on specific responses to the Multi-Dimensional Emotional Abuse Scale (MDEAS; Murphy & Hoover, 2001) and the Conflict Tactics Scale – Revised (CTS2; Straus, Hamby, Bony-McCoy, & Sugarman, 1996), couples were considered eligible or ineligible for participation. Those considered eligible received an overview of the CAPP program and were offered double sessions of therapy for \$20, matching the clinic's minimum rate on its sliding scale fee schedule, assuming the couple's completion of 10 double-length therapy sessions. Couples who were eligible and chose to participate in the study signed Institutional Review Board (IRB) approved consent forms and returned for a second day of assessment, including the taping of a 10-minute communication sample, which was later coded by trained coding personnel, to determine the frequencies of particular forms of positive and negative communication within the couple, which are described in the measures section of this document.

### *Demographics*

As previously mentioned, the sample consisted of 83 couples presenting for therapy at the FSC who met eligibility requirements for the CAPP study. Men in the sample were a

mean 33 years old (standard deviation 8.7) and women were a mean 31 years old (standard deviation 8.2). Couples had been together for an average of 6 years (standard deviation 6.2 for females and 6.5 for males). A total of 78% of the couples in the sample were married or cohabiting. Also, in terms of ethnicity of the sample: 48% were Caucasian; 37% African American; 8% Hispanic; 1% Native American; 1% Asian Pacific Islander, and 4% self-identified as “Other.”

### *Instruments*

The following instruments were used to measure the variables examined in this study:

#### *Mood/Anxiety Disorder Symptoms and Psychoticism Symptoms*

The mood/anxiety disorder symptoms and psychoticism symptoms of psychopathology were measured using the Brief Symptom Inventory (BSI; Derogatis, 1993). Each item on the 53-item BSI describes a psychopathology symptom, and respondents use a five-point response scale to indicate the degree to which he or she experiences that symptom. The response scale options range from 0 – “not at all” to 4 – “extremely”, regarding the degree of symptoms experienced degree the last four months (Boulet & Boss, 1991; Hayes, 1997; Morlan & Tan, 1998).

The BSI is comprised of nine subscales assessing different types of psychopathology. The subscales include: somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism (Boulet & Boss, 1991; Hayes, 1997; Morlan & Tan, 1998). In addition to the subscales, the BSI can be scored for a Global Severity Index, which is based on the sum of the respondent’s ratings of severity for all of the inventory’s symptoms.

For the purposes of this study, BSI subscales were broken into researcher-devised categories of mood/anxiety disorder symptoms and psychoticism symptoms.

Mood/anxiety symptoms include somatization, obsessive-compulsive acts, depression, anxiety, and phobic anxiety. Psychoticism symptoms include paranoid ideation and psychoticism - symptoms that involve major distortions in perception and thinking.

Categories were created based on researcher consideration of symptoms that may occur in daily life, but are not considered abnormal if they do not persist or alter daily functioning. Such symptoms were placed in the mood/anxiety symptom category.

Psychoticism symptoms were symptoms that do not occur in daily life in American culture and are more likely to impair regular functioning. Furthermore, the distinction between psychotic and non-psychotic symptoms is based on information in the DSM-IV, (American Psychiatric Association, 1994), a manual of diagnostic criteria widely used by mental health care professionals.

Items comprising each subscale are provided in Table 1 below.

Table 1

*Items Comprising BSI Subscales*

Somatization	Faintness or dizziness
	Pains in heart or chest
	Nausea or upset stomach
	Trouble getting your breath
	Hot or cold spells
	Numbness or tingling in parts of your body
	Feeling weak in parts of your body

Obsessive compulsive	Trouble remembering things
	Feeling blocked in getting things done
	Having to check and double-check what you do
	Difficulty making decisions
	Your mind going blank
	Trouble concentrating
Depression	Thoughts of ending your life
	Feeling lonely
	Feeling blue
	Feeling no interest in things
	Feeling hopeless about the future
	Feelings of worthlessness
	Your feeling being easily hurt
Anxiety	Nervousness or shakiness inside
	Suddenly scared for no reason
	Feeling fearful
	Feeling tense or keyed up
	Spells of terror or panic
	Feeling so restless you couldn't sit still



Phobic anxiety	Feeling afraid in open spaces or on the streets
	Feeling afraid to travel on buses, subways or trains
	Having to avoid certain things, places, or activities because they frighten you
	Feeling uneasy in crowds, such as shopping or at a movie
	Feeling nervous when you are left alone
	Feeling very self-conscious with others
Paranoid ideation	Feeling others are to blame for most of your troubles
	Feeling that most people cannot be trusted
	Feeling that you are watched or talked about by others
	Others not giving your credit for your achievements
	Feeling that people will take advantage of you if you let them
	Feeling that people are unfriendly or dislike you
Psychoticism	The idea that someone else can control your thoughts
	Feeling lonely even when you are with people
	The idea that you should be punished for your sins
	Never feeling close to another person
	The idea that something is wrong with your mind
	Feeling inferior to others
	Feeling very self-conscious with others
	Feelings of worthlessness

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Adapted from Derogatis, L. R. (1993). *BSI*. Minneapolis, MN: MCS Pearson, Inc.

In consideration of whether the subscales maintained their reliability in the sample used in this study, which is not a clinical sample, Cronbach alphas were run on the subscales in the study sample. Internal consistency reliability for each of the subscales used in this study, based on the coefficient alpha for both the sample used in this study and the sample used in the BSI manual (Derogatis, 1993) are provided in Table 2 below.

Table 2

*Internal Consistency Reliability: FSC Sample, BSI Manual Sample*

BSI symptom subscale	FSC Male $\alpha$	FSC Female $\alpha$	BSI Manual $\alpha$
Somatization	.65	.78	.80
Obsessive compulsive	.87	.83	.83
Depression	.88	.86	.85
Anxiety	.79	.85	.81
Phobic anxiety	.39	.69	.77
Paranoid ideation	.78	.78	.77
Psychoticism	.74	.77	.71

Adapted from Derogatis, L. R. (1993). BSI. Minneapolis, MN: MCS Pearson, Inc. & University of MD CAPP data.

The subscale means and standard deviations of the sample used in this study ( $n = 83$  males; 83 females) and the sample tested in the BSI manual ( $n = 361$  males; 358 females) are presented in Table 3 below.

Table 3

*Means and SDs of the FSC Sample and the Adult Sample in the BSI Manual*

FSC sample				
BSI symptom subscale	Male mean	SD male	Female mean	SD female
Somatization	.34	.41	.57	.60
Obsessive compulsive	.90	.83	1.2	.87
Depression	.60	.66	.87	.76
Anxiety	.55	.58	.77	.75
Phobic anxiety	.13	.20	.28	.40
Paranoid ideation	.65	.63	.77	.67
Psychoticism	.28	.31	.40	.40
BSI manual, adult nonpatients				
BSI symptom subscale	Male mean	SD male	Female mean	SD female
Somatization	.23	.32	.35	.46
Obsessive compulsive	.37	.41	.48	.54
Depression	.21	.33	.36	.56
Anxiety	.26	.31	.44	.54
Phobic anxiety	.11	.25	.22	.44
Paranoid ideation	.33	.41	.35	.49
Psychoticism	.15	.27	.17	.34

BSI manual, adult psychiatric outpatients				
BSI symptom subscale	Male mean	SD male	Female mean	SD female
Somatization	.67	.71	.94	.84
Obsessive compulsive	1.5	.98	1.6	1.0
Depression	1.6	1.1	1.9	1.5
Anxiety	1.5	.95	1.8	1.0
Phobic anxiety	.79	.84	.91	.91
Paranoid ideation	1.06	.93	1.21	.97
Psychoticism	1.12	.84	1.24	.89

Adapted from Derogatis, L. R. (1993). BSI. Minneapolis, MN: MCS Pearson, Inc. &

University of MD CAPP data.

Note: SD = Standard Deviation

Note: Presence of symptoms: 0 = not at all, 1 = a little bit, 2 = moderately, 3 = quite a bit, 4 = extremely.

The BSI is considered to be one of the best self-report measures of psychopathology symptoms (Morlan & Tan, 1998). Many studies have been conducted to substantiate this belief. One study that is relevant to the present study was conducted by Hayes (1997) and is concerned with the applicability of the BSI to clients presenting to University Counseling Centers. This study included BSI results from 2,078 clients representing 31 counseling centers. An exploratory factor analysis indicated that six of the BSI's subscales were most accurately represented – depression, somatization, hostility, social comfort (not previously identified in BSI studies), obsessive-compulsiveness and phobic anxiety. Unfortunately, the paranoid ideation, psychoticism, interpersonal sensitivity and anxiety subscales did not emerge in this factor analysis. That said, this may be due to the

population participating in the study – college students who may have abnormally low levels of these symptoms (Hayes, 1997).

Although the present study used a population from a University-based counseling center, it is a center that attracts community members rather than mainly college students. As such, this sample likely is more representative of the general population, and the full set of nine BSI subscales may be more applicable. Another study of reliability and validity of the BSI (Boulet & Boss, 1991) found that, “The internal consistency of the instrument was established for a relatively homogenous sample of forensic psychiatric inpatient and outpatients. The resulting measures of reliability revealed a high degree of consistency among the items that compose each dimension” (Boulet & Boss, 1991, p. 436). The study also found that the BSI appeared to be a valid index of degree of psychopathology.

The Boulet and Boss study (1991) used a sample of 501 male inpatients and outpatients of a psychiatric hospital who were diagnosed with mental illnesses via the DSM-III-R (American Psychiatric Association, 1987). An intelligence test (WAIS-R; Wechsler, 1981), and the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1951) were also used in the study to test convergent validity with sample responses to the BSI (Boulet & Boss, 1991; Derogatis, 1993). Overall, the results demonstrated that BSI subscales had significant correlations with indices of similar constructs assessed by the validation measures, as well as lower correlations with indices of theoretically different constructs.

Finally, Morlan and Tan (1998) found that the BSI was a useful tool for assessing overall symptoms. This study, investigated correlations between subscales of the BSI

and those of the Brief Psychiatric Rating Scale (BPRS; Hafkenscheid, 1991) to examine evidence of convergent validity (i.e., subscales from the two measures that are intended to assess similar types of psychopathology are significantly correlated). The study was conducted via the administration of the two tests to 27 volunteers in treatment for mental illness. It was found that the BSI has good convergent validity for assessing the presence of symptomology in clients, based on the significant correlations between of BSI subscale scores and corresponding BPRS subscale scores. Convergent validity for the BSI depression, anxiety, and hostility subscales was noted to be particularly strong (Derogatis, 1983; Morlan & Tan, 1998).

#### *Trauma-related Symptoms*

Dissociation and defensive avoidance trauma symptoms were measured via the Trauma Symptom Inventory - Adapted (TSI-A; Briere, 1995). A brief, 42-question report form of the Trauma Symptom Inventory (TSI; Briere, 1995). The TSI is a 100-item self-report measure that is used to assess a variety of trauma-related symptoms. Respondents rate frequency of items occurring in the past six month on a scale of 0 – never to 3 – often.

The measure includes 3 validity scales – Response Level, Inconsistent Response, and Atypical Response, which are used to measure malingering or exaggerated and inconsistent responses. The TSI also includes 10 clinical scales - Anxious Arousal, Depression, Anger/Irritability, Intrusive Experiences, and Defensive Avoidance - comprise five of the scales closely related to PTSD symptoms based on the DSM-IV-TR (American Psychological Association, 2000). Five other TSI clinical scales include Dissociation, Sexual Concerns, Dysfunctional Sexual Behavior, Impaired Self-Reference,

and Tension-Reduction Behavior – all of which are behaviors commonly seen in trauma survivors (McDevitt-Murphy, Weathers, & Adkins, 2005).

For the purposes of this study, the defensive avoidance and dissociation subscales were considered for the category of “trauma-based symptoms.” The defensive avoidance category measures for posttraumatic avoidance on both a cognitive (trying to block painful memories) and behavioral (avoiding stimuli that are reminders of the traumatic event) level. The dissociation category measures symptoms such as depersonalization, out-of-body experiences and psychic numbing.

The two subscales from the TSI were chosen because they considered symptoms that are often unique to experiences of trauma and they were not similar to any psychopathology symptoms measured on the BSI (Derogatis, 1993). Furthermore, some clinical scales of the TSI, such as Sexual Concerns, are often the reported reason of low relationship satisfaction in the couple. Such subscales were not included because they do not necessarily consider the impact of psychopathology symptoms on the relationship; rather, they are issues that impact the relationship regardless of the presence of psychopathology. Items comprising each scale are listed in Table 4 below.

Table 4

*Items Comprising TSI-A Subscales*

Defensive avoidance	Trying to forget about a bad time in your life
	Stopping yourself from thinking about the past
	Pushing painful memories out of your mind
	Staying away from certain people or places because they reminded you of something
	Trying to block out certain memories
	Not letting yourself feel bad about the past
	Trying not to have any feelings about something that once hurt you
	Trying not to think about things in your life that were painful
Dissociation	Feeling like you were outside your body
	Your mind going blank
	Feeling like you were watching yourself from far away
	Not feeling like your real self
	Not being able to feel your emotions
	Absent-mindedness
	Feeling like things weren't real
	Feeling like you were in a dream
	Daydreaming

Adapted from: Briere, J. (1995). *Trauma Symptom Inventory professional manual*. Odessa, FL: Psychological

Assessment Resources, Inc.



Reliabilities for the two scales used in this study, with the standardization sample was found to be  $\alpha = .90$  for defensive avoidance and  $\alpha = .82$  for dissociation (Briere, 1995). The subscale means and standard deviations of the sample used in this study ( $n = 83$  males; 83 females) and the non-patient sample tested in the TSI manual ( $n = 66$  males; 305 females) are presented in Table 5 below.

Table 5

*Means and SDs of the FSC Sample and the Adult Sample in the TSI Manual*

FSC sample				
TSI-A symptom subscale	Male mean	SD male	Female mean	SD female
Defensive avoidance	.75	.59	.94	.73
Dissociation	.80	.60	.97	.67
TSI no trauma history				
TSI-A symptom subscale	Male mean	SD male	Female mean	SD female
Defensive avoidance	.81	.74	.99	.69
Dissociation	.69	.69	.83	.44
TSI trauma history				
TSI-A symptom subscale	Male mean	SD male	Female mean	SD female
Defensive avoidance	1.5	.75	1.7	.75
Dissociation	1.5	.71	1.0	.72

Adapted from: Briere, J. (1995). *Trauma Symptom Inventory professional manual*. Odessa, FL: Psychological

Assessment Resources, Inc. & University of MD CAPP data.

Note: SD = Standard Deviation

Note: Span of frequency 0=Never... 3= Often.

The McDevitt-Murphy et al. (2005) study of the use of TSI to assess for PTSD symptoms found that it yielded a correct classification rate of 85.5% of individuals clinically diagnosed with PTSD, and that the measure showed good convergent validity compared to other measures of PTSD. This study included 62 respondents who lived in a small, southeastern city. Respondents were mostly female (89%) and Caucasian (80%). Additionally, 70% reported having attended at least some college. Also, all respondents reported experiencing at least one event that fit Criterion A of the DSM-IV (American Psychological Association, 2000) PTSD diagnostic criteria. The TSI was completed along with the Clinical Administered PTSD Scale (CAPS; Blake et al., 1995). Additionally, interviews were conducted with participants and the convergent validity of the TSI was measured via the use of the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997), the PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993), the Civilian Mississippi Scale (CMS; Vreven, Guadanowski, King, & King, 1995), and the Traumatic Stress Subscale of the Personality Assessment Inventory (PAI; Morey, 1991).

Findings revealed that nearly all TSI scales were significantly correlated with other tested self-report measures of PTSD – which indicates that the assessment displays good convergent validity – with the PTSD-specific TSI scales yielding the strongest correlations. Overall, this study found that the TSI is a valid measure of symptoms that are related to traumatic experiences (McDevitt-Murphy et al. 2005).

Briere's (1995) manual regarding the TSI indicates that all 10 of the TSI's clinical scales differentiated respondents who either did or did not suffer from PTSD. In the validation studies a 91.1% correct classification rate occurred.

### *Relationship Satisfaction*

Each partner's overall relationship satisfaction was measured with the Dyadic Adjustment Scale (DAS; Spanier, 1976). This 32-item self-report instrument measures individuals' satisfaction with various aspects of their relationships. Specifically, the DAS has four subscales measuring aspects of dyadic adjustment: *dyadic consensus* – the amount of agreement in a couple regarding issues impacting the relationship, such as finance, interpersonal relationships and household tasks, *dyadic satisfaction* – the degree of overall subjective satisfaction versus tension in the relationship and the amount of consideration given to terminating the relationship, *affectional expression* – satisfaction with displays of affection in the relationship such as the sexual activity in the relationship, and *dyadic cohesion* – common interests or activities within the couple. The DAS cutoff for differentiating between distressed and non-distressed couples is 100, and the distribution of DAS scores has been found to have a standard deviation of 16 (Spanier, 1976). In the sample used for this study, the mean score for males was 91.92 with a standard deviation of 21.47, and for females the mean was 85.45 with a standard deviation of 22.60, indicating that the couples tend to be in the distressed range.

The DAS is considered to be the most widely used measure of relationship quality (Graham, Liu, & Jeziorski, 2006). In Graham et al.'s (2006) review of literature about the DAS, they found that studies on the measure report strong overall reliability indices. Furthermore, as Spanier asserts in his manual on the instrument (Spanier, 1976), it is found to in fact be uninfluenced by cultural factors such as the nature of the relationship or respondent ethnicity or gender. All of the four subscales were also found to be reliable, based on the review of studies attempting to substantiate their reliability.

An additional study (Spanier & Thompson, 1982) resulted in similar findings. In this study, 205 men and women completed the DAS, and internal consistency of the measure was assessed using Cronbach's coefficient alpha, which was .91 for the total scale for the study sample. The authors concluded that, "...the DAS is a reliable and valid measure" (Spanier & Thompson, 1982, p. 737). Overall, the authors stated that while the subscales are not as strong as the overall measure of dyadic adjustment provided by the total score, they are still valid, and the DAS is generally appropriate as a measure of dyadic adjustment (Spanier & Thompson, 1982). As is standard practice in use of the DAS in research, the total DAS score was used as the measure of overall relationship satisfaction in the present study.

#### *Positive and Negative Communication Behavior*

Partners' positive and negative communication behavior were measured via the Marital Interaction Coding System-Global (MICS-G; Weiss & Tolman, 1990). In the larger study from which the data for this study were derived, undergraduate coders were trained for 35 hours to code couples' interactions as they were viewed in a 10-minute videotaped interaction. The couple's interaction is specific to an area of conflict in their relationship, as they were instructed to work toward solving the problem during their 10-minute discussion.

Behaviors are scored on a 5-point scale ranging from "none" to "very high" (a global rating of the behavior occurring within each 2-minute segments of the 10-minute discussion). The scale is used by coders to assess each partner on a variety of behaviors. The main behaviors that are rated are: *conflict* - such as criticism or complaints, *problem solving* - such as proposing a compromise or solution to an issue, *validation* - approval

or agreement with the partner, *invalidation* – a partner providing an excuse or engaging in a disagreement, *facilitation* – paraphrasing or positively engaging in mind reading, and *withdrawal* – unresponsiveness, physical distance (Epstein & Baucom, 2002).

Overall scores are determined by the sum of scores for three positive interaction categories (problem solving, facilitation, and validation) and three negative interaction categories (conflict, invalidation, and withdrawal) for each partner within the couple. Thus, the six types of behavior were collapsed into two (positive and negative) composite behavioral indices. Summed scores determine overall extent of positive and negative interactions among each partner within the couple.

Heyman's (2001) review of literature on a variety of tools used for clinical assessment finds that the most widely used coding system is the more specific act-by-act coding version of the MICS (Weiss & Sommers, 1983). Additionally, Weiss and Tolman's (1990) study of the MICS-G, which compared the tool to the MICS, found that the MICS-G was at least as effective in discriminating marital distress as the MICS, and potentially even more so. The study included videotaped interactions of 50 couples from five different research laboratories. The sample included an equal number of distressed and non-distressed couples. Unfortunately, no demographic information was provided on the couples used in the study by the laboratories supplying the tapes used. Tapes had been previously coded by MICS coders and were then also coded by MICS-G coders to determine the reliability of the new index. The goal of the study was to develop a more advanced global interaction rating system based on the MICS that was more cost-effective, reliable and able to differentiate interactions between distressed and non-distressed couples. Inter-rater reliability was found to range from moderate to high, and

the MICS-G was found to be at least comparable to the MICS based on the convergent validity and high discriminant validity that were found among the categories used in the rating system. In fact, the MICS-G was found to exceed the ability of the MICS to classify tape segments of couple interactions based on couples' classification of distress level.

### *Procedures*

As previously noted, this study was based on data collected for a larger ongoing study conducted by researchers in the Family Service Center (FSC) in the Department of Family Studies at the University of Maryland, College Park. Data used in the present study were collected over a six-year period from 2000-2006. The participants in the original study included couples who contacted the FSC for couple therapy and were then screened to determine eligibility based on responses to the Multi-Dimensional Emotional Abuse Scale (MDEAS; Murphy & Hoover, 2001) and the Conflict Tactics Scale – Revised (CTS2; Strauss et al., 1996). Upon determination of eligibility, couples were offered the opportunity to participate in couple therapy for a discounted price, based on the commitment of completing ten double (1.5 hour) therapy sessions. If they agreed to participate in the study, couples were scheduled for a second day of assessments during which the communication sample was completed. It is important to note that the CAPP study has received approval from the Institutional Review Board (IRB). Furthermore, all study participants reserve the right to withdraw from the study if they choose to, at any point.

Data collected from assessment tools completed on the first and second assessment days of the CAPP study – including the communication sample, were analyzed in terms

of overall scores on categories of psychopathology, relationship satisfaction and positive and negative communication to determine the impact of different forms of psychopathology symptoms on relationship satisfaction and the potential for mediation via positive or negative communication within the couple.

## CHAPTER 3: RESULTS

### Overview of Data Analyses

A quantitative statistical analysis of relevant CAPP data, involving Pearson correlations and partial correlations was used for this study. Analyses were conducted on scores for the degrees of psychopathology symptoms, the partners' levels of relationship satisfaction, and the partners' levels of positive and negative communication. The data file had no information that would identify the subjects in the study. The file is organized such that data from both members of a couple are included in one case, allowing analyses examining associations between characteristics of the two members of relationships (e.g., one person's psychopathology symptoms and the other person's relationship satisfaction). Pearson correlations were conducted to test the hypotheses involving direct relations between individual independent and dependent variables (e.g., male's psychoticism symptoms and female's relationship satisfaction), multiple regression analyses were used to test the joint relation between a set of independent variables (e.g., the males' three types of psychopathology) and a dependent variable (e.g., the female's relationship satisfaction), and partial correlations were used to test the relationship between level of psychopathology symptoms and partner relationship satisfaction, controlling for the individual's communication. For all hypotheses tested via correlations, correlations were considered to be significant at the .05 level or below for a one-tailed test.



### *Tests of the Hypotheses*

Each hypothesis is presented below, along with the results of the analysis testing it:

#### *Hypothesis 1:*

*The greater one partner's level of psychopathology symptoms, the lower the other partner's level of relationship satisfaction. This association will be tested for both male and female partners in the relationship. It will also be tested both together for the three types of psychopathology considered in this study and separately for the three types of psychopathology considered in this study – mood/anxiety disorder, psychoticism, and trauma-based mental illness.*

Pearson correlations were computed between each of the three types of symptoms in one partner and the other partner's DAS score. None of the correlations were statistically significant. Thus, there were no univariate associations found between individual types of psychopathology symptoms and partner relationship satisfaction.

When female' three types of symptoms (mood/anxiety disorder, psychoticism, trauma) were used as a set of variables predicting males' DAS scores in a multiple regression analysis, the results were not significant, with  $R = .20$ ,  $R^2 = .04$ ,  $F(3, 79) = 1.06$ ,  $ns$ , and none of the three types of symptoms was a significant predictor in this simultaneous analysis. Similarly, when males' three types of symptoms were used as a set of variables predicting their female partners' DAS scores, the results were not significant, with  $R = .23$ ,  $R^2 = .05$ ,  $F(3, 80) = 1.48$ ,  $ns$ , and none of the three types of symptoms was a significant predictor in this simultaneous analysis. Thus, there was no support for Hypothesis 1 in either the six Pearson correlations or either of the two multiple regression analyses.

Exploratory Pearson correlations were computed between an individual's own symptoms of psychopathology and his or her *own* relationship satisfaction. Findings indicate that females' overall relationship satisfaction scores on the DAS were lower when they reported more psychotic symptoms on the BSI,  $r = -.25$ , ( $p = .012$ , 1-tailed). Similar findings occurred for females' trauma symptoms; for which the correlation coefficient was significant,  $r = -.21$  ( $p = .028$ , 1-tailed), meaning that the more trauma symptoms that females reported on the TSI, the lower their relationship satisfaction was. Males' relationship satisfaction was not significantly correlated with their own experience of any of the three types of symptoms considered in this study. Thus there was some evidence that females' but not males' relationship satisfaction was associated with their own symptoms of psychopathology.

*Hypothesis 2:*

*The greater one partner's level of psychopathology symptoms, the more that each member of the couple will exhibit negative communication toward the other member.* This association will be tested for both male and female partners in the relationship. It will also be tested both together for the three types of psychopathology considered in this study and separately for the three types of psychopathology considered in this study – mood/anxiety disorder, psychoticism, and trauma-based mental illness.

When Pearson correlations were computed between the individual types of symptoms assessed with BSI and TSI scores and the other partner's negative communication assessed with the MICS-G, it was found that females' psychoticism symptoms as reported on the BSI were associated with greater negative communication by male partners,  $r = .27$  ( $p = .011$ , 1-tailed). No other symptoms were associated with negative

partner communication for either the males or females in the univariate tests. In the multiple regression analysis using the three types of females' symptoms to predict male partners' negative communication, the result was significant, with  $R = .39$ ,  $R^2 = .15$ ,  $F(3, 68) = 4.10$ ,  $p = .01$ . In this simultaneous analysis, the females' psychoticism symptoms were a significant predictor of their male partners' negative communication ( $\beta = .56$ ,  $p = .001$ ). In the multiple regression analysis using the three types of males' symptoms to predict their female partners' negative communication, the result was not significant, with  $R = .21$ ,  $R^2 = .04$ ,  $F(3, 68) = 1.02$ , *ns*.

In terms of individuals' symptoms and their own negative communication, it was found that females' psychoticism symptoms were associated with more of their own negative communication,  $r = .29$  ( $p = .008$ , 1-tailed). None of the Pearson correlations between male partners' symptoms and their own negative communication were significant.

In the multiple regression analysis using the set of three types of females' symptoms to predict their own negative communication, the results were significant, with  $R = .40$ ,  $R^2 = .16$ ,  $F(3, 68) = 4.30$ ,  $p = .008$ . In this simultaneous analysis, the female's psychoticism symptoms were a significant predictor of her own negative communication ( $\beta = .57$ ,  $p = .001$ ), and there was a trend for the female's mood/anxiety disorder symptoms to be negatively associated with her amount of negative communication ( $\beta = -.30$ ,  $p = .06$ ). In the multiple regression analysis using the set of three types of males' symptoms to predict their own negative communication, the results were not significant, with  $R = .22$ ,  $R^2 = .05$ ,  $F(3, 68) = 1.15$ , *ns*. As such, Hypothesis 2 was only supported for females' psychotic symptoms being associated with both their male partners' and their own greater

negative communication. There was an unexpected trend in the multiple regression analysis toward females who reported more mood/anxiety disorder symptoms exhibiting less negative communication.

*Hypothesis 3:*

*The greater one partner's level of psychopathology symptoms, the less that each member of the couple will exhibit positive communication toward the other.* This association will be tested for both male and female partners in the relationship. It will also be tested both together for the three types of psychopathology considered in this study and separately for the three types of psychopathology considered in this study – mood/anxiety disorder, psychoticism, and trauma-based mental illness.

None of the Pearson correlations computed between individuals' three types of symptoms and their partners' degrees of positive communication were significant. In the multiple regression analysis using the three types of females' symptoms to predict male partners' positive communication, the result was not significant, with  $R = .26$ ,  $R^2 = .07$ ,  $F(3, 68) = 1.70$ ,  $ns$ . However, in this simultaneous analysis, the females' psychoticism symptoms were a significant negative predictor of their male partners' positive communication ( $\beta = -.36$ ,  $p = .04$ ), and there was a trend for females' mood/anxiety disorder symptoms to be positively associated with their male partners' positive communication ( $\beta = .28$ ,  $p = .09$ ). This means that more female psychoticism symptoms were associated with less positive male communication. However, more of females' mood/anxiety symptoms were associated with more positive communication from their male partners.

In the multiple regression analysis using the three types of males' symptoms to predict their female partners' positive communication, the result was not significant, with  $R = .16$ ,  $R^2 = .03$ ,  $F(3, 68) = 0.62$ ,  $ns$ , and in this simultaneous analysis none of the individual types of symptoms were associated with females' positive communication. Thus, there was partial support for the hypothesis for females' symptoms being associated with their male partners' positive communication but none for males' symptoms being associated with their female partners' positive communication.

Regarding the relation between individuals' symptoms and their own positive communication, there was a significant Pearson correlation between females' reports of more psychotic symptoms and less positive communication by the females,  $r = -.20$  ( $p = .049$ , 1-tailed). In the multiple regression analysis using the set of three types of females' symptoms to predict their own positive communication, the results were not significant, with  $R = .24$ ,  $R^2 = .06$ ,  $F(3, 68) = 1.37$ ,  $ns$ . In this simultaneous analysis, there also was a trend for the female's psychoticism symptoms to be a significant negative predictor of her own positive communication ( $\beta = -.31$ ,  $p = .07$ ).

In the multiple regression analysis using the set of three types of males' symptoms to predict their own positive communication, the results also were not significant, with  $R = .07$ ,  $R^2 = .004$ ,  $F(3, 68) = 0.10$ ,  $ns$ . In this simultaneous analysis, none of the three types of the males' symptoms was associated with their own positive communication.

Therefore, Hypothesis 3 received some support from the findings regarding individuals' symptoms and their *own* positive communication as females' greater psychoticism symptoms were found to be associated with a less of their own positive

communication, although correlations between trauma and mood/anxiety disorder symptoms and own positive communication were not found.

*Hypothesis 4:*

*More positive communication by each partner will be associated with the other partner's greater relationship satisfaction.*

A Pearson correlation indicated that the higher the female's positive communication the higher her male partner's level of relationship satisfaction,  $r = .28$  ( $p = .005$ , 1-tailed). Also, the higher the male's positive communication the higher his female partner's relationship satisfaction,  $r = .29$  ( $p = .004$ , 1-tailed). Thus, Hypothesis 4 was supported for both genders.

In addition, a Pearson correlation also indicated that for females, the higher their positive communication the higher their own relationship satisfaction was,  $r = .36$  ( $p = <.001$ , 1-tailed). Also, for the males the results were similar; the higher their positive communication the higher they reported their relationship satisfaction to be,  $r = .34$  ( $p = <.001$ , 1-tailed). Thus, for both females and males, positive communication was associated with both the partner's and one's own relationship satisfaction.

*Hypothesis 5:*

*More negative communication by each partner will be associated with the other partner's lower relationship satisfaction.*

There was a significant Pearson correlation between males' negative communication and their female partners' relationship satisfaction,  $r = -.41$  ( $p < .001$ , 1-tailed), indicating that the more that males exhibited negative communication the lower their female partners' relationship satisfaction was. Hypothesis 5 was supported by this finding.

However, females' negative communication was not significantly associated with their male partners' relationship satisfaction,  $r = -.14$ , *ns*.

In terms of the association between one's negative communication and one's own relationship satisfaction, the Pearson correlation for females was  $-.33$  ( $p = .001$ , 1-tailed), and for males it was  $-.35$  ( $p = < .001$ , 1-tailed). Thus, the more negative communication found for each partner on the MICS-G, the lower that partner rated his or her own relationship satisfaction on the DAS.

*Hypothesis 6:*

*The relation between partner 1's psychopathology symptoms and partner 2's level of relationship satisfaction will be mediated by partner 1's level of negative communication toward the partner.* This will be tested for both male and female partners in the relationship. It will be tested only for symptoms in which a relationship between psychopathology symptoms and relationship satisfaction is found.

As reported for Hypothesis 1, there were no significant Pearson correlations found for one partner's psychopathology symptoms and the other partner's relationship satisfaction. Consequently, there was no need to compute partial correlations between symptoms and partner's satisfaction, controlling for the individual's own negative communication, because there was no relation for the communication variable to mediate.

*Hypothesis 7:*

*The relation between partner 1's psychopathology symptoms and partner 2's level of relationship satisfaction will be mediated by partner 1's level of positive communication toward partner 2.* This will be tested for both male and female partners in the

relationship. It will be tested only for symptoms in which a relationship between psychopathology symptoms and relationship satisfaction is found.

As reported for Hypothesis 1, there were no significant Pearson correlations found for one partner's psychopathology symptoms and the other partner's relationship satisfaction. Consequently, there was no need to compute partial correlations between symptoms and partner's satisfaction, controlling for the individual's own positive communication, because there was no relation for the communication variable to mediate.

### *Tests of the Research Questions*

#### *Research Question 1:*

*Is there a gender difference in the association between level of psychopathology symptoms and degrees of partners' positive communication, negative communication, and relationship satisfaction?*

A number of the findings differed by gender. For example, the tangential findings for hypothesis 1 revealed that females' psychoticism and trauma-based symptoms were associated with their relationship satisfaction, whereas male's symptoms were not associated with their relationship satisfaction. Also, in hypothesis 2 it was only females' symptoms that were associated with their male partners' negative communication. Additionally, it was found that females' own psychoticism symptoms were associated with their tendency toward greater negative communication. Furthermore, females' mood/anxiety symptoms were associated with a trend toward less negative communication, whereas symptomology in males had no association with their own negative communication.



In hypothesis 3 it was only females' symptoms that were associated with changes in communication. Psychoticism symptoms among females were associated with less positive communication from their male partners and less positive communication for themselves as well. A trend was also found in which females' mood/anxiety based symptoms were associated with more positive communication from their male partners. Positive communication was not associated with male psychopathology at all.

Finally, in hypothesis 5 it was only males' negative communication that was associated with partner satisfaction. Females' negative communication had no relation partner satisfaction. That said, no differences were found in terms of positive communication in hypothesis 4 – in this case both male and female partners' satisfaction were associated with more positive communication.

#### *Research Question 2*

*Are there differences among the three types of psychopathology symptoms examined in this study – mood/anxiety disorder symptoms, psychoticism symptoms, and trauma-based symptoms -- in their associations with both communication and relationship satisfaction?*

In a few instances there were significant findings for some types of psychopathology symptoms but not for others. For example, as noted, in hypothesis 1, it was found that females' relationship satisfaction was associated with the presence of both their psychoticism symptoms and trauma-based symptoms. In contrast females' relationship satisfaction was not significantly related to their mood/anxiety disorder symptoms.

In the tests of hypothesis 2, females' psychoticism symptoms were found to be associated with their male partners' negative communication. Also, females' psychotic

symptoms were associated with more of their own negative communication.

Furthermore, there was a trend toward less negative communication used by the females in the sample when they exhibited more mood/anxiety disorder symptoms. However, there was no association between males' negative communication and their female partners' trauma-based symptoms or mood/anxiety disorder symptoms.

Finally, findings for hypothesis 3 revealed differences in symptoms in that females' psychotic symptoms were found to be associated with lower instances of their male partners' positive communication in simultaneous analyses. Also, trends were found regarding specific symptoms in that females' psychotic symptoms were found to be associated with less of their own positive communication. Also, a trend was found regarding females' mood/anxiety disorder symptoms and more positive communication from their male partners. Again, there was no association between females' trauma-based symptoms and their male partners' or their own positive communication.

### Summary of Results

Table 6 summarizes results and delineates measures used to determine findings for all of the hypotheses tested in this study.

Table 6

#### *Hypotheses, Results and Measures Used*

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Hypothesis 1: The greater partner 1's level of psychopathology symptoms, the lower partner 2's level of relationship satisfaction.

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Measures	Findings
BSI, TSI-A, DAS	Not supported for any type of symptoms for either males or females.

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Hypothesis 2: The greater one partner's level of psychopathology symptoms, the more that each member of the couple will exhibit negative communication toward the other member.

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Measures	Findings
BSI, TSI-A, MICS-G	Supported only for female's psychoticism symptoms and their male partners' negative communication.

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Hypothesis 3: The greater one partner's level of psychopathology symptoms, the less that each member of the couple will exhibit positive communication toward the other.

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Measures	Findings
BSI, TSI-A, MICS-G	No support from Pearson correlations for individual types of symptoms and partner's positive communication. In multiple regression analysis, supported for females' psychoticism symptoms negatively related to their male partners' positive communication (more female psychoticism symptoms associated with less male partner positive communication); trend for females' mood/anxiety symptoms to be positively related to their male partners' positive communication (more female mood/anxiety symptoms associated with more male partner positive communication).

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Hypothesis 4: More positive communication by each partner will be associated with the other partner's greater relationship satisfaction.

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Measures	Findings
MICS-G, DAS	Supported for both male and females.

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Hypothesis 5: More negative communication by each partner will be associated with the other partner's lower relationship satisfaction.

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Measures	Findings
MICS-G, DAS	Supported only for males' negative communication.

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Hypothesis 6: The relation between partner 1's psychopathology symptoms and partner 2's level of relationship satisfaction will be mediated by partner 1's level of negative communication toward the partner.

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Measures	Findings
N/A	Not supported, because there was no direct association between one partner's symptoms and the other partner's relationship satisfaction level (see Hypothesis 1); therefore no relation to mediate.

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Hypothesis 7: The relation between partner 1's psychopathology symptoms and partner 2's level of relationship satisfaction will be mediated by partner 1's level of positive communication toward the partner.

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Measures	Findings
N/A	Not supported, because there was no direct association between one partner's symptoms and the other partner's relationship satisfaction level (see Hypothesis 1); therefore no relation to mediate.

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## CHAPTER 4: DISCUSSION

This study was conducted to consider whether different forms of psychopathology symptoms -- psychoticism, mood/anxiety, and trauma-based -- were associated with relationship satisfaction. It also tested whether positive and negative communication within a couple was associated with partners' relationship satisfaction, and if this association did exist, if it played a mediating role in the potential relationship between psychopathology symptoms and relationship satisfaction. Knowledge about associations among psychopathology symptoms, relationship satisfaction, and communication would be helpful in the implementation of clinical treatments for couples in which at least one member is experiencing symptom of a mental illness.

The first hypothesis, that more psychopathology symptoms will result in lower relationship satisfaction for one's partner was not supported in that none of the correlations between the three types of symptoms in one partner were associated with the relationship satisfaction level of the other partner.

The second hypothesis, that more psychopathology symptoms will be associated with more negative communication by one's partner was supported only for females' with more psychotic symptoms on their part associated with more negative communication by their male partners.

The third hypothesis, that more psychopathology symptoms will result in a decrease in positive communication, was not at all supported by study findings from tests for individual types of symptoms and partner's positive communication. In tests considering all types of psychopathology symptoms simultaneously, however, it was supported in that females' psychoticism symptoms were found to be negatively associated with their male

partners' positive communication, meaning more female psychoticism symptoms were associated with less male partner positive communication. Also, a slight trend was found toward females' mood/anxiety disorders symptoms being associated with their male partners using more positive communication.

The fourth hypothesis, that more positive communication from one partner will be associated with greater relationship satisfaction for the other partner was supported for both males and females in the study.

The fifth hypothesis, that more negative communication from one partner will be associated with less relationship satisfaction for the other partner was supported only in relation to males' greater negative communication associated with their female partners' lower satisfaction.

The sixth and seventh hypotheses, that partner 1's psychopathology symptoms and partner 2's relationship satisfaction would be mediated by partner 1's level of negative communication (hypothesis 6) and positive communication (hypothesis 7), were not supported because there were no significant relationships between one partner's types of symptoms and the other's relationship satisfaction in the first place; i.e., no relation that could be mediated by communication.

#### Understanding the Results Within the Context of Prior Research

##### *Psychopathology, Communication, and Relationship Satisfaction*

The findings from this study were only partially consistent with the hypotheses and the literature reporting prior research on the relation between psychopathology and couples' communication and relationship satisfaction. Considering the first hypothesis -- the greater partner 1's level of psychopathology symptoms, the lower partner 2's level of

relationship satisfaction will be -- it was found that the association between symptoms and satisfaction was not significant. However, trauma-based and psychotic symptoms experienced by females were found to be associated with their *own* satisfaction being lower.

Upon consideration of this study's findings, it is important to note that the sample used in the study had been experiencing some form of mild to moderate abuse, as mandated for their inclusion in the CAPP research study. This abuse may be emotional, physical, or possibly both emotional and physical. As such, the abuse may overshadow the psychopathology symptoms experienced, in terms of the impact on relationship satisfaction.

Overall, the couples in this sample were not satisfied with their relationships, based on their reports on the DAS (Spanier, 1976); however, the reasons for this lack of satisfaction may not be psychopathology symptoms. Partners in abusive relationships often feel powerless, fearful and vulnerable (Yodanis, 2004). These feelings may account for dissatisfaction with a relationship far more than the presence of partners' psychopathology symptoms.

Furthermore, findings from hypothesis 1, that females experiencing psychoticism or trauma-based symptoms are less satisfied with their relationships, may also be related to the abuse experienced by women in the study sample. Often, women who are abused experience symptoms such as fear, shame, low self-esteem and isolation (Kromsky & Cutler, 1989). Many of these symptoms that occur due to abuse are similar to those associated with trauma. As such, it may be the experiences of the abuse rather than the experience of psychopathology that are causing relationship dissatisfaction.

Of further consideration, however, is the fact that abuse and depression are also often linked in women (Kubany et al, 2004), yet mood/anxiety based symptoms were not associated with relationship dissatisfaction in this study. Additionally, males' relationship satisfaction was not linked with any symptoms in the tests of hypothesis 1, despite the fact that males in the sample were potentially recipients of abusive behavior from their partners as well.

As such, it is not possible to clearly determine the link between the tendency toward abusive behavior in this sample and the partners' experiences of psychopathology symptoms. However, consideration of the presence of abuse in the relationships of sample participants may assist in understanding the study's findings – abuse experienced in the relationship may be the reason why couples are seeking assistance and are dissatisfied with their relationship, rather than psychopathology symptoms. Furthermore, abuse in the relationship may in fact be the cause of or may exacerbate psychopathology symptoms in females in particular who are experiencing relationship dissatisfaction.

In contrast to this finding, the reviewed literature indicated that prior studies have found lower overall relationship satisfaction associated with various forms of partner psychopathology symptoms. For example Hooley et al.'s (1987) study of couples in which schizophrenia, depression and bipolar disorder were present found that relationship distress is common in couples in which one member has a mental illness – regardless of the diagnosis. Also, the Heene et al. (2005) study of the relationship between depression and marital quality found that there were significant correlations between depressive symptoms and marital satisfaction for both members of the couple. Zlotnick et al.'s (2000) study of reports of depression on the National Comorbidity Survey (NCS) in



relation to marital distress was similar to Heene et al.'s (2005) findings – intimate partner relationships are impaired by depression. Similarly, McLeod's (1994) study found that husbands with wives with panic disorder had lower relationship satisfaction than husbands whose wives did not have panic disorder. Also, regarding trauma-based symptoms, Spasojevic et al. (2000) found a significant correlation between PTSD symptoms and relationship satisfaction. In contrast, the present study found no significant association between one person's psychopathological symptoms and his or her partner's relationship distress, and an association between psychopathology and one's own relationship satisfaction level was found only for women.

As noted, it is difficult to determine precisely why the expected associations were not found in this study. One possibility is that this study was conducted in a clinic that specializes in couple and family therapy, not the treatment of forms of psychopathology, and thus clients who are experiencing problems with more severe levels of psychopathology are not likely to seek treatment there. Furthermore, the presence of untreated major mental illness is a criterion for screening out couples and families from treatment at the Family Service Center, because the clinic staff is not prepared to provide services, including medication, for severe psychopathology. In addition, untreated mental illness was an exclusion criterion for couples' participation in the CAPP study that served as the source of data for the present study. These restrictions resulted in a sample with a limited range of psychopathology symptoms compared to samples of psychiatric patients (see Table 3). Because the CAPP inclusion criteria required that individuals with diagnosed psychopathology currently be in separate treatment for it, the concurrent treatments for mental illnesses in this clinical sample may have improved

partner satisfaction despite the lingering presence of symptoms. Finally, although an examination of intake forms regarding the couples' reasons for seeking therapy was not conducted in this study, communication is frequently noted by couples as being a major area of relationship distress. As such, couples in this sample who were seeking therapy may have been more significantly burdened by communication problems in their relationships than by the presence of psychopathology symptoms in a partner. The findings of this study are consistent with this possibility, because partners' positive and negative forms of communication were found to be significantly related to their level of relationship satisfaction.

Another point of consideration is that due to the lack of a substantial body of literature regarding research on relationship satisfaction and psychopathology symptoms, many articles reviewed for this study reported studies involving families of people exhibiting psychopathology symptoms (especially in cases of severe mental disorders), rather than intimate partners. Family experiences may differ from those of partners, so it is difficult to compare the current findings to those from many of the prior studies.

That said, although much of the literature reviewed for this study focused on the lower relationship satisfaction associated with the presence of psychopathology symptoms, a positive relation between psychopathology and the quality of the individual's relationships with significant others was found in one study. Lukens et al. (2004) concluded from their study of siblings of people with mental illness, "In spite of the tremendous outpouring of sadness and anger, people were able to identify positive ways in which the sibling's illness had contributed to their identity and had added some sense

of meaning to their lives...For the study participants, mental illness changed the character of the family unit and intensified relationships (Lukens et al., 2004, p. 494).”

Also, Hooley et al.’s (1987) article on psychopathology and relationship distress recognizes that some marriages remain stable and quite satisfactory despite the presence of psychopathology symptoms in one partner. In their study it was found that spouses of people with positive symptoms – symptoms that are present and recognizable, such as delusions – reported higher satisfaction with their marriages than those with spouses exhibiting impulse-control or negative symptoms – those that are less clearly associated with a mental illness, such as apathy or self-neglect. This may be attributed to spouses holding the spouse with symptoms more accountable when the symptoms are less clearly a manifestation of a mental illness and holding a partner less accountable when the symptoms are more clearly linked to a mental illness (Hooley et al., 1987). Perhaps in the present study the symptoms considered were more clearly recognized by partners as being the result of a mental illness, and partners were thus more understanding and patient, and less likely to be strongly dissatisfied with their marriage overall. Future studies should include assessment of partners’ perceptions of psychopathology symptoms, as a possible mediator of level of distress about the symptoms.

Although findings regarding one’s psychopathology symptoms in relation to one’s own dyadic satisfaction are tangential to the hypothesis, they are worthy of exploration via culled literature because they may be relevant to research findings.

Riggs, et al.’s (1998) study of veterans with PTSD noted that the veterans had high scores on the MMPI family problems scale and on clusters of problems relating to social abilities and intimacy - which draws a clear parallel between trauma-related symptoms

and the potential for relationship satisfaction. The high scores found in that study on clusters relating to social abilities and intimacy may account for the family problems experienced by veterans in the study. This study considers the ability for the family member with the symptoms to interact with other family members – potential support for the finding that females’ trauma-based symptoms affect her own relationship satisfaction.

In terms of females’ psychotic symptoms and their own relationship satisfaction, Hooley (2004) noted that in families in which psychotic symptoms are present in a family member a negative communication cycle is often noted. In the cycle, relatives display negative behavior toward the symptomatic individual, the person experiencing the psychotic symptoms then reciprocates with negative behavior, this then leads to more negative behavior by the relatives, and the cycle continues. Hooley’s description of the negative interaction cycle in families in which a person is experiencing a major mental illness may account for the finding that females with psychotic symptoms also report lower relationship satisfaction. This is particularly poignant in consideration of hypothesis 2 – that more psychopathology symptoms for females will be related to more negative communication by their male partners (and by the females themselves). According to Hooley (2004), harsh criticisms – a negative communication style that is associated with expressed emotion (EE), are an indication that families are not supportive of the person in the family experiencing a major mental illness. Koenig et al.’s (1997) study of psychiatric patients’ interactions with relatives echoes this finding.

Christensen and Shenk (1991) also found that psychopathology symptoms may lead to breakdowns in couple communication in that the experience of the symptoms may increase the needs of the person experiencing them and may impact the other partner’s

ability to meet these needs. Also, cognitive distortions experienced as part of the psychopathology may reduce communication effectiveness. Both Hooley's (2004) and Christensen and Shenk's (1991) explanation of communication in couples in which a member is experiencing psychopathology symptoms are helpful in understanding this study's findings for hypothesis 2 – that females' psychotic symptoms are associated with more negative communication by their male partners. Furthermore, the two articles (Christensen & Shenk, 1991, and Hooley, 2004) may also help account for the tangential finding in this study that women reporting psychotic symptoms also are found to display more negative communication.

Hypothesis 3 – that the greater one partner's level of psychopathology symptoms, the less that each member of the couple will display positive communication – resulted in findings that the presence of more of females' psychoticism symptoms is associated with less positive communication from their male partners and from themselves. This is supported by some reviewed literature. For example, Hooley's (2004) article describes a negative interaction cycle that occurs in families in which symptoms of severe mental illness are present. In this interaction cycle, family members exhibit hostile and negative communication towards the family member with the symptoms of mental illness and the symptomatic family members react with negative communication, fueling the cycle. This supports the finding that female' psychotic symptoms are associated with lower instances of their male partners' positive communication. It also supports the finding that females with psychoticism symptoms are found to display less of their own positive communication as well.

The findings of the Hooley (2004) article also may explain the trend in this study that was found towards more positive communication in couples in which the female is experiencing mood/anxiety disorder symptoms. In his article, Hooley notes that the negative communication cycle that was previously mentioned is possibly rooted in family members' desire to "heal" their family member who is experiencing psychoticism symptoms. As such, partners may believe that their communication toward their partner is in fact positive and is helping them. This may explain why the trend toward more positive behavior was found in association with mood/anxiety disorder symptoms in this study; according to the study family members of people with mental illness want to help them. Males in relationships with females who have mood/anxiety disorders may exhibit positive communication in an effort to help, whereas those whose female partners exhibit psychotic symptoms may want to "heal" their partner with their communication, yet end up communicating negatively, as found in hypothesis 2, rather than positively. Male partners of females with psychotic symptoms may not be choosing to display less positive behavior; they may actually want to display more of it to help the partner experiencing the symptoms. This is potentially illustrated by the trend toward more positive behavior by males who had partners with more mood/anxiety disorders; the male partners may accidentally display negative communication in an attempt to help.

Additional support for hypothesis 3 may be found in the Vaddadi et al. (2002) article that reports that relatives of people with severe mental illness experience verbal and physical abuse by the relative exhibiting psychopathology symptoms. This may be an additional explanation for the finding that there is less positive communication in this study for couples in which females display psychotic symptoms. If males are

experiencing verbal or physical abuse from their female partners, they may be less likely to communicate with them positively. The males may in fact react to the abuse by communicating with their female partners more negatively, as found in hypothesis 2.

Finally, the Casbon et al. (2005) may be interpreted to support the trend found for hypothesis 3 towards male partners of females with mood/anxiety disorders displaying more positive communication. This article found that partners with depressive symptoms who received negative feedback continued to seek out additional negative feedback. It is possible that male partners of females displaying mood/anxiety disorder symptoms recognize this cycle and attempt to break it by providing positive feedback and communication, rather than fueling it with negative feedback and communication.

Hypothesis 4 – that more positive communication by each partner will be associated with the other partner's greater relationship satisfaction – was supported by data for both males and females in the relationship. Literature supports these findings as well. Gottman and Levenson's (1992) study of couple communication and satisfaction led to their assertion that a high ratio of positive communication to negative communication is required in a relationship to ensure satisfaction. Although hypothesis 5 – more negative communication by each partner will be associated with the other partner's lower relationship satisfaction was found to only be significant for male partners' negative communication in this study, Gottman and Levenson's (1992) article remains relevant to this finding as well.

Additionally, Johnson and Bradbury's (1999) study of couple interaction patterns revealed that couples in their study actually gauge their level of relationship satisfaction based on their interaction. As such, this study's findings for hypotheses 4 and 5- that

both males and females who report greater relationship satisfaction are found to display more positive communication and that females' reports of lower relationship satisfaction are related to higher instances of male partners' negative communication - are supported by the Johnson and Bradbury (1999) article.

Finally, the finding for hypothesis 5 – that males' negative communication is associated with their female partners' reports of lower relationship satisfaction, is specifically supported by the Gottman and Krokoff (1989) longitudinal study of couple interaction patterns and relationship functioning. In Gottman and Krokoff's (1989) study it was found that husbands' negative interaction patterns with their wives were predictive of current relationship distress – which directly echoes this study's findings for hypothesis 5. Overall, it is widely accepted among behavioral researchers and theorists that deficits in communication skills – particularly those surrounding problem-solving discussions and involving the exchanges of negative communication, are a critical causal factor in relationship distress (Christensen & Shenk, 1991).

#### Implications for Clinical Practice

Findings of this study may lead to many useful interventions that can help couples in which psychopathology symptoms or communication challenges are affecting satisfaction with the relationship. For example, the tangential findings from hypothesis 1 indicate that females with trauma symptoms and psychotic symptoms have lower relationship satisfaction. As such, it may be important for clinicians who are treating women with these symptoms to check in on their relationship satisfaction and to consider improving satisfaction if necessary during the course of therapy, perhaps via couple



therapy and a focus on communication – which was found to impact satisfaction in hypotheses 2 and 5.

Additionally, findings regarding females' satisfaction and her symptoms may imply that it is important to help females with psychotic and/or trauma symptoms see their relationship in a better light. It may be useful for therapists to consider negative cognitions that may accompany psychotic and trauma-based symptoms. Furthermore, as findings indicate that male partners' satisfaction is not associated with females' psychopathology symptoms, it may be helpful for therapists treating females with psychotic or trauma-based symptoms to highlight that their male partners' are not dissatisfied with their relationship due to their female partners' symptoms; recognition that their male partners' dissatisfaction with the relationship is not tied to their partners' psychopathology symptoms may improve females' satisfaction in this case. It is possible that because females with psychoticism and trauma-based symptoms are less likely to be satisfied with their relationships, they may assume their male partner is also not satisfied because of her illness. Recognition that their illness has not affected their male partners' satisfaction may ultimately improve females' satisfaction.

Findings from tests of hypothesis 2 indicate that males' negative communication is associated with the presence of female partners' psychoticism symptoms. As such, it may be helpful for males with female partners who experience psychotic symptoms to learn to be more mindful of their negative communication and to improve their positive communication. This may be correlated with females' reported of lower satisfaction with the relationship when she has psychoticism symptoms. Perhaps if male partners' negative communication was decreased the satisfaction of females with psychotic

symptoms may improve. This is supported by findings for hypothesis 5 that reveal an association between males' negative communication and females' relationship satisfaction.

Also, findings from hypothesis 3 indicate that females with psychoticism symptoms experience less positive communication from male partners, yet females with mood/anxiety disorder symptoms may experience more positive communication from male partners. Working with males who interact more positively with female partners with mood/anxiety disorder symptoms may reveal why they are able to be positive despite these symptoms, while males with female partners with psychoticism symptoms are less able to interact positively. These revelations may be useful in therapeutic practice. Lessons learned from males who are able to display more positive behaviors despite the presence of symptoms may be worthy of inclusion in therapy with those who are not.

Furthermore, in light of findings for hypothesis 5 and based on literature reviewed for this study, it is important for partners of people with psychopathology to beware of communication that may be believed to be positive but is actually negative in its impact on the symptomatic individual. This is something that can be accomplished in couple therapy, with a therapist assisting a couple in noting communication that is in fact hurtful when it occurs. It is possible that this may not have been previously noted in the relationship.

Due to the findings for hypothesis 2 that males in particular have a tendency toward greater negative communication when their female partners display psychoticism symptoms and that the negative communication poorly impacts relationship satisfaction

(hypothesis 5), a strong focus on male negative communication may be particularly important. This may be successfully accomplished via groups for male partners of females with psychoticism symptoms that focus specifically on communication behavior. Groups may serve many purposes in that males may be able to share experiences that lead to frustration with their female partners' symptoms, which may ultimately alleviate frustration and decrease negative communication. Also, hearing about others in similar situations may normalize their experiences, which may alleviate some frustrations and decrease negative communication. Finally, the group may serve as a platform to teach improved communication skills to the men participating, focusing particularly on decreasing negative communication behaviors.

#### Implications for Research

In terms of this study's implications for future research on psychopathology and relationship satisfaction, it would be helpful to have more in-depth research regarding the relation between psychopathology and communication in couples. Although this study assessed several forms of positive and negative communication, it may be useful to determine what other aspects of negative communication specifically are related to symptoms – such as tone of voice, or content of conversation. Also, it would be helpful to know if there are forms of positive communication that were not considered in the study or captured in the MICS-G that may actually be important to consider and may be related to psychopathology and have an impact on relationship satisfaction.

Based on the findings in conjunction with hypothesis 1 -- that female's psychoticism symptoms and trauma-based symptoms are associated with their relationship satisfaction -- it may be important to consider which psychoticism symptoms and which trauma

symptoms specifically are responsible for this relationship. For example, with psychoticism symptoms it may only be women experiencing delusions or women experiencing hallucinations whose relationship satisfaction is impacted. In terms of trauma-based symptoms, it may be that women exhibiting avoidance symptoms and not those exhibiting withdrawal symptoms are impacted. There is also the potential that it is a combination of symptoms or others' reactions to the symptoms that may be the cause for the association between the symptoms and lower relationship satisfaction. Of course, many other variables may be responsible as well, such as memories of specific negative events associated with a partner's psychopathology (e.g., loss of a job) that occurred in the past in a couple's relationship and continue to influence both partners' feelings about any current symptoms. Identifying these variables may contribute to a more comprehensive understanding of the link between psychopathology and relationship functioning.

In consideration of the findings for hypothesis 2, what is it about females' psychoticism symptoms that is associated with their male partners' use of negative communication? Is it a lack of understanding of the symptoms? Is it a sense that the female partners are to blame for the symptoms? Any number of explanations is possible, and future studies could include measures of such possible moderator variables. Along these lines it is also worthwhile to consider if there are ways to improve the satisfaction with one's relationship for those with symptoms. For instance, is therapy a worthwhile intervention? Are there other interventions that may be more or equally effective?

Also, in relation to hypothesis 3 it would be helpful to research what it is about females' psychotic symptoms that make it less likely that their male partners will

communicate with them positively and how this is different from females' mood/anxiety disorder symptoms, which actually tend towards displays of more positive behavior. Is it the females' display of the symptoms? Is it the male partners' understanding of or empathy towards female partners with the symptoms? Determining the differences may inform future therapeutic endeavors for couples in which psychopathology symptoms are present in females in particular.

Questions specific to gender differences that are worthy of future research include the consideration of why females' but not males' symptoms are related to relationship satisfaction (even if it is only their own) and why it is only male's and not female' negative communication that is associated with relationship satisfaction – as in the findings for hypothesis 5. It is interesting that females' communication is not associated with level of relationship satisfaction. Are men less sensitive to negative communication? It is difficult to know the precise meaning behind these findings without conducting further research on possible causal pathways between symptoms and relationship satisfaction that involve mediator variables. Also specific to gender is the finding that females' psychoticism and trauma-based symptoms are associated with their own relationship satisfaction and their psychoticism symptoms are related to their male partners' communication; yet males' symptoms have no associations with relationship satisfaction or communication. An exploration of this gender difference may consider females' feelings about their symptoms and their understanding of how to manage them. Future research may also consider males' understanding of their own symptoms and whether their cognitions regarding their symptoms are perhaps less negative than their cognitions about women with the same types of symptoms. Perhaps women are more

understanding of symptoms when they are exhibited by others, and thus they display less negative behavior if their male partners are symptomatic, whereas men are more understanding if the symptoms are their own and less so if they are exhibited by others. Again, adding measures of partners' cognitions about each other could help answer such questions.

Another area of research may explore reasons why mood/anxiety disorder symptoms were not associated with relationship satisfaction in a sample such as the present one, whereas a number of prior studies found such an association. A study breaking down specific symptoms that comprise these larger symptom clusters and considering spousal understanding of these symptoms as well as the understanding of the symptoms by those exhibiting them may help determine why psychoticism symptoms had some impact on relationship satisfaction and negative communication whereas the other types of symptoms did not. This finding is particularly worthy of further research due to the focus on mood/anxiety disorder symptoms in literature. Perhaps there was something unique in this clinic sample that led to the findings that there were no associations between these symptoms and partners' relationship satisfaction and communication. Replicating the study with samples of clients who sought professional help specifically for psychopathology may help to explain whether these findings were shaped by the agendas that the couples had in seeking couple therapy rather than treatment for symptomatic individuals. Furthermore, this study did not control for whether a couple had one or both members experiencing symptoms, and partners' negative responses to symptoms may be influenced by this.

Much of the literature reviewed for the study focuses on the merits of positive communication – which is supported by findings for hypothesis 4, and the challenges associated with negative communication. Findings for hypotheses 4 and 5 echo surveyed literature in that they support the notion that greater positive communication is associated with relationship satisfaction and greater negative communication is associated with relationship satisfaction (at least for male communication and female satisfaction). As such, it may be worthwhile to research methods that help couples – perhaps men in particular, remain mindful of their negative communication behaviors. Also, determining methods that help men decrease negative communication with their partners may be effective in improving women’s overall relationship satisfaction as well. It may be important to consider if common communication skills that are taught in couple therapy are effective in decreasing negative communication and increasing positive communication associated with the occurrence of psychopathology symptoms during couple interactions. Perhaps there are more effective means of accomplishing this goal. Perhaps teaching skills in a group setting increases couple accountability and increases the regular use of more positive and less negative communication. Evaluating such impacts of alternative interventions may be one possible area for future studies.

#### Limitations of the Study

A few limitations should be noted in consideration of this study. One important limitation is that this study considered data from a sample already seeking therapy. As such, this sample was already experiencing distress and was aware of the distress. The couples in the sample may have already started implementing changes to try to help the relationship before seeking therapy. This is particularly possible because the fact that

they are seeking therapy indicates that the couple is at least somewhat sensitive to the needs of their relationship and makes some attempts to adjust to them and rectify problems accordingly. The sample also included couples who were more distressed than the general population, in that they were distressed to the point that they felt that therapy was necessary.

This was also a relatively small sample – only 83 couples. The size of the sample can influence the external validity of results in that they are most directly applicable to couples with the range of personal characteristics found in the sample and are not as generalizable to the broader population as a whole.

Another limitation of this study is that it included assessment instruments that measured self-reports of symptoms and relationship satisfaction. Participants may not have been honest in their reports of psychopathology symptoms experienced – particularly due to the stigma associated with mental illness. They may also have had a skewed opinion of their relationship when reporting satisfaction – they may have reported greater satisfaction with their relationship because they did not want to admit to the precise level of distress they were feeling or because they felt positive about the relationship in that they and their partners were taking action and working together to elicit help for the relationship. They may have also exaggerated distress if they were particularly upset with their partner at the time of completing the assessment of satisfaction.

Because the presence of untreated mental illness renders couples ineligible for participation in the study, the sample did not include any couples in which an untreated mental illness was present. As such, the number of couples in the sample in which



moderate to severe symptoms were occurring may not have been large enough to provide an adequate test of the study's hypotheses. As noted earlier, therapists at the FSC do not prescribe medication and do not specialize in treatment for people with mental illness. Consequently, people with degrees of mental illness that could have a significant impact on their couple relationships are less likely to seek treatment at the FSC, or they are screened out and referred elsewhere for treatment. Thus, it would be important to replicate this study with a sample that includes a wider range of psychopathology.

### Conclusion

Although reviewed literature finds a link between psychopathology symptoms and relationship satisfaction, this study only found associations between the two when women experienced psychotic or trauma-based symptoms and in these cases only their own satisfaction was related. Also, in terms of communication and psychopathology in intimate relationships, females' psychoticism symptoms were associated with more negative communication by their male partners, although no other associations between symptoms and negative communication were found to be significant. That said, positive communication was found to be negatively associated with the presence of psychotic symptoms in females – less of their own positive communication was associated with psychotic symptoms and a significant finding was revealed regarding less of men's positive communication in association with their female partners' psychotic symptoms. Positive communication was also found to be associated with increased relationship satisfaction for both partners; however, only males' negative communication was found to be linked with lower relationship satisfaction.

Overall, some specific categories of symptoms were found to be associated with communication and satisfaction in that females' psychoticism symptoms and trauma-based symptoms were associated with their satisfaction, and their psychoticism symptoms were associated with their male partners displaying more negative communication and the females with the symptoms displaying less of their own positive communication; yet mood/anxiety based symptoms were not found to have a significant association in any of the hypotheses (although there were trends regarding these symptoms and both positive and negative communication). Furthermore, males' negative communication was associated with relationship satisfaction although females' negative communication was not.

Based on the findings of this study, it appears that the population seeking help at the FSC was greatly impacted by communication within the couple. Females' satisfaction was more negatively associated with male partners' negative communication than by their male partners' experiences of any form of psychopathology symptoms. Also, an important finding of this study is that positive communication is associated with an increase in relationship satisfaction for both partners in the couples in this sample.

Differences between characteristics of this study and prior studies may account for some of the discrepancies between the present findings and reviewed literature. Additionally, despite many hypotheses not being supported by findings, the findings remain poignant in that they may inform future research projects or therapeutic interventions.

## APPENDIX A

University of Maryland  
Institutional Review Board  
2100 Blair Lee Building  
College Park, MD 20742-5121

*Notice: Review of Request of Determination of Non-Human Subject or Non-Research IRB Form*

Date: March 30, 2007

To: Dr. Norman Epstein  
Elise Resnick  
Department of Family Studies

From: Roslyn Edson, M. S., CIP  
IRB Manager  
University of Maryland, College Park

Re: *Request for Determination of Non-Human Subject or Non-Research IRB Form #07-NHS-0015*  
Project Title: *The Relationship Between Differing Forms of Psychopathology Symptoms of Couple Communication and Relationship Satisfaction*

The *Request for Determination of Non-Human Subject or Non-Research Form* for the above-cited project was reviewed. According to the information on the form and the student investigator's email responses, your research only involves the analysis of data that does not contain individually identifiable information. Individually identifiable information are data for which the identity of the subject is or may readily be ascertained by the investigator or associated with the information. Since the data do not contain individually identifiable information, the IRB application does not need to be reviewed by the IRB under the requirements of the U.S. Department of Health and Human Services (HHS) regulations in 45 CFR Part 46 and the University's Federal Wide Assurance. Therefore, it was determined that your research does not require review and approval by the Institutional Review Board. Please contact the IRB Office at 301-405-0678 if you have any IRB-related questions or concerns.

APPENDIX B  
Brief Symptom Inventory (BSI)

**INSTRUCTIONS:** Below is a list of problems and complaints that people sometimes have. Read each one carefully, and select one of the numbered descriptors that best describes HOW MUCH DISCOMFORT THAT PROBLEM HAS CAUSED YOU DURING THE PAST MONTH INCLUDING TODAY. Write that number next to the question. Do not skip any item.

EXAMPLE:

HOW MUCH WERE YOU DISTRESSED BY:

\_\_\_\_\_ Body Aches

Descriptors:

0 Not at all

1 A little bit

2 Moderately

3 Quite a bit

4 Extremely

HOW MUCH WERE YOU DISTRESSED BY:

- \_\_\_\_\_ 1. Nervousness or shakiness inside
- \_\_\_\_\_ 2. Faintness or dizziness
- \_\_\_\_\_ 3. The idea that someone else can control your thoughts
- \_\_\_\_\_ 4. Feeling others are to blame for most of your troubles
- \_\_\_\_\_ 5. Trouble remembering things
- \_\_\_\_\_ 6. Feeling easily annoyed or irritated
- \_\_\_\_\_ 7. Pains in heart or chest
- \_\_\_\_\_ 8. Feeling afraid in open spaces
- \_\_\_\_\_ 9. Thoughts of ending your life
- \_\_\_\_\_ 10. Feeling that most people cannot be trusted
- \_\_\_\_\_ 11. Poor appetite
- \_\_\_\_\_ 12. Suddenly scared for no reason
- \_\_\_\_\_ 13. Temper outbursts that you could not control
- \_\_\_\_\_ 14. Feeling lonely even when you are with people
- \_\_\_\_\_ 15. Feeling blocked in getting things done
- \_\_\_\_\_ 16. Feeling lonely
- \_\_\_\_\_ 17. Feeling blue
- \_\_\_\_\_ 18. Feeling no interest in things
- \_\_\_\_\_ 19. Feeling fearful
- \_\_\_\_\_ 20. Your feelings being easily hurt
- \_\_\_\_\_ 21. Feeling that people are unfriendly or dislike you
- \_\_\_\_\_ 22. Feeling inferior to others
- \_\_\_\_\_ 23. Nausea or upset stomach
- \_\_\_\_\_ 24. Feeling that you are watched or talked about by others

- \_\_\_\_\_ 25. Trouble falling asleep
- \_\_\_\_\_ 26. Having to check and double check what you do
- \_\_\_\_\_ 27. Difficulty making decisions
- \_\_\_\_\_ 28. Feeling afraid to travel on buses, subways, or trains
- \_\_\_\_\_ 29. Trouble getting your breath
- \_\_\_\_\_ 30. Hot or cold spells
- \_\_\_\_\_ 31. Having to avoid certain things, places, or activities because they frighten you
- \_\_\_\_\_ 32. Your mind going blank
- \_\_\_\_\_ 33. Numbness or tingling in parts of your body
- \_\_\_\_\_ 34. The idea that you should be punished for your sins
- \_\_\_\_\_ 35. Feeling hopeless about the future
- \_\_\_\_\_ 36. Trouble concentrating
- \_\_\_\_\_ 37. Feeling weak in parts of your body
- \_\_\_\_\_ 38. Feeling tense or keyed up
- \_\_\_\_\_ 39. Thoughts of death or dying
- \_\_\_\_\_ 40. Having urges to beat, injure, or harm someone
- \_\_\_\_\_ 41. Having urges to break or smash things
- \_\_\_\_\_ 42. Feeling very self-conscious with others
- \_\_\_\_\_ 43. Feeling uneasy in crowds
- \_\_\_\_\_ 44. Never feeling close to another person
- \_\_\_\_\_ 45. Spells of terror or panic
- \_\_\_\_\_ 46. Getting into frequent arguments
- \_\_\_\_\_ 47. Feeling nervous when you are left alone
- \_\_\_\_\_ 48. Others not giving you proper credit for your achievements
- \_\_\_\_\_ 49. Feeling so restless you couldn't sit still
- \_\_\_\_\_ 50. Feelings of worthlessness
- \_\_\_\_\_ 51. Feeling that people will take advantage of you if you let them
- \_\_\_\_\_ 52. Feelings of guilt
- \_\_\_\_\_ 53. The idea that something is wrong with your mind.

## APPENDIX C

### Dyadic Adjustment Scale (DAS)

Most persons have disagreements in their relationship. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list. Place a checkmark (✓) to indicate your answer.

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

	<i>All the time</i>	<i>Most of the time</i>	<i>More often than not</i>	<i>Occasionally</i>	<i>Rarely</i>	<i>Never</i>
16. How often do you discuss or have you considered divorce, separation or terminating your relationship?						
17. How often do you or your partner leave the house after a fight?						
18. In general, how often do you think that things between you and your partner are going well?						
19. Do you confide in your partner?						
20. Do you ever regret that you married (or lived together?)						
21. How often do you or your partner quarrel?						
22. How often do you and your partner “get on each others’ nerves”?						

HOW OFTEN WOULD YOU SAY THE FOLLOW EVENTS OCCUR BETWEEN YOU AND YOUR MATE? CIRCLE YOUR ANSWER.

23. Do you kiss your partner?

EVERYDAY    ALMOST    EVERYDAY    OCCASIONALLY    RARELY    NEVER

24. Do you and your partner engage in outside interests together?

ALL OF THEM    MOST OF THEM    SOME OF THEM    VERY FEW OF THEM    NONE OF THEM

25. Have a stimulating exchange of ideas?

NEVER    LESS THAN    ONCE OR TWICE    ONCE OR TWICE    ONCE A DAY    MORE OFTEN  
ONCE A MONTH    A MONTH    A WEEK

26. Laugh together?

NEVER    LESS THAN    ONCE OR TWICE    ONCE OR TWICE    ONCE A DAY    MORE OFTEN  
ONCE A MONTH    A MONTH    A WEEK

27. Calmly discuss something?

NEVER    LESS THAN    ONCE OR TWICE    ONCE OR TWICE    ONCE A DAY    MORE OFTEN  
ONCE A MONTH    A MONTH    A WEEK

28. Work together on a project?

NEVER    LESS THAN    ONCE OR TWICE    ONCE OR TWICE    ONCE A DAY    MORE OFTEN  
ONCE A MONTH    A MONTH    A WEEK

THESE ARE SOME THINGS ABOUT WHICH COUPLES SOMETIMES AGREE AND SOMETIMES DISAGREE. INDICATE IF EITHER ITEM BELOW CAUSES DIFFERENCES OF OPINION OR HAVE BEEN PROBLEMS IN YOUR RELATIONSHIP DURING THE PAST FEW WEEKS. CHECK "YES" OR "NO."

29. Being too tired for sex.                      Yes \_\_\_\_ No \_\_\_\_

30. Not showing love.                              Yes \_\_\_\_ No \_\_\_\_

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, in your relationship.

•                      •                      •                      •                      •                      •

---

EXTREMELY    FAIRLY    A LITTLE    HAPPY    VERY    EXTREMELY    PERFECT  
UNHAPPY    UNHAPPY    UNHAPPY                      HAPPY    HAPPY    HAPPY



32. Which of the following statements best describes how you feel about the future of your relationship? Check the statement that best applies to you.

- ☐ 1. I want desperately for my relationship to succeed, and would go to almost any length to see that it does.
- ☐ 2. I want very much for my relationship to succeed, and will do all I can to see that it does.
- ☐ 3. I want very much for my relationship to succeed, and will do my fair share to see that it does.
- ☐ 4. It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.
- ☐ 5. It would be nice if my relationship succeeded, but I refuse to do any more than I am doing now to keep the relationship going.
- ☐ 6. My relationship can never succeed, and there is no more that I can do to keep the relationship going.

## APPENDIX D

### TRAUMA SYMPTOM INVENTORY – ADAPTED (TSI-A)

Instructions: The items that follow describe a number of things that may or may not have happened to you. Read each one carefully, and then indicate on the answer sheet how often it has happened in the last **6 months** by circling the correct number. Circling a 0 means it hasn't happened at all in the last 6 months. Circling a 3 means it has happened often in the last **6 months**. Circling a 1 or 2 means it has happened in the last 6 months, but has not happened often.

Never

Often

0                      1                      2                      3

Please answer each item as honestly as you can. **Be sure to answer every item.**

*In the last **6 months**, how often have you experienced:*

		Never			Often
1/1.	Nightmares or bad dreams	0	1	2	3
2/2.	Trying to forget about a bad time in your life	0	1	2	3
3/3.	Irritability	0	1	2	3
4/4.	Stopping yourself from thinking about the past	0	1	2	3
5/8.	Flashbacks (sudden memories or images of upsetting things)	0	1	2	3
6/10.	Feeling like you were outside your body	0	1	2	3
7/12.	Sudden disturbing memories when you were not expecting them	0	1	2	3
8/15.	Becoming angry for little or no reason	0	1	2	3
9/20.	Your mind going blank	0	1	2	3
10/22.	Periods of trembling or shaking	0	1	2	3
11/23.	Pushing painful memories out of your mind	0	1	2	3
12/26.	Feeling like you were watching yourself from far away	0	1	2	3
13/27.	Feeling tense or "on edge"	0	1	2	3
14/29.	Not feeling like your real self	0	1	2	3
15/31.	Worrying about things	0	1	2	3
16/34.	Being easily annoyed by other people	0	1	2	3
17/35.	Starting arguments or picking fights to get your anger out	0	1	2	3
18/37.	Getting angry when you didn't want to	0	1	2	3
19/38.	Not being able to feel your emotions	0	1	2	3
20/41.	Feeling jumpy	0	1	2	3
21/42.	Absent-mindedness	0	1	2	3
22/45.	Yelling or telling people off when you felt you shouldn't have	0	1	2	3
23/51.	High anxiety	0	1	2	3
24/54.	Nervousness	0	1	2	3

25/57.	Feeling mad or angry inside	0	1	2	3
26/59.	Staying away from certain people or place because they reminded you of something	0	1	2	3
27/62.	Suddenly remembering something upsetting from your past	0	1	2	3
28/63.	Wanting to hit someone or something	0	1	2	3
29/66.	Suddenly being reminded of something bad	0	1	2	3
30/67.	Trying to block out certain memories	0	1	2	3
31/70.	Violent dreams	0	1	2	3
32/72.	Just for a moment, seeing or hearing something upsetting that happened earlier in your life	0	1	2	3
33/74.	Frightening or upsetting thought popping into your mind	0	1	2	3
34/83.	Not letting yourself feel bad about the past	0	1	2	3
35/84.	Feeling like things weren't real	0	1	2	3
36/85.	Feeling like you were in a dream	0	1	2	3
37/87.	Trying not to have any feelings about something that once hurt you	0	1	2	3
38/88.	Daydreaming	0	1	2	3
39/89.	Trying not to think or talk about things in your life that were painful	0	1	2	3
40/91.	Being startled or frightened by sudden noises	0	1	2	3
41/93.	Trouble controlling your temper	0	1	2	3
42/97.	Feeling afraid you might die or be injured	0	1	2	3

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