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**Anger Expression in
Formerly-Depressed and Never-Depressed Women**

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**Anger Expression in
Formerly-Depressed and Never-Depressed Women**

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Dissertation

Presented to the Faculty of the Graduate School of

the University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Philosophy

The University of Texas at Austin

August 2007

**Anger Expression in
Formerly-Depressed and Never-Depressed Women**

Publication No. _____

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The University of Texas at Austin, 2007

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Women who have experienced depression are vulnerable to future depressive episodes as well as emotional, cognitive, and interpersonal difficulties. Several theoretical models have explored the link between maladaptive anger expression and women's depression (Jack, 1991; Davanloo, 1980; Cox, Bruckner, & Stabb, 2003), but the existing research examining this relationship has primarily relied on self-report methods. A growing area of research has begun assessing women's communication styles in the context of interactions with their romantic partners. This field of observational research has studied communication patterns in couples with marital conflict, but no studies have yet examined anger expression in women with a history of depression.

Therefore, the present study examined anger expression in 26 formerly-depressed (FD) and 30 never-depressed (ND) women and their partners. Couples were a part of a larger community study investigating cognitive and interpersonal factors in depression. Participants

completed the Structured Clinical Interview for DSM-IV (SCID; Spitzer et al., 1988) on the telephone to screen for eligibility and determine FD/ND group status. Women and their partners completed self-report measures of depressive symptoms, emotional expression, relationship conflict, and relationship intimacy. Couples also completed an observational interaction task to assess patterns of communication. An observational coding system was developed in collaboration with Deborah Jacobvitz, Ph.D. at the University of Texas at Austin to assess couples' direct anger expression, hostility, and emotional attunement.

The results indicated that contrary to predictions, women expressed more direct anger but similar levels of hostility compared to their male partners. Second, findings supported the prediction that self-reported emotional expression would be associated with relationship intimacy and inversely related to relationship conflict. However, the observational patterns of direct anger, hostility, and emotional attunement were not associated with the relationship outcomes. Results also indicated that FD and ND women did not differ in their patterns of direct anger and hostility expression during the observational interaction task. Exploratory analyses found that individuals' behaviors exhibited during the interaction task were consistent with self-reported ratings of these behaviors. Finally, exploratory analyses also indicated that individuals' patterns of behavior such as hostility impacted their partners' perceptions of the quality of their relationships.

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CHAPTER ONE

Introduction

Approximately seven million women in the United States are currently diagnosed with depression and potentially millions more women suffer from untreated symptoms of depression (Dropleman & Wilt, 1993). Over the course of their lives, about one out of every four women will become depressed (U.S. Department of Health and Human Services, Agency for Healthcare Policy and Research, 1993). Clearly, depression is a serious healthcare problem for women, as it affects women at twice the rate of men (Wickramaratne, Weissman, Leaf & Holford, 1989). The American Psychological Association (APA) Task Force on Women and Depression (McGrath, Keita, Stickland, & Russo, 1990) found that gender differences exist even after taking into account differences in helping-seeking practices, tendencies to report symptoms, ethnicity, income level, education, and occupation. In addition, depression often strikes individuals again months or even years later. Depressed individuals are 50-60% more likely to experience another depressive episode, and the risk rapidly increases with the number of prior episodes (Keller et al., 1992).

Women who are depressed exhibit a unique pattern of emotional and interpersonal problems. In addition to the cognitive (Beck, 1991) and health impairments (Miller, Cohen, & Herbert, 1999) found in depression, extensive theoretical and clinical evidence has found that depressed women often have difficulty expressing negative emotions such as anger (Jack, 1991). Self-report research has found that depressed women do not openly express anger, and instead tend to suppress angry feelings (Goldman & Haaga, 1995) or exhibit hostile behaviors (Biaggio & Godwin, 1987). However, anger that is expressed openly and constructively has been

associated with a decrease in depressive symptoms (Bridewell and Chang, 1997). These maladaptive patterns of anger expression and hostility may contribute to the higher levels of relationship conflict and disruptions in relationship intimacy found in depressed couples (Coyne, Thompson, & Palmer, 2002).

While research has found that emotional and interpersonal factors are associated with depression, studies have yet to establish whether they are risk factors or symptoms of depression. In order to assess the causality of this relationship, researchers have begun using the depression-vulnerable paradigm (Hedlund & Rude, 1995). The paradigm involves examining women who have been depressed in the past, or formerly-depressed, to determine factors that may increase their vulnerability to future episodes of depression. This is a practical way of identifying a depression-vulnerable group, because gender and a history of depression put formerly-depressed women at a much greater risk for developing the disorder. In addition, individuals are studied outside of an episode of depression, and so their cognitive patterns, affective processing, and interpersonal behavior cannot be attributed to the direct effects of depression. Therefore, the depression-vulnerable paradigm provides evidence for the causal relationship between indirect anger expression and depression.

Studies examining anger expression and depression have primarily relied on self-report methodology in college-age, nonclinical populations. Self-report studies may be missing important aspects of anger expression in depressed couples because of demand characteristics or depressed individuals are unaware of their communication patterns (Margolin et al., 1998). Therefore, a new direction in this field involves assessing couples' communication patterns and emotional expression using observational interaction tasks (Heyman, 2001). Extensive observational studies have found that couples with high relationship conflict exhibit more

hostility and negative affect than nondistressed couples (Notarius & Markman, 1989).

Researchers have begun examining communication patterns in depressed and nondepressed couples, and most studies have found that depressed couples interact in more negative ways than nondepressed couples (Ruscher & Gotlib, 1988). However, a few researchers have found no differences between depressed and nondepressed couples' communication patterns (Gotlib & Whiffen, 1989; Johnson & Jacob, 2000). In addition, no observational studies to date have verified self-report findings of emotional expression patterns in depression-vulnerable couples.

The study examined direct anger expression and hostility in 30 never-depressed (ND) and 26 formerly-depressed (FD) women and their partners, who were part of a larger community study. After eligibility and group status was determined using the Structured Clinical Interview for DSM-IV (SCID; Spitzer, Williams, Gibbons, & First, 1988), couples completed a research session at the University of Texas at Austin. During the session, couples discussed an area of conflict in their relationship for ten minutes, which is a commonly-used observational paradigm (Gottman & Levenson, 1986). Participants completed measures of depressive symptoms, emotional expression, relationship intimacy, and relationship conflict. Videotapes of the interaction task were analyzed using an observational coding system developed in collaboration with Deborah Jacobvitz, Ph.D. in the Department of Human Ecology at the University of Texas at Austin. The observational coding system assessed female and male direct anger expression, hostility, and emotional attunement/ engagement on a 7-point Likert-type rating scale.

It was hypothesized that FD women would exhibit less direct anger and more hostility than ND women during the observational task. It is also predicted that there would be relationships between observational and self-reported emotional expression, relationship conflict, and relationship intimacy. Finally, it was hypothesized that, regardless of their depression

histories, women would express less direct anger and more hostility than their male partners during the observational task.

The proposed study provided several contributions to existing research. First, the study sought to extend previous findings about the negative communication patterns of depressed couples to a sample of depression-vulnerable couples. Second, the project aimed to extend research examining the general negative patterns of communication in couples to a greater understanding about specific modes of anger expression, such as direct anger expression and hostility. In addition, the depression-vulnerable study design attempted to determine whether these anger expression patterns are symptoms of depression or risk factors for developing the disorder. Finally, identifying the maladaptive forms of emotional expression associated with depression provided a potential mode of prevention and intervention for women at risk for depression.

CHAPTER TWO

Literature Review

Depression is a growing problem for our society and has serious implications for psychological and social adjustment on an individual and interpersonal level. It is associated with debilitating cognitive, memory, physical, and emotional difficulties, as well as other psychological disorders. Individuals who have experienced depression are at an increased risk for suicidal behaviors, anxiety disorders, and substance abuse (Rush, Zimmerman, & Wisniewski, 2005). Depressed women exhibit cognitive difficulties such as negative cognitive biases (Beck, 1991), negative attributional styles (for review, see Barnett & Gotlib, 1988), and cognitive rumination (for review, see Mor & Winquist, 2002). In a meta-analysis of 157 studies examining memory impairment in depression, Burt, Zembler, and Niederehe (1995) found that depression was associated with memory recall and recognition problems. Depression is also associated with a variety of health consequences, including cardiac problems (Girald, Arthur, & Reuler, 1985) and decreased immune function (Miller et al., 1999). Finally, depressed women often have difficulties expressing their thoughts and feelings, and may stifle their feelings of anger and other negative emotions (Sperberg & Stabb, 1998). These symptoms may increase the development, maintenance, and reoccurrence of depression.

Interpersonal problems also have a major impact on the lives of depressed individuals. Low social support has been found to be both a risk factor and consequence of depression (Monroe, Bromet, Connell, & Steiner, 1986). Interpersonal difficulties may be due to depressed individuals' social skills impairments (Mandal, 1986), or other factors that lead to negative social interactions (Jacobson & Anderson, 1982). These interpersonal deficits may contribute to the

increased marital conflict, as well as decreased relationship satisfaction and intimacy found in depressed individuals (Coyne et al., 2002). Research has shown that marital conflict has a negative impact on the onset, course, and outcome of depression (O’Leary & Beach, 1990). While the causal relationship between depression and relationship conflict is yet unclear, relationship difficulties play a prominent role in the outcome and relapse of women’s depression.

Although research has found that cognitive, emotional, and interpersonal problems are associated with depression, it is unclear whether these are risk factors or consequences of the depressed episode. In order to examine the causal role of these factors, researchers have begun to use the depression-vulnerable paradigm (Hedlund & Rude, 1995). The paradigm involves studying individuals who have been depressed in the past, and therefore are more vulnerable to future episodes of depression. This approach enables researchers to assess existing factors that may put depression-vulnerable, or formerly-depressed, individuals at risk for depression relapse. Research using this paradigm has examined the cognitive functioning of formerly-depressed individuals fairly extensively and has found evidence of negative processing biases in this population that are similar to, but more subtle than, those observed in depressed groups (i.e., Hedlund & Rude, 1995; Ingram, Miranda, & Segal, 1998; Rude, Covich, Jarrold, Hedlund, & Zentner, 2001; Wenzlaff, Rude, & West, 2002). Further, a few studies (i.e., Rude, Valdez, Odom, & Ebrahimi, 2003) have found evidence that cognitive biases observed during remission predict subsequent diagnoses of Major Depressive Disorder. Therefore, the depression-vulnerable paradigm is able to elucidate the causal link between depression and cognitive, emotional, and interpersonal factors.

Conceptual Models of Depression

Although depression is associated with reduced emotional expression and impairments in interpersonal relationships, few conceptual models have provided a comprehensive picture of how these factors influence the development and maintenance of depression in women.

Feminist conceptualizations, such as Jack's (1991) Silencing-the-Self theory, focus on the role of societal influences in women's emotional expression and mental health. Psychodynamic theory, such as Davanloo's (1980) Short-term Dynamic Psychotherapy model, focuses on individuals' characteristic patterns of avoiding emotional expression, the development of these patterns in past relationships, and the manifestation of these patterns in current relationships with others. Finally, clinically-oriented literature, such as Cox, Bruckner, and Stabb's (2003) Anger Advantage model, examines the effects that patterns of adaptive and maladaptive emotional expression have on women's psychological well-being. These models provide insight into different aspects of the link between women's emotional expression and depression.

Feminist Conceptualization: Silencing-the-Self Theory

Jack's (1991) Silencing-the-Self theory was developed out of Jack's clinical work and a large qualitative study examining emotional expression in depressed women. The underlying premise of Jack's (1991) theory is that society creates impossible standards for women in relationships. Women silence their true thoughts and emotions in an attempt to make their interpersonal relationships successful, and then they become more vulnerable to depression.

The first tenet of the Silencing-the-Self theory (Jack, 1991) is that women view themselves in terms of their relationships. Women conceptualize their identity as an interconnected and collectivistic "relational self," in which their identity is social in nature and defined by important relationships in their lives. Secondly, Jack posits that societal expectations

influence women's beliefs about their interpersonal relationships. Historical and cultural influences have shaped the idea of the "perfect" or even "superwoman" image, which affect women's beliefs about how to develop and maintain intimacy in relationships. Because women are expected to express warmth and compassion to others, as opposed to anger and conflict, women suppress their angry feelings. Women may silence themselves to avoid expressing the "wrong" thoughts or feelings to their partners, who may reject this self-expression.

When society discourages women from expressing their true thoughts and feelings, Jack posits that women experience both an arousal in anger and a need to repress these feelings. When women experience this inner turmoil, anger begins to leak out in destructive, aggressive, and hostile ways. These intense anger outbursts only serve to increase women's self-blame and guilt about anger expression, as well as disconnection with their partners.

Jack posited that all women experience the relational self, the split between ideal and authentic selves, and the active censoring of thoughts and feelings. However, she noticed that women who were depressed exhibited these characteristics in more extreme forms than nondepressed women. A logical extension of Jack's (1991) theory is that women become vulnerable to depression when they do not openly express emotions such as anger and they become continually disconnected in interpersonal relationships. By viewing women's emotional expression through the lens of societal and cultural factors, this theory is able to provide a potential explanation for how impaired anger expression may lead to women's increased vulnerability to depression.

Psychodynamic Conceptualization: Short-Term Dynamic Psychodynamic Theory

Davanloo's (1980) Short-term Dynamic Psychotherapy model was developed in the 1960's when Davanloo found that shifting his traditional psychoanalytic model led to more

effective therapeutic outcomes for his clients. The Short-term Dynamic Psychotherapy model incorporates predominant psychoanalytic principles, such as interpreting resistance to release feelings, recognizing the role of transference in therapy, and linking transference behaviors to past and current relationships in individuals' lives. The primary distinction between traditional psychoanalytic approaches (Freud, 1918) and Davanloo's (1980) model is that he encourages the therapist to have an active role in challenging individuals' defenses in order to expedite the course of therapy.

In the Short-term Dynamic Therapy model, the therapist confronts individuals about their feelings towards the therapist, as well as their feelings regarding past and current important relationships. The therapist challenges how individuals tend to respond when they try to avoid experiencing emotions. These defenses are confronted through two types of interpretation, the "person" and the "conflict" triangles. The predominant focus of therapy is on the person triangle, in which the therapist links the individuals' transference with behaviors in past and current relationships. The conflict triangle is also used in order to link individuals' impulses/feelings, anxiety, and defenses in a meaningful way.

Davanloo's (1980) approach focuses on the way that individuals express anger and other emotions, as well as the characteristic patterns that individuals use to reduce the anxiety associated with experiencing these emotions. For example, individuals may avoid experiencing anger through defenses such as passivity or intellectualization. When the therapist continually interprets links between the individuals' transference and past important relationships, individuals can better understand how their maladaptive patterns of anger expression developed. As the link between transference and current relationships also becomes clear, individuals gain insight into the manifestation of these patterns in their current relationships. Therefore,

Davanloo's (1980) Short-term Dynamic Psychotherapy model provides a possible mechanism through which past relationships form patterns of maladaptive emotional expression, and how these patterns may surface in current relationships with romantic partners.

Clinically-Oriented Conceptualization: Anger Advantage Model

Cox, Bruckner, and Stabb's (2003) Anger Advantage model provides a clinically-oriented conceptualization of the role that emotional expression plays in women's psychological well-being. The theory draws on the work of several predominant clinicians examining women's emotions, relationships, and mental health (i.e. Miller, 1976; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991; Thomas, 1993). Cox, Bruckner, and Stabb developed the Anger Advantage (2003) framework through their clinical work and several research studies surveying over 1000 women and girls. Overall, this model examines mechanisms of anger expression in women, and posits that physical and emotional problems such as depression develop when anger is continually expressed in maladaptive ways.

The Anger Advantage model (Cox, Bruckner, & Stabb, 2003) posits that women's beliefs about anger influence their patterns of emotional expression. For example, women may believe that anger is destructive or inappropriate; the expression of anger or conflict shows weakness or emotional instability; or that anger disrupts intimacy and connectedness in relationships. Similar to Jack's (1991) Silencing-the-Self model, Cox et al. (2003) posit that interpersonal experiences and societal influences reinforce these messages about anger expression. Women may eventually lose the ability to recognize the internal physiological and psychological signs of anger, which further continues the pattern of maladaptive anger expression.

The model presents four categories of diverting or indirectly expressing anger: internalization, externalization, segmentation, and containment. Internalization occurs when

women absorb feelings and blame themselves for anger that is meant for others. Alternatively, externalization is the tendency for women to project feelings of anger outwards onto others, often in aggressive and hostile behaviors. Segmentation occurs when women disconnect themselves from angry feelings to the extent that angry feelings leak out in passive-aggressive ways. The final category of maladaptive anger expression is containment, in which women consciously inhibit and suppress their feelings of anger to avoid expressing their feelings in front of others. Women using this strategy may exhibit behaviors such as crying when angry, or appearing as if they are “holding back” in expressing angry feelings.

In addition to these maladaptive modes of anger expression, the Anger Advantage model (Cox, Bruckner, & Stabb, 2003) proposes that there are several adaptive ways to express angry feelings. First, anger consciousness encourages women to become comfortable experiencing anger through facial expression, verbal tone, and body posture, as well as an overall congruence between verbal and nonverbal language about feelings. Cox, Bruckner, and Stabb (2003) posit that “think tanking” feelings presents a way to study anger in an accepting and non-judgmental way to understand what led to the feelings as well as how to address them. The authors also describe constructive anger language to use when discussing feelings with others, which includes using “I” statements to express feelings, specifically addressing situations and contexts which led to the anger, respecting the other person’s boundaries by not engaging in hostile behavior, and avoiding apologizing for angry feelings.

The Anger Advantage model (Cox, Bruckner, & Stabb, 2003) posits that maladaptive modes of anger expression such as internalization, externalization, segmentation, and containment may lead to depression and other psychological problems because emotions are not openly expressed. In other words, any type of maladaptive anger expression in which feelings

are expressed in indirect, hostile, and/or passive-aggressive ways may lead to women's depression. Cox, Bruckner, and Stabb's (2003) model provides conceptualizations of adaptive maladaptive anger expression, as well as the role of emotional expression in women's mental health.

Integrative Conceptualization of Anger Expression and Depression

Definition of direct anger. Before conceptualizing the link between women's anger expression and the development of depression, it is necessary to examine the construct and manifestations of anger. The researcher proposes the construct of "direct anger," which incorporates ideas from Cox, Bruckner, and Stabb's (2003) constructs of anger consciousness, "think tanking," and constructive anger language. Direct anger is conceptualized as the ability to recognize the internal physiological sensations of anger, as well as the awareness and experience of angry feelings in a conscious, mindful, and deliberate manner. Individuals are clear and open to their experience and expression of anger, and do not inhibit or suppress their angry feelings. In addition, direct anger expression involves a deliberate and constructive pattern of anger expression, in which feelings are communicated without hostility or escalation.

Extending Cox, Bruckner, and Stabb's (2003) conceptualization of adaptive anger expression, the proposed conceptual model posits that the verbal component of direct anger involves individuals communicating their thoughts and needs to others. Individuals focus on specific areas of conflict or disagreement that are addressed openly, rather than hostilely blaming or attacking their partners. Nonverbally, individuals seem to "make space" for their anger through angry verbal tone, facial expression, and engaged body language. The researcher's model proposes that there is also congruence between body language and verbal messages about anger; for example, individuals do not smile while saying they are frustrated. Although

individuals may express direct anger through varying degrees of verbal and nonverbal language, the construct of direct anger involves an overall pattern of expressing anger in an open, straightforward manner.

Women's direct anger expression, hostility, and depression. The Anger Advantage model (Cox, Bruckner, & Stabb, 2003) posits that women's maladaptive patterns of anger expression may lead to psychological problems, but does not thoroughly describe the mechanism through which these patterns of emotional expression develop and contribute to women's emotional difficulties. The proposed conceptual model presents two possible ways through which this relationship occurs, building on Davanloo's (1980) Short-term Dynamic Psychotherapy model and Jack's (1991) Silencing-the-Self theory.

The Short-term Dynamic Psychotherapy model (Davanloo, 1980) proposes that women may develop maladaptive patterns of anger expression through their experiences in important relationships. Extending Davanloo's (1980) model, women's early interactions with their parents and other family members lead to the development of characteristic patterns of avoiding emotions. These defenses manifest in current relationships, such as with romantic partners. Because emotions are not expressed openly in past and current relationships, women may develop a variety of psychological problems including depression.

An alternative mechanism through which maladaptive patterns of anger expression develop is based on Jack's (1991) model. Women have more difficulty than men recognizing and openly expressing anger due to societal influences on women's roles in interpersonal relationships. It may become increasingly difficult for women to recognize and assert their needs in relationships, and they may lose a sense of their true thoughts and feelings. Integrating Jack's model with the ideas of Cox, Bruckner, and Stabb (2003), when women silence their thoughts

and feelings, they may internalize angry feelings and engage in other patterns of maladaptive anger expression.

The proposed conceptual model posits that indirect anger expression may lead to an ongoing pattern of hostility, disconnection, and depression. When women do not openly express feelings of anger, hostility may build in close relationships and lead to depressive symptoms (Jack, 1991). An emerging pattern of internalization and hostility may develop, in which these emotions are expressed through maladaptive patterns of anger expression described by Cox, Bruckner, and Stabb (2003). Instead of effectively resolving the underlying conflict and angry feelings, hostility creates further distance and disconnection in relationships. Women do not express anger in direct, straightforward ways and so minor interpersonal disagreements lead to increased relationship conflict. Women may focus on superficial areas of communication with their partners to avoid hostility often expressed during arguments, and so relationship intimacy may decline. Because their partners do not seem to understand their thoughts and feelings, individuals may feel misunderstood and isolated within important relationships. Therefore, the conceptual model proposes that women develop depression through decreased direct anger expression, increased hostility, and an escalating sense of isolation and disconnection with themselves and their partners.

Self-Report Research of Anger Expression

Conceptualization of Anger Expression

Researchers have yet to develop a comprehensive picture of the multifaceted concept of anger (Fehr, Baldwin, Collins, Patterson, & Benditt, 1999). This field of research has been impaired by varying conceptualizations and assessments of anger expression (Edmondson & Conger, 1996). Based on researchers' conceptualizations of anger, studies assess anger through

behavioral manifestations such as yelling or controlling behaviors, cognitive appraisal of a threat, triggers for anger provocation, or physiological reactions to anger (Fehr et al., 1999). One main field of anger expression research involves defining anger through coping mechanisms, such as internalized methods of “anger-in,” and externalized ways of “anger-out” (Spielberger, Johnson, Russell, & Crane, 1985). Researchers using Spielberger et al.’s (1985) anger coping mechanisms often focus on the negative health consequences associated with maladaptive anger expression (i.e., Porter, Stone & Schwartz, 1999; Wenneberg, Schneider, & Walton, 1997), and so are beyond the scope of the present study. In addition, three predominant theoretical models used to examine anger expression include psychodynamic (i.e. Davanloo, 1980), feminist (i.e. Jack, 1997), and clinical-oriented literature (i.e. Cox, Bruckner, & Stabb, 2003). (Please refer to the Conceptual Models of Depression section for further discussion of these theoretical models.) Some of the controversial findings examining anger expression discussed below may be due to the lack of an integrative conceptualization and assessment of anger expression.

Direct anger. One distinct component of anger expression is the proposed concept of direct anger. As previously described in the Conceptual Models of Depression section, direct anger involves the recognition, awareness, and expression of anger in deliberate and constructive ways. Although no research to date has examined the specific construct of direct anger, a few studies have examined similar concepts of anger expression. Direct anger was developed from Cox, Bruckner, & Stabb’s (2003) research, in which the researchers examined the constructs of anger consciousness, “think tanking,” and constructive anger language based on a large qualitative study of women. Direct anger is also similar to Spielberger et al.’s (1985) “anger-control” coping mechanism, in which individuals monitor the experience or expression of anger. Expanding on Spielberger et al.’s (1985) anger coping mechanisms, Linden et al. (2003)

developed a rating scale of anger expression based on a six-factor model of anger expression. This scale included factors related to direct anger such as “assertion,” in which individuals delayed the expression of anger and in order to directly express their feelings to the person whom angered them. In addition, the concept of constructive anger expression was recently examined in health psychology literature (Davidson, Macgregor, Stuhr, Dixon, & MacLean, 2000). The authors proposed that constructive anger expression involved behaviors such as expressing anger to determine a resolution, discussing ways to deal with conflict more effectively in the future, and developing a better understanding of the other person after expressing angry feelings.

To date, health psychology literature assessing anger-control and constructive anger expression is the only field that has quantitatively examined constructs similar to direct anger. These studies have found that constructive anger expression and assertive anger coping mechanisms are associated with adaptive health outcomes such as reduced blood pressure (Davidson et al., 2000; Hogan & Linden, 2004).

Hostility. Many researchers use the terms of anger and hostility interchangeably (Novaco, 1975), or use other varying definitions to describe the construct of hostility. Overall, most fields of hostility research view hostility in terms of a stable personality trait based on characteristics of disgust, contempt, resentment, and a predisposition to become angry (Plutchik, 1980). Measures assessing hostility focus on the externalizing pattern of expressing anger in aggressive, critical, judgment, or passive-aggressive ways. For example, a commonly-used measure of hostility conceptualizes it in terms of assaulting or attacking others, indirect passive-aggressive behavior, irritability, negativism, resentment, suspicion, and verbal expression of angry feelings (Buss & Durkee, 1957). In addition, Spielberger et al.’s (1985) coping mechanism of anger-out may be similar to the concept of hostility, in which anger is externalized

through verbally or physically aggressive ways. Most of research examining the construct of hostility has been in the field of health psychology, in which extensive studies have found that hostility is associated with physical health problems such as cardiovascular disease (i.e. Barefoot, Dahlstrom, & Williams, 1983; Vogeleson, 1998).

Anger Expression in Women

Gender differences in anger expression. Although women tend to be more emotionally expressive than men (Snell, Miller, Belk, Garcia-Falconi, & Hernandez-Sanchez, 1988), anger is the one exception (Sharkin, 1993). This may be due to the strong cultural beliefs about the expression of anger for women (Jack, 1991). Miller (1976) suggested that the gender differences found in anger expression may be due to societal influences restricting the expression of negative emotions in subordinate groups such as women. Based on these cultural influences, women may feel that they cannot express anger with significant people in their lives and so they tend to inhibit the expression of their emotions (Thomas, 1993).

Many studies have supported the existence of gender differences in anger expression using self-report measures in predominantly non-clinical college populations (Sharkin, 1993). Studies have indicated that men experience anger more frequently than women, such as Biaggio's (1989) findings that male college students reported more anger-arousing incidents than female students. Researchers have also found that women tend to respond to anger in less open and straightforward ways than men. For example, Fehr et al. (1999) found that when undergraduate students were asked to describe their responses to anger-inducing scenarios in interpersonal relationships, men were more likely to discuss angry feelings than women. On the other hand, women were more likely to respond to anger-inducing situations with hurt feelings, or express anger indirectly through complaining to someone else or misdirecting their anger to

another person. Similarly, Averill (1983) found that women were four times more likely to cry than men when they were angry, suggesting that women do not openly express angry feelings. Recent research has supported these findings, such as findings that women were more likely to use anger coping strategies such as diffusion, in which individuals distract themselves or “work off” their frustration through other activities (Linden et al., 2003).

However, several researchers have found that women and men’s patterns of anger expression do not differ. Although Biaggio (1989) found gender differences using self-report measures, the findings were not replicated when using a confederate design to experimentally provoke students. In a study involving a college population and a community sample, Averill (1983) found that women described similar anger frequencies, intensities, and open expression of anger as men. In addition, Stoner and Spencer (1987) found that there were no gender differences in outwardly expressed anger in a broader community sample of participants aged 21 to 83 years. These controversial findings about the gender differences in anger expression may be due to the varying constructs of anger, differing conceptualizations of coping strategies, focus on college-age convenience samples, and reliance on self-report measures. As previously discussed, researchers’ varied definitions and assessments of anger expression may also contribute to the contrasting study findings. Gender differences may be difficult to detect in non-clinical and college-age samples, possibly because societal influences may not have exerted as much influence this population. Therefore, there is a need for research examining gender differences in women in a clinical, community population.

Direct anger expression gender differences. Qualitative research studies suggest that women express anger less frequently and openly than men (Cox, Bruckner, & Stabb, 2003; Jack, 1991). (Please refer to the Conceptualization of Depression section for further discussion of

these qualitative findings.) Researchers have not yet examined gender differences in the proposed construct of direct anger, or related concepts of the anger-control coping mechanism (Spielberger et al., 1985), assertion strategies of anger expression (Linden et al., 2003), and constructive anger expression (Davidson et al., 2000).

Hostility gender differences. Theoretical, clinical, and qualitative evidence suggests that women have more difficulty openly expressing anger than men (Jack, 1991; Davanloo, 1980; Cox, Bruckner, & Stabb, 2003). When women are unable to constructively express their feelings, they may be more likely to express anger in hostile or passive-aggressive ways (Miller, 1976). Few quantitative studies have examined gender differences in hostility expression, and the self-report studies that have explored this relationship have instead found that men express anger in more hostile and aggressive ways than women. For example, Biaggio (1989) found that male college students expressed anger in more physically and verbally aggressive ways than female students. Recent studies have also suggested that males express more hostility than females; for example, Linden et al. (2003) found that male college students were more likely to use aggressive anger coping strategies than women. It is possible that the varying definitions of hostility used in the theoretical and self-report literature may contribute to these contradictory results.

Anger Expression in Depressed Women

Direct anger expression in depressed women. Clinical and qualitative evidence suggests that women who are depressed are at an even greater risk for anger expression problems than nondepressed women (Jack, 1991). Research has lagged behind these ideas, but overall, self-report studies have found that depressed individuals have difficulty expressing anger directly. One predominant area in anger expression and depression research involves examining the role

of anger suppression, or the inhibition of anger expression. For example, Goldman and Haaga (1995) found that clinically depressed participants reported higher levels of anger suppression towards their spouses and other individuals, as compared to nondepressed participants. Because it is possible that these differences in anger expression may be due to the comparison between clinical and nonclinical samples, researchers have compared anger expression among different diagnostic groups. For instance, Riley, Treiber, and Woods (1989) examined patterns of anger expression in depressed, PTSD, and nonclinical participants. Although individuals diagnosed with PTSD reported higher levels of anger overall, depressed individuals exhibited higher levels of anger suppression than the PTSD and nonclinical groups. Examining gender differences in the relationship between anger expression and depression, Newman, Gray, and Fuqua (1999) found that anger suppression was more highly correlated with depression in women than men. These studies suggest that the inhibition of anger expression poses the most problems for depressed women.

While many studies have examined the relationship between depression and the inhibition of anger expression, few studies have examined the role of direct, constructive anger expression in depressed women. In health psychology literature, constructive anger expression has been found to be inversely associated with depression (Davidson et al., 2000). Researchers have examined the relationship between depression and other constructs similar to direct anger, such as Spielberger et al.'s (1985) anger-control coping mechanism. For example, studies have found that the anger-control was inversely associated with depressive symptoms in college students (Biaggio & Godwin, 1987; Bridewell and Chang; 1997). In other words, depressed individuals were more likely to use inappropriate patterns of anger expression, rather than anger-control strategies. Similarly, factor analyses of several self-report measures of anger expression

found that depression was associated with poorly controlled anger expression, described as less physical anger expression and more indirect, nonverbal communication (Kopper & Epperson, 1996).

Hostility in depressed women. Research has also suggested that depression is associated with aggressive patterns of anger expression such as hostility. Using several self-report measures of hostility and anger expression, Biaggio and Godwin (1987) found that depressed college students exhibited higher levels of hostility towards others than did nondepressed individuals. Recent studies have supported these findings; for example, higher levels of externalized anger-out patterns of expression were associated with depression in college students (Sperberg & Stabb, 1998). Weissman, Klerman, and Paykel (1971) reported similar findings in a community sample of clinically depressed women. Depressed women were more likely to express hostility towards close family members, as compared to nondepressed women. In addition, Moreno et al. (1993) found that the cognitive, behavioral, and overall levels of hostility increased with the severity of depression in a college counseling center population. While research suggests that depressed women exhibit more hostility and less direct anger expression than nondepressed women, the self-report methodology used in these studies was unable to examine the subtle patterns of interpersonal communications in depressed individuals.

Observational Research of Anger Expression

Limitations of Self-report Measures

Research examining anger expression in depressed women has focused on self-report measures, but there are several limitations in this methodology. The primary disadvantage of self-report measures is that they are vulnerable to the distortions of the participant. That is, self-report measures can involve demand characteristics in which participants respond in a way to

make themselves appear socially desirable (Heppner, Kivlighan, & Wampold, 1999). Given the societal messages about anger expression in women (Jack, 1991), demand characteristics may especially influence self-reported patterns of anger expression. Secondly, depressed woman may inadvertently respond in ways to appear more distressed, due to the negative cognitive biases associated with depression (Beck, 1991), or the increased relationship conflict found in depressed couples (Coyne et al., 2002). In addition, women may have difficulty accurately reporting their patterns of anger expression because they are not fully cognizant of how they interact with their partners. Finally, because self-report questionnaires tend to involve retrospective and global descriptions of constructs (Margolin et al., 1998), participants may describe their communication patterns in broad terms instead of focusing on specific aspects of their interaction. Due to these limitations of self-report measures, studies based solely this method may be missing or underestimating the role of indirect anger expression in depression.

Couples' Interaction Tasks

Based on the limitations of self-report methods and skepticism about couples' ability to accurately report their patterns of interaction, studies have begun to include observational data to examine communication in romantic relationships. Despite the time-consuming and costly nature of observational methods (Gottman, 1998), this approach has been gaining popularity because it allows researchers to draw their own conclusions about interpersonal communication instead of relying on participants' descriptions (Heyman, 2001). Observational data links qualitative and quantitative research methods because it allows for descriptive data as well as analysis of quantitative constructs (Margolin et al., 1998). Unlike self-report measures, these methods assess ongoing, moment-to-moment processes and can target subtle communication

patterns such as anger expression of which participants are not necessarily aware (Margolin et al., 1998).

Researchers have used observational methods such as couples' interaction tasks to examine patterns of communication in romantic relationships. Depending on the type of research problem, couples' interaction tasks can vary on a variety of dimensions, such as the activity, amount of instructions provided by the researcher, family unit observed, and setting (Margolin et al., 1998). A commonly-used procedure to observe couples' verbal and nonverbal expression is the conflict interaction task, which involves the researcher asking the couple to discuss one to two areas of conflict in their relationship (Gottman & Levenson, 1986).

Observational data from the couples' conflict interaction task can be coded in primarily two different ways: the detailed, microanalytic coding system and the more global, macroanalytic method (Baucom & Kerig, 2004). In the 1960's and 1970's, researchers developed microanalytic coding systems to provide a comprehensive analysis of couples' interactions. For example, the frequently-used microanalytic Marital Interaction Coding System (MICS; Weiss & Summers, 1983) is comprised of thirty codes organized into seven behavioral categories: blame, invalidation, problem description, proposals for change, facilitation, validation, and irrelevant off-topic discussion. The actual coding of these variables is extremely complex, but in general, both partners are coded continuously in "data streams" during the interaction. This analysis enables the researcher to examine the level of behaviors exhibited by each partner, as well as the sequential pattern of the couples' interaction. However, due to the detailed analysis of behaviors, microanalytic coding systems tend to be extremely time-consuming in coder training and data analysis (Heyman, 2004).

The limitations of the microanalytic coding techniques led to the development of a new generation of global, macroanalytic coding systems in the 1980's (Baucom & Kerig, 2004). These systems focus on more global ratings of behaviors observed in the interaction tasks. For example, the Rapid Marital Interaction Coding System (RMICS; Heyman & Vivian, 1993) assesses positive, negative, and neutral codes such as hostility, dysphoric affect, withdrawal, constructive problem discussion, and self-disclosure. The RMICS uses coders' existing knowledge to rate the frequencies of these behaviors and behavioral patterns on a rating scale. While this approach to coding observational data leads to more efficient training and data analysis, it reduces the ability to detect complex patterns of interaction (Notarius & Markman, 1989). Researchers must weight the contrasting advantages and limitations to the global and microanalytic coding systems to determine an appropriate approach to observational studies.

Observed Anger Expression in Distressed Couples

Several common patterns of interaction have been identified using both microanalytic and global coding systems, because researchers initially developed the interaction task paradigm to examine communication patterns in distressed and nondistressed couples (Gottman & Notarius, 2000). In a large metaanalysis, Notarius and Markman (1989) found several "stubborn facts" of distressed couples compared to nondistressed couples. First, couples with high relationship conflict exhibited higher levels of negative affect and hostility during interaction tasks. This was reflected in findings that couples were more likely to start conversations hostilely, and both partners maintained the negative behavior throughout the discussion. Second, distressed couples showed increased negative reciprocity, meaning that they were more likely to reciprocate and escalate their partners' hostility. These couples also emitted less positive behavior towards their partners during the interaction tasks. In addition, distressed couples were

more likely to exhibit demand-withdrawal patterns. In this type of interaction, one partner, often the female, become more aggressive and demanding, while the male partner reacts by sulking or withdrawing from the discussion.

Closer examination into observational studies of distressed couples suggests gender differences in their communication patterns, as well as that distressed couples exhibited more hostility than nondistressed couples. Gottman and Levenson (1986) illustrated gender differences in the expression of negative affect by describing the interactions of a married couple with high relationship conflict. Using a microanalytic coding system, they found that only 6.7% of the wife's negative affect was expressed in terms of anger and contempt, as compared to that 77.7% for her husband. The other 93.7% of her negative affect was expressed through whining, sadness, and fear during the interaction task. Because the man expressed his anger directly while his wife did not, the researchers suggested that this pattern provided evidence for the man's dominance in their relationship. These findings also supported previous evidence that women do not express anger directly (Jack, 1991). Gottman (1994, 1999) later expanded these findings into four factors that have detrimental impacts on relationship satisfaction and future divorce rates. Based on the effects on couples' relationships, he termed the following factors as the "Four Horseman of the Apocalypse:" criticism, contempt, defensiveness, and withdrawal. These communication factors, similar an overall pattern hostility, are associated with both concurrent and longitudinal relationship distress (Gottman & Krokoff, 1989; Roberts, 2000).

Observed Anger Expression in Depressed Couples

Anger expression in depressed couples. As observational research of distressed and nondistressed couples expanded, studies began assessing how clinical factors such as depression may affect couples' communication patterns. Overall, studies have suggested that depressed

couples exhibit more negative and less positive behaviors than nondepressed couples, reflecting patterns of hostility in depressed couples. Extensive research by Biglan, Hops, and associates at the Oregon Research Institute (Biglan et al., 1985; Hops et al., 1987) has examined communication patterns during problem-solving interaction tasks and home observations in depressed and nondepressed married couples. Using the LIFE coding system (Arthur, Hops, & Biglan, 1982), the researchers found that depressed women exhibited higher rates of depressive behavior, such as complaining, ignoring, self-derogatory behavior, and other dysphoric behaviors. Depressed women also showed lower rates of problem-solving behaviors than their partners and other nondepressed individuals, such as less approving, affirming, empathizing, and accepting responsibility.

Subsequent research has supported the Oregon Institute's findings (Biglan et al., 1985; Hops et al., 1987) regarding depressed couples' negative communication styles in observational interaction tasks. Using the Interaction Coding System (Gotlib & Kowalik, 1985), Ruscher & Gotlib (1988) found that depressed couples exhibited higher levels of negativity, such as direct disagreement, denying responsibility, noncompliance, and commands. Compared to nondepressed couples, depressed couples also showed reduced positive behaviors, including less agreement, accepting responsibility, compromise, and offering assistance. Studies using an abbreviated form of the Marital Interaction Coding System (Weiss, Hops, & Patterson, 1973) have also found that depressed couples exhibit more negative behaviors and less positive behaviors than nondepressed couples (Johnson & Jacob, 2000).

Examining depressed couples' communication patterns over the course of the interaction tasks, McCabe and Gotlib (1993) found that depressed wives became increasingly more negative over the course of the interaction task, exhibiting behaviors such as criticism, justification, and

mind-reading. These negative patterns of interaction may be stronger in couples in which the wife is depressed rather than the husband (Johnson & Jacob, 2000). The wide use of coding systems collapsed into broad positive and negative behaviors has made it difficult to assess specific patterns of anger expression in depressed couples. However, examination of depressed couples' negative behavior across these studies suggest an overall pattern of hostility including criticism, justification, complaining, ignoring, commanding, disagreement, denying responsibility, and noncompliance.

To date, few observational studies have examined constructs similar to direct anger expression in depressed couples. Depressed individuals have been shown to express fewer emotions such as anger with their partners, as compared to nondepressed individuals (Biglan et al., 1985; Hops et al., 1987). Extending these findings, Cohan and Bradbury (1997) used the SPAFF coding system to examine anger expression in newlywed couples. Assessing anger expression through verbal tone, volume, and content, the researchers found that anger expression was associated with decreased depressive symptoms and increased marital satisfaction at the 18-month longitudinal follow-up. Observational research has yet to thoroughly examine patterns of direct anger expression in clinically depressed women and their partners.

Controversial findings in anger expression for depressed couples. Although these studies suggest that depressed couples exhibit negative communication patterns, some researchers have found that depressed and nondepressed couples' interactions do not differ. A few studies have suggested that the negativity and hostility observed in depressed couples is due to the marital conflict found in couples with depression (Coyne et al., 2002). While Gotlib and Whiffen (1989) found that inpatient depressed individuals and their partners exhibited more negative behaviors than nondepressed couples during interaction tasks, depressed couples' negativity did

not differ from nondepressed hospitalized patients and their partners. The researchers proposed that the high marital conflict in both groups accounted for these patterns of negative communication. However, the researchers only assessed gestures, facial expressions, and nonverbal behaviors associated with negative communication, rather than using an overarching microanalytic or global coding system. In addition, the researchers included 14 male and 8 female depressed targets, and so it is possible that examining a larger group of female depressed individuals and their partners would lead to more robust differences between the groups.

Schmaling and Jacobson (1990) also found that depressed couples displayed negative affect and aggressive behavior similar to nondepressed couples with high marital distress. The researchers assessed communication patterns during the interaction tasks using the microanalytic Interactional Coding System (Hahlweg & Conrad, 1983) and depressive content/ affective codes from the LIFE coding system (Arthur, Hops, & Biglan, 1982). While the findings suggest the possibility of the confounding factor of marital conflict, these findings are not definitive. Nondepressed couples with high marital conflict had significantly higher depressive symptoms than the normal control couples, and so it is possible that depressive symptoms still impacted the negative communication patterns found in these couples. Regardless, the studies by Gotlib and Whiffen (1989) and Schmaling and Jacobson (1990) highlight the importance of examining the relationship between depression, anger expression, and relationship conflict.

In addition, a few studies have suggested that depressed women and their partners do not exhibit negative interactions during observational tasks. For example, Johnson and Jacob (2000) found that depressed husbands and their partners showed negative interactions, but communication between depressed wives and their partners did not differ from nondepressed couples. The researchers used a revised version of the Marital Interaction Coding System

(Weiss, Hops, & Patterson, 1973) to assess negative behavior such as criticizing, disagreeing, putting down, and exhibiting other negative responses. It is possible that using a broad categorization of negative affect is not sensitive enough to assess the subtle verbal and nonverbal patterns of communication found in women as compared to men (Jack, 1991; Averill, 1983).

Overall, existing observational research suggests that depressed women and their partners exhibit more negative patterns of interaction than nondepressed couples. Several findings suggesting that there are no differences between depressed and nondepressed couples' interactions highlight the importance to further examine the relationship between depression and negative communication styles. In addition, these studies suggest the need for observational coding systems that are able to capture women's subtle nonverbal and verbal communication patterns. Although research has grouped these negative and positive behaviors broadly, examining the specific role of direct anger expression and hostility may provide a more comprehensive picture of depressed women's communication patterns in interpersonal relationships. Observational research examining anger expression patterns in depressed women would provide conclusive support for previous findings using self-report measures (Goldman & Haaga, 1995; Biaggio & Godwin, 1987).

CHAPTER THREE

Methodology

Study Overview

The objective of the present study was to examine anger expression in 26 formerly-depressed (FD) and 30 never-depressed (ND) women and their partners. It was hypothesized that FD women would exhibit less direct anger and more hostility than ND women during the observational interaction task. An observational coding system was developed in collaboration with Deborah Jacobvitz, Ph.D. at the University of Texas at Austin, to assess couples' direct anger expression, hostility, and emotional attunement. In addition, it was expected that direct anger expression and emotional attunement would be associated with relationship intimacy and inversely associated with relationship conflict, while the reverse associations would exist between hostility and the relationship variables. Self-reported emotional expression was expected to be associated with relationship intimacy and inversely associated with relationship conflict. Finally, it was predicted that women will exhibit less direct anger and more hostility than their male partners.

This study extended previous research in several important ways. Based on the limitations of self-report methodology and recent developments in observational techniques, the present study used an observational task to objectively assess anger expression. Because observational studies have been criticized for lacking a theoretical rationale for their hypotheses (Heyman, 2001), the study approached women's emotional expression using an integrative conceptualization based on Jack's (1991) Silencing-the-Self theory, Davanloo's (1980) Short-term Dynamic Psychotherapy model, and Cox, Bruckner, and Stabb's (2003) clinically-oriented

Anger Advantage model. The study assessed couples' patterns of anger expression in a community sample in order to extend previous research that has been limited to anger expression in college-age and nonclinical samples. Finally, communication patterns in FD and ND women were examined to contribute to causal link between depression, interpersonal relationships, and emotional factors.

Participants

Women and their partners came from a larger community study investigating cognitive and interpersonal factors in depression. The study consisted of 26 formerly-depressed (FD) and 30 never-depressed (ND) women and their partners, for a total of 56 couples.

Inclusion Criteria

To participate in the study, couples had to be married or cohabiting for at least six months. The present study was limited to heterosexual couples because research has found that some communication patterns may differ in gay and lesbian relationships (Kurdek, 1998).

Criteria for female participants (targets). Women had to be at least 25 years old to qualify for the study. The Structured Clinical Interview for DSM-IV (SCID; Spitzer et al., 1988) was used to determine that women had not ever met criteria bipolar disorder or psychosis, as well as for substance abuse in the past 6 months. Based on women's depression status on the SCID, couples were assigned to the FD or ND group. FD women had at least one episode of depression lasting 2 weeks or longer in the past five years, with no residual symptoms in the last 4 months. ND women had no episode of depression lasting 2 weeks or longer in the past five years.

Criteria for male participants (partners). The targets' romantic partners must have been at least 21 years old. Regardless of the couples' FD/ ND group status, male partners could not

have endorsed psychosis over the course of their lifetimes. However, male partners could have had depression, bipolar disorder, or substance abuse if the interviewer determined that they were psychologically stable at the time of the interview.

Recruitment of Participants

Participants were recruited from the community in Austin, Texas. Couples were primarily recruited through bi-monthly advertisements in a free local newspaper. Some flyers were posted around the university campus, grocery stores, and laundromats, but few participants were recruited through this method. Individuals interested in participating were asked to contact the study via telephone or email. (Please refer to Appendix A for newspaper advertisements, as well as Appendices B and C for flyer advertisements.)

Characteristics of Participants

The following participant demographic information was obtained: gender, age, race/ethnicity, highest level of completed education, length of marriage or co-habitation, and whether the couple had children. It was expected that the demographic characteristics of the FD and ND groups would not differ significantly.

Overview of Study Procedures

1. Telephone Screening
 - a. Introduction and verbal consent
 - b. Demographic information
 - c. Structured Clinical Interview for DSM-IV (SCID; Spitzer et al., 1988)
 - d. If eligible, couple was scheduled for research session.
2. Research Session
 - a. Introduction and informed consent

- b. Questionnaires*- Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), Miller Social Intimacy Scale (MSIS; Miller and Lefcourt, 1982), and Areas of Disagreement Questionnaire (AOD; Richards, Butler, & Gross, 2003)
- c. Couples' Interaction Task
- d. Questionnaire- Emotional Self-Disclosure Scale (ESDS; Snell, Miller, & Belk, 1988)
- e. Debriefing

* *Note:* As part of a larger study, additional self-report measures and other tasks were completed during the research session.

Diagnostic Interviews

As described above, inclusion criteria were determined using the Structured Clinical Interview for DSM-IV (SCID; Spitzer et al., 1988). Doctoral students in the Counseling Psychology program at the University of Texas with some counseling and interviewing experience administered these diagnostic semi-structured interviews.

Precautions for Safety of Participants

The faculty advisor, Stephanie Rude, Ph.D. who is a licensed and practicing psychologist, provided interviewers with brief training regarding suicidal and homicidal concerns that may have arisen during the study. She addressed guidelines to follow if clients were experiencing significant psychological distress. The training also included role-playing to ensure that the interviewers could appropriately assess risk and respond to these situations. All diagnostic interviews were audio-taped with the participants' permission to assess interviewer accuracy and reliability. In addition, all data and audiotapes were stored in a locked office separate from any identifying participant information.

If interviewers were informed of a participant's suicidality, homicidality, or significant distress, they immediately consulted with the faculty advisor about what course of action, if any, was warranted. Interviewers provided participants with telephone numbers for mental health providers in the area. Interviewers and Dr. Rude were prepared to intervene if a participant seemed to pose an immediate harm to themselves or someone else by contacting the Travis County Mental Health Unit of the Sheriff's Department. All consultations about research participants who appeared to be experiencing significant distress, suicidality, or homicidality were carefully documented. Please refer to Appendix D for Precautions for Safety of Participants Training Guidelines.

Self-report Measures

Depression

Beck Depression Inventory. The Beck Depression Inventory (BDI; Beck et al., 1961; Appendix E) was used to assess participants' level of current depressive symptoms. Although a more recent version of the Beck Depression Inventory has been published in accordance with the DSM-IV guidelines (BDI-II, Beck, Steer, & Brown 1996), the previous version was selected for financial considerations as part of the larger community study. Because depressed mood has been shown to affect interpersonal communication and relationship conflict (Coyne et al., 2002), this variable was included as a covariate in the relevant analyses. The BDI is a 21-item questionnaire addressing depressed mood, cognitive difficulties, low self-esteem, sleep disturbance, and fatigue. Participants are asked to rate how much they have experienced each symptom over the past week on a 4-point scale. For example, participants selected one of the following items: "0) I do not feel sad; 1) I feel sad; 2) I am sad all the time and I can't snap out

of it; 3) I am so sad or unhappy that I can't stand it.” Items are being summed to determine a total score.

Previous samples examining the internal consistency of the BDI have yielded an average coefficient alpha of .81 (Beck, Streer, Ball, & Ranieri, 1996). Previous samples assessing convergent validity have also yielded of an average of $r = .60$ with clinical ratings of depression (Beck, Streer, Ball, & Ranieri, 1996). In addition, previous samples examining content validity have indicated that the BDI measures many symptoms considered to be indicative of depression (Beck, Streer, Ball, & Ranieri, 1996). In the present sample, the convergent validity was $r = .42$ with the AOD, and the divergent validity was $-.40$ with the MSIS.

Emotional Self-Disclosure

Emotional Self-Disclosure Scale. The Emotional Self-Disclosure Scale (ESDS; Snell et al., 1988; Appendix F) was used to measure the participants' willingness to disclose eight emotions to a male friend, a female friend, and a romantic partner. The ESDS assesses emotions including anger, depression, happiness, jealousy, anxiety, calmness, apathy, and fear. These ratings are on a 5-point scale ranging from “not at all willing to discuss this topic” to “totally willing to discuss the topic.” The original version of the ESDS was revised to 24 items to reduce the length of the questionnaires for participants to complete. For example, the revised version asked participants to rate their willingness to discuss “Times you felt angry,” rather than asking five items related to anger, including items such as “Times you felt infuriated” or “Times you felt irritated.” Items were summed to obtain the subscale and total scores. The subscale for emotional expression with a romantic partner was used in analyses because of its relevance to the research questions. The one-item subscale of anger expression with a romantic partner was also used in some exploratory analyses.

Previous samples examining the internal consistency of the ESDS have yielded an average range of $r = .83$ to $.95$ (Snell et al., 1988). Previous samples examining convergent validity have indicated that the ESDS is correlated with many variables considered to be associated with emotional self-disclosure, such as gender roles and cultural background (Snell et al., 1989). In the present sample, the convergent validity was $r = .53$ with the MSIS, and the divergent validity was $-.45$ with the AOD.

Relationship Intimacy

Miller Social Intimacy Scale. The Miller Social Intimacy Scale (MSIS; Miller & Lefcourt, 1982; Appendix G) was used to measure participants' feelings of intimacy with their partners. The MSIS is a 17-item questionnaire which assesses intimacy in close interpersonal relationships on a 10-point scale, including behaviors such as confiding in their partner, expressing feelings, spending time together, exhibiting affection, showing support, and feeling closeness. For the first six items, the scale ranges from "very rarely" to "almost always," and for the rest of the items, the scale ranges from "not much" to "a great deal." For example, participants are asked to rate the question, "How often are you able to understand his/ her feelings?" Items 2 and 14 are reverse-coded, and then items were summed to achieve a total score.

Previous samples examining the internal consistency of the MSIS have yielded an average coefficient alpha of $.91$ (Miller and Lefcourt, 1982). Previous samples have also yielded an average convergent validity of $r = .71$ and an average discriminant validity of $r = .48$ (Miller and Lefcourt, 1982). In addition, previous samples assessing discriminative validity have indicated that MSIS scores for married individuals were significantly higher than unmarried

individuals ($t = 8.17, p < .001$) (Miller and Lefcourt, 1982). In the present sample, the convergent validity was $r = .45$ with the ESDS, and the divergent validity was $-.47$ with the AOD.

Relationship Conflict

Areas of Disagreement Questionnaire. The Areas of Disagreement Questionnaire (AOD; Richards et al., 2003; Appendix H) was used to assess relationship conflict and areas of disagreement. This measure was an adapted version of the Couples Problem Inventory (CPI; Gottman, Markman, & Notarius, 1977) for use in both dating and married couples. The AOD is a 13-item questionnaire that asks participants to rate how much they disagree with their partners on topics such as money, communication, and family/ relatives. In addition, participants could rate two additional areas of disagreement not captured in the 13 listed topics, as well as rank the three greatest areas of disagreement in their relationship. These ratings are on a 101-point scale ranging from “0= you don’t disagree at all” to “100= you disagree very much.” An overall level of relationship conflict score was achieved by summing the ratings on the areas of disagreement.

Because the AOD was an experimental measure, there was no existing data published regarding its reliability and validity. The proposed study contributed to the reliability and validity of the measure. Internal consistency was difficult to determine because of the nature of relationship conflict; that is, couples’ disagreement levels varied widely across the measure according to the areas of conflict. However, the sample in the six-month longitudinal portion of the study yielded a temporal stability of $r = .94$. Examination of the convergent validity in the study sample indicated that the AOD was correlated with several variables considered to be associated with relationship conflict (Coyne et al., 2002), such as depressive symptoms ($r = .42, p < .01$). Examination of the divergent validity in the study sample also indicated that the AOD was inversely correlated with several variables considered to be negatively associated with

relationship conflict (Roberts, 2000), such as relationship intimacy ($r = -.47, p < .01$) and emotional expression ($r = -.25, p < .01$).

Observational Couples' Interaction Task

In the proposed study, couples completed a 10-minute conflict interaction task because this period of time has been shown to provide an adequate sample of positive and negative behavior (Heyman et al., 2001). Graduate research assistants described the interaction task to couples and then facilitated their selection of a topic for the conversation. These doctoral research assistants were Counseling Psychology students at the University of Texas at Austin with counseling and interviewing experience. The faculty advisor, Stephanie Rude, Ph.D. who is a licensed and practicing psychologist, provided the research assistants with brief training regarding situations that may have arisen during the session. Similar to the interviewer training, she addressed guidelines to follow if it was discovered that clients were experiencing significant psychological distress, suicidality, or homicidality during the session. The training also included role-playing to ensure that the interviewers and experimenters could appropriately introduce the observational task, facilitate the couples' selection of a topic, and ensure that both members of the couple were comfortable discussing the topic. (Please refer to Appendix D for Precautions for Safety of Participants Training Guidelines.)

Observational Coding System

As previously discussed, incorporating aspects of microanalytic and global coding systems would maximize the benefits of both systems while minimizing their inherent limitations. Therefore, the present study developed an integrative coding system in collaboration with Deborah Jacobvitz, PhD in the Department of Human Ecology at the University of Texas at

Austin. The coding system assessed male and female interactions on three 7-point Likert-type rating scales: direct anger, hostility, and emotional attunement.

Conceptualization of direct anger scale. Few observational coding systems to date have assessed the construct of direct anger, and so the researcher developed a scale incorporating ideas from Cox, Bruckner, and Stabb's (2003) Anger Advantage model. As previously described in the Conceptual Models of Depression section, the concept of direct anger integrates constructs of anger consciousness, "think tanking," and constructive anger language. Direct anger is conceptualized as the ability to recognize the internal physiological sensations of anger, as well as the awareness and experience of angry feelings in a conscious, mindful, and deliberate manner. Individuals are clear and open to their experience and expression of anger, and do not inhibit or suppress their angry feelings. In addition, direct anger expression involves a deliberate and constructive pattern of anger expression, in which feelings are communicated without hostility or escalation.

The direct anger coding scale assessed verbal and nonverbal indices of anger expression. Extending Cox, Bruckner, and Stabb's (2003) conceptualization of adaptive anger expression, the coding system assessed how individuals verbally communicate their thoughts and needs to their partners. Behavioral indices included addressing areas of disagreement in open and direct ways, focusing on specific areas of conflict, and not hostilely blaming or attacking their partners. For example, individuals may have used "I messages" to express their feelings, such as "I feel angry about this issue."

In addition, the observational coding scale examined nonverbal components of direct anger expression. These behavioral indices focus on ways that individuals seemed to "make space" for their anger through angry verbal tone, facial expressions, and engaged body language.

The direct anger scale focused on ways in which there was congruence between body language and verbal messages about anger; for example, individuals did not smile while saying that they were frustrated. Although individuals may have expressed direct anger through varying degrees of verbal and nonverbal language, the construct of direct anger involved an overall pattern of expressing anger in an open, straightforward manner. (Please refer to the Observational Coding Handbook and Observational Coding Sheet in Appendices I and J for further description of the direct anger coding scale.)

The direct anger scale was developed in order to contribute to the field of emotional expression research in several ways. Based on the lack of research examining adaptive modes of anger expression, the researcher proposed the construct of direct anger and developed the coding scale as a way of assessing this concept. The direct anger coding scale provides an objective measure of emotional expression based on observational patterns of communication, as opposed to self-report questionnaires of anger expression. In addition, the assessment of verbal and nonverbal anger expression presents a more comprehensive picture of emotional expression. The researcher hopes to contribute to further research examining direct anger expression through the development of this coding scale.

Conceptualization of hostility scale. The construct of hostility was selected as an index of behaviors that individuals may exhibit when they are unable to express anger in constructive ways. The conceptualization of hostility and the coding scale were adapted from the Dyadic Hostility Scale (Jacobvitz, 2005) in order to assess male and female partners' interactions separately. Hostility was conceptualized as a pattern of behaviors which created distance in individuals' relationships with their partners. The predominant indices of hostility included hostile, sarcastic, and hurtful behaviors, as well as critical and judgmental comments. For

example, the scale assessed verbal components of hostility such as cynical, condescending, or impatient tone; derisive comments; defensiveness; and unnecessary escalation or yelling. The hostility scale also captured nonverbal behaviors such as sneers, grimacing, eye rolling, and other hostile body language.

Previous samples examining the Dyadic Hostility Scale's convergent validity have found that it is correlated with variables expected to be associated with couples' hostility. For example, couples' hostility has been shown predict their children's ADHD and somatic symptoms (Jacobvitz, Hazen, Curran, & Hitchens, 2004). (Please refer to the Observational Coding Handbook and Observational Coding Sheet in Appendices I and J for further description of the hostility coding scale.)

Conceptualization of emotional attunement scale. The emotional attunement and engagement scale was selected as an index of individuals' connectedness and understanding with their partners. The conceptualization of emotional attunement/ engagement and the coding scale were adapted from the Dyadic Emotional Attunement/ Engagement Scale (Booher, 2000) in order to assess male and female partners' interactions separately. Emotional attunement was conceptualized as individuals' awareness and attentiveness to their partners' thoughts, feelings, and behaviors. Emotional engagement was a related construct, but focused on individuals' commitment to the relationship and connection with their partners. Individuals who were emotionally attuned/ engaged with their partners often exhibited reciprocity of affect, that is, they matched their partners' emotions and intensity of affect. In other words, individuals seemed to be on the "same wavelength" with their partners, such as mirroring their partners' frustration about the conflict area instead of disregarding their partners' feelings. Verbal indices of emotional attunement/ engagement included rephrasing partners' thoughts and emotions,

expressing emotions without escalation or disengagement, asking partners to clarify statements, and exhibiting mutual laughter and humor about the areas of conflict. The emotional attunement/engagement scale also assessed nonverbal indices, such as consistent eye contact, open posture oriented towards their partners, and nodding.

Emotional attunement/ engagement was included in the coding system to provide a more comprehensive picture of the couples' relationship and how partners communicate emotions to each other. In addition, emotional attunement and engagement were expected to be important components of relationship intimacy and conflict. (Please refer to the Observational Coding Handbook and Observational Coding Sheet in Appendices I and J for further description of the emotional attunement/ engagement coding scale.)

Development of coding scales. Using the theoretical conceptualization of constructive anger expression as a foundation (Cox, Bruckner, & Stabb, 2003), the first stage of developing the coding scales was to examine several couples' videotaped interaction tasks. The researcher examined interaction tasks of two couples from the study's pilot data, three ND couples, and one FD couple. The couples from the pilot dataset and ND couples were not used in the data analyses; however, to increase the sample size of the FD group, the FD couple was later assigned a random identification number and reanalyzed as part of the study dataset.

In collaboration with Deborah Jacobvitz, Ph.D. at the University of Texas at Austin, behavioral indices of direct anger were identified and endpoints of the Likert-type scale were defined. The Dyadic Hostility (Jacobvitz, 2005) and Emotional Attunement/ Engagement Scales (Booher, 2000) were adapted to individual level behaviors observed in the interaction tasks. After developing a concrete framework of the direct anger, hostility, and emotional attunement/ engagement scales, the next stage involved clarifying behaviors observed for each Likert-type

scale point. In addition, the six couples' interaction tasks described above were examined to determine an appropriate range of behaviors expected in the larger study sample.

Several important decisions were made in the course of developing the coding scales. First, couples were assessed on an individual rather than dyadic level because of the theoretical conceptualization focused on women's anger expression and depression. Second, although women were the target participants in the study, their male partners were also assessed using the individual level coding system in order to examine gender differences in anger expression. Third, to reduce variance in the coding procedure, each coding scale was analyzed sequentially in the order of direct anger, hostility, and emotional attunement/ engagement. Finally, each of the scales was analyzed separately, so that the scales were able to assess distinct constructs. For example, an individual incorporated both direct anger and hostility when she said to her partner, "I feel so angry when you do that. Well, what can I expect, you're so insensitive." Her expression of angry feelings was captured on the direct anger expression, and then the hostile comment attacking her partner was captured on the hostility scale.

Rater training for coding scales. Researchers have found that graduate-level raters tend to be more sensitive than undergraduate student in detecting subtle emotional and behavioral patterns, as well as providing more reliable and accurate ratings (Kline et al., 2004). Therefore, the researcher was the primary rater and her observational ratings were used in the data analyses. For reliability purposes, a graduate student in the Counseling Psychology program at the University of Texas at Austin was selected as a second coder.

Before raters analyzed the dataset, the observational data was prepared so that raters were blind to the couples' group status. First, a new coding identification number replaced the original couples' identification number used during the research screening and sessions. A research

assistant, who was not involved in the observational data analysis, randomly assigned the coding identification numbers to combine the FD/ ND groups and time periods during which the couples completed the study. This process ensured that both raters were blind to any potentially identifying information regarding the couples' group status. In addition, the order in which raters analyzed the male and female partners was randomized to reduce any potential biases in the sequential coding of the couples' interactions.

Training the raters on the observational coding system took approximately two months. Raters first read the Observational Coding Manual (Appendix I), as well as discussed each scales' conceptualizations and examples. They practiced analyzing the two pilot interaction tasks and two ND couples' interaction tasks on each of the rating scales, and discussed discrepancies with the faculty advisor. When raters became familiar with the coding system, each rater coded the remaining two practice tapes separately and then met to discuss their ratings. At this point, coders were relatively consistent in their ratings on each coding scale, and so they began analyzing the study dataset. Weekly meetings were held to discuss questions about the coding system, prevent rater drift, and maintain high interrater reliability. Although it was not necessary for the present study, if interrater reliability significantly dropped during the course of data analysis, raters would have reviewed the Observational Coding Manual (Appendix I) and analyzed all videotapes until the interrater reliability improved.

Interrater reliability for coding scales. Based on the relatively small sample size of the present study, the second coder analyzed 50% of randomly selected couples' interaction tasks. This exceeds most researchers' recommendations to assess at least 20-30% of the observational tasks for interrater reliability (Floyd & Rogers, 2004). The first ten videotapes were selected to determine preliminary interrater reliability. The faculty advisor then randomly selected the rest

of the tapes the second rater analyzed, and so the raters were unaware of which tapes would be used for interrater reliability.

Although interrater reliability can be difficult to achieve with observational coding system (Heyman, 2004), Pearson correlations of .7 to .8 were determined to be acceptable. For females, interrater reliability was $r = .77$ for direct anger (Mean = 4.36), $r = .86$ for hostility (Mean = 3.09), and $r = .78$ for emotional attunement (Mean = 4.23). For males, interrater reliability was $r = .70$ for direct anger (Mean = 3.46), $r = .70$ for hostility (Mean = 2.80), and $r = .85$ for emotional attunement (Mean = 3.82). Correlations among the observational variables, as well as associations between the observational and self-report measures, are discussed in the Results section.

Procedures

Telephone screening

Graduate research assistants contacted potential participants interested in the study and conducted telephone screening with both members of the couple.

- a. *Introduction and verbal consent.* The interviewer ensured that participants were available to complete telephone screening, and then discussed confidentiality and verbal consent. To ensure the accuracy and reliability of the telephone screening, the interviews were audio-taped with participants' permission. Please refer to Appendix K for the Telephone Script for Demographic Information and Verbal Consent.
- b. *Demographic information.* Potential participants were considered ineligible if they did not meet the age or relationship length inclusion criteria. Please refer to

Appendix K for Telephone Script for Demographic Information and Verbal Consent.

- c. *Structured clinical interview for DSM-IV- Nonpatient, Lifetime* (SCID-NP; Spitzer et al., 1988). The interviewer assessed the couple's history of depression and other inclusion criteria.
- d. If the couple was eligible, they were scheduled for a research session.

Research session

Research sessions were conducted at the University of Texas at Austin, Department of Educational Psychology, TARA rooms. The room used for the couple's interaction task included a couch for the couple to sit on, as well as other furnishings to emulate a living room. The room included a one-way mirror through which the couple was videotaped, but blinds were placed over a portion of the mirror so as to seem less intrusive. Please refer to Appendix L for a schematic of the room. An additional smaller room across the hall was used so that the couple could complete self-report measures separately. A graduate research assistant obtained informed consent and explained the interaction task, and one to two trained research assistants aided in conducting and videotaping the session.

- a. *Introduction and informed consent.* The graduate research assistant greeted participants, introduced the research assistants, and described the session length and structure. She then explained the consent form, highlighting the study's contact information, confidentiality, and that portions of the session would be videotaped with their permission. She clarified that her role during the session was to listen but not to give any advice. Finally, she addressed the mental health provider list on the back of the consent form, which was provided to all couples

involved in the study as a resource. Please refer to Appendices M and N for consents for ND and FD couples. In addition, please see Appendix O for Resources Referral List for Study Participants.

- b. *Questionnaires.* As part of the larger study, couples completed the Overgeneral Memory Test (Williams & Broadbent, 1986) and the Scrambled Sentences Test (SST; Wenzlaff, 1988) in a randomized order. Couples were asked to complete a packet of questionnaires which included the Beck Depression Inventory (BDI; Beck et al., 1961), Miller Social Intimacy Scale (MSIS; Miller and Lefcourt, 1982), and Areas of Disagreement Questionnaire (AOD; Richards et al., 2003). Couples completed the questionnaires separately to ensure that they responded as accurately as possible.
- c. *Couples' interaction task.* A research assistant turned on the cameras placed behind the one-way observation mirror and the couple began the conflict interaction task. Common areas of disagreement included communication problems, financial concerns, and housekeeping duties. The graduate research assistant asked the couple to mutually agree on an area of disagreement. She asked if both members were willing to discuss the topic to ensure their comfort during the interaction task. Because using a standardized set of procedures for the conflict interaction task reduces measurement error in the task (Heyman, 2001), the graduate research assistant introduced the task as follows:

Every couple has issues that they struggle with. This part of the study is going to be a conversation about areas in which you tend not to agree (or areas of disagreement). The point of this is to see how you interact when you have a disagreement in your relationship. I am going to leave the room for the task, to give you some privacy. To help you get started on it though, let us first identify a topic for the conversation. What's an important area of disagreement?

To help the couple begin the conversation and focus the discussion, the graduate research assistant asked the couple to each briefly state their main concern about the area of disagreement (Heyman, 2001). She encouraged each member of the couple to describe their primary concern in a few sentences. She then described the guidelines for the conversation:

Just like you have been, try to talk like you're in your own living room. Try to keep discussing (name area of conflict) until get I get back. It is important to stay focused on the area of disagreement, as opposed to just chatting. It is okay to talk about other areas of disagreement as well, if they come up. I am going to knock on door in about 10 minutes to let you know that you have about a minute to wrap up. Then, I'll knock on the door in another minute, come in, and ask it how went.

The graduate research assistant left the room to allow the couple to begin the conversation. She knocked on the door in 9 minutes, and then returned to the room in 10 minutes to end the task.

- d. *Questionnaire.* As part of the larger study, the couple completed an interview about their self-perceptions and perceptions of their partners. They also completed a second packet of questionnaires, which included the Emotional Self-Disclosure Scale (ESDS; Snell et al., 1988). The order of the interview and second questionnaire packet was randomized between male and female partners.
- e. *Debriefing.* The graduate research assistant asked the couple how the session went and thanked them for their time. She paid the couple \$40 for their participation and validated their garage parking ticket. As a part of the larger study for FD couples, she stated that a research assistant would contact them in six months for the longitudinal follow-up portions of the study. The graduate research assistant gave them a copy of their informed consent form and asked them to contact the research study if that had any questions in the future.

CHAPTER FOUR

Results

Description of Sample

In the present study, the sample was composed of 56 couples, 26 in the FD group and 30 in the ND group. An additional 11 couples, 2 in the FD group and 9 in the ND group, were eliminated from the dataset because the researcher was unable to analyze the videotaped interaction tasks. The videotaped interaction tasks exhibited problems such as poor video camera microphone sound quality or equipment malfunction in eight of the couples, data being misplaced in two of the couples, and one couple speaking Portuguese during the interaction task. In addition, the 2 couples from the pilot study and the first 4 ND couples who completed the study were used to develop the observational coding system and so were not included in the dataset.

FD/ ND groups were compared on the following demographic variables: age, race/ ethnicity, education level, marriage or co-habitation, length of marriage or co-habitation, and whether or not the couples had children. It was not expected that there would be significant differences between the FD and ND samples on any of the demographic variables.

As shown in Table 1, independent sample t-tests were conducted to examine participants' ages in the FD and ND groups. There were no significant differences in age for female partners between the FD/ND groups (Mean_{FD} = 33.81; M_{ND} = 34.57), $t(54) = -.32, p = ns$. There were also no significant differences in age for male partners in each group (Mean_{FD} = 33.58; M_{ND} = 36.97), $t(54) = -1.18, p = ns$.

Participants were not racially or ethnically diverse for a community sample in Austin, Texas. Percentages of the racial/ ethnic groups represented in the FD and ND participants are shown in Table 2. The expected sizes of Caucasian/ non-Caucasian cells were too small to perform chi-squared analyses, and so it is uncertain whether racial/ethnic backgrounds differed between the FD/ND groups.

As shown in Table 2, chi-squared analyses were conducted to examine the highest level of education for participants in the FD and ND groups. There were no significant differences for education level of female partners in the FD/ ND groups, $\chi^2(1, N = 56) = 1.52, p = ns$. For males, there was a weak trend for participants in the FD group to have lower education levels than those in the ND group, $\chi^2(1, N = 56) = 2.34, p = .12$.

Chi-squared analyses were conducted to examine marriage and co-habitation in the FD and ND couples. As shown in Table 2, FD couples, 61.5% of couples were married and 38.5% of the couples were living together. For ND couples, 60.0% of couples were married and 40.0% of the couples were living together. There were no significant differences in marriage or co-habitation between the FD/ND groups, $\chi^2(1, N = 56) = .01, p = ns$.

Couples' length of marriage/ co-habitation was not normally distributed in the sample, and so square root transformations were conducted on the data before completing analyses. As shown in Table 1, an independent t-test was completed to examine any differences between the lengths of the relationships for the FD/ ND couples. There was a trend that the ND couples had longer relationships than the FD couples, $t(53) = -1.78, p = .10$.

Chi-squared analyses were conducted to examine whether the FD and ND groups differed in having children. As shown in Table 2, 38.5% of the FD couples had children and 61.5% did not have children. In the ND group, 30.0% of the couples had children and 70.0% did not have

children. There were no significant differences in having children between the FD/ND groups, $\chi^2(1, N = 56) = .01, p = ns$.

Preliminary Analyses

Observational Coding System

To examine the interrater reliability of the observational coding system, 50% of the sample ($N = 26$) was randomly analyzed by an additional rater. Pearson correlations were conducted to assess interrater reliability between the two raters on each of the coding system variables of direct anger, hostility, and emotional attunement (Heyman, 2004). Pearson correlations of $r = .70$ - $.80$ were considered to be sufficient levels of interrater reliability. For females, interrater reliability was $r = .77$ for direct anger (Mean = 4.36), $r = .86$ for hostility (Mean = 3.09), and $r = .78$ for emotional attunement (Mean = 4.23). For males, interrater reliability was $r = .70$ for direct anger (Mean = 3.46), $r = .70$ for hostility (Mean = 2.80), and $r = .85$ for emotional attunement (Mean = 3.82). Means and standard deviations of the coding scales for females and males are shown in Tables 3 and 4.

Pearson correlations were conducted to examine relationships between the observational variables and self-report questionnaires. As shown in Table 5, females' direct anger was associated with their hostility, $r = .49, p < .01$. Females' hostility was inversely correlated with their emotional attunement, $r = -.54, p < .01$. Females' depressive symptoms were associated with their hostility, $r = .31, p < .05$. However, females' BDI scores were not significantly correlated with their levels of direct anger, $r = -.02, p = ns$. As shown in Table 6, males' direct anger was associated with their hostility, $r = .35, p < .01$. Males' hostility was inversely correlated with their emotional attunement, $r = -.55, p < .01$. Males' emotional attunement was

inversely correlated with their depressive symptoms, $r = -.29, p < .01$. In addition, males' emotional attunement was also associated with relationship intimacy, $r = .37, p < .01$.

Self-report Measures

The means and standard deviations for the BDI, ESDS, MSIS, and AOD self-report measures for females and males are shown in Tables 3 and 4. A few participants did not complete all the questionnaire items, and so these questionnaires were removed from the analyses. For females, three ESDS, one MSIS, and one AOD were removed from the analyses. For males, one ESDS and one MSIS were removed from the analyses.

Pearson correlations were conducted to examine relationships among study variables. As shown in Table 5, female depressive symptoms were correlated with decreased emotional self-disclosure to their romantic partners, $r = -.27, p < .05$; decreased relationship intimacy, $r = -.32, p < .05$; and increased relationship conflict, $r = .50, p < .01$. As shown in Table 6, male depressive symptoms were correlated with decreased emotional self-disclosure to their romantic partners, $r = -.22, p = ns$; decreased relationship intimacy, $r = -.54, p < .01$, and increased relationship conflict, $r = .34, p < .05$. There was an interest in examining how anger and hostility were associated with relationship variables, such as intimacy, without the confounding influence of depression. Therefore, in the following analyses, depressive symptoms were used as a covariate whenever it was significantly correlated with the study variables.

Testing Hypotheses

Anger expression in FD and ND women: Hypothesis 1

It was hypothesized that the FD women would exhibit lower levels of direct anger and higher levels of hostility than the ND women during the observational interaction task.

A univariate ANOVA was conducted to examine direct anger expression in the FD and ND groups, as shown in Table 7. Prior to conducting the analysis, the data was examined to ensure that the ANOVA assumptions were met. Because participants were assessed independently of each other and no repeated measures were used, the independence assumption seemed reasonable. There were no serious violations of the constant variance and normality assumptions; for example, Levene's test supported the assumption of equal population variances at the .05 level, $F(1, 54) = .05, p = ns$. The effect of group was not significant (Mean_{FD} = 4.15; M_{ND} = 4.57), $F(1, 54) = 1.86, p = .18$, although the mean difference was in the expected direction. Female direct anger expression was not correlated with current depressive symptoms, $r = -.02, p = ns$, and so BDI was not entered as a covariate in the ANOVA analysis.

An ANOVA parallel to that described above was used to examine hostility expression between the FD and ND groups. As above, the data was examined to ensure that the ANOVA assumptions were not seriously violated. The effect of group was not significant (Mean_{FD} = 3.23; M_{ND} = 2.97), $F(1, 54) = .42, p = ns$.

Because female hostility and depressive symptoms were correlated, $r = .31, p < .05$, the above analysis was also conducted using BDI as a covariate. Prior to completing the ANCOVA analysis, the data was examined to ensure that the independence, constant variance, and normality assumptions were met. In addition, inspection of the data did not indicate any serious violations of the homogeneity of regression slopes and linearity of regression ANCOVA assumptions. Using BDI as a covariate, the difference in hostility expression between FD and ND women was also not significant (Mean_{FD} = 3.23; M_{ND} = 2.97), $F(1, 54) = .04, p = ns$.

Emotional expression, relationship intimacy, and relationship conflict: Hypothesis 2

It was hypothesized that direct anger expression and emotional attunement would be associated with relationship intimacy and inversely associated with relationship conflict. On the other hand, hostility was predicted to be associated with relationship conflict and disruptions in relationship intimacy.

Observational variables and relationship intimacy. Because study participants were nested within couples, mixed model analyses were conducted to examine the relative associations between the observational variables and relationship intimacy. As preliminary analyses, multiple regression analyses were conducted to explore the relative associations among these variables for men and women (shown in Appendix P). Prior to conducting the mixed model analyses, a case analysis identified two outliers in the dataset. A sensitivity study showed that removing the two couples from the dataset greatly impacted the analysis results, and so these observations were dropped from the analysis. The data was also examined to ensure that the mixed models assumptions were not seriously violated. The conditional independence assumption seemed to be reasonable. In other words, given that the random effects variable took into account the paired nature of the couples' level data, the study variables were considered to be independent. That is, each couple was recruited independently from other couples and no repeated measures were used in the study. Examination of the scatter plots of the residuals and study variables supported that there were no serious violations of the constant variance and normality assumptions for the error terms.

Using mixed model analyses, direct anger, hostility, and emotional attunement were used to predict relationship intimacy. The fixed effects were the predictors of direct anger, hostility,

and emotional attunement. A random couple-level intercept was included to control for the dependence within couples.

Mixed model analysis found that when controlling for the other predictors, direct anger, $b = .22, t = .14, p = ns$; hostility, $b = .27, t = .24, p = ns$; and emotional attunement, $b = 1.19, t = .92, p = ns$; did not significantly predict relationship intimacy. The model did not explain any of the within couple explained variance; it actually increased the unexplained within couple variance by 3.66% (Kreft & de Leeuw, 1998; Singer, 1988). A small portion of the between couple variance was explained by the predictors. The model reduced the unexplained between variance from 69.90 to 67.21, a 3.85% reduction in unexplained variance between the predictors and relationship intimacy. The estimated intraclass correlation for these analyses was .37, indicating that without using mixed models to account for the non-independent nature of the couples data, statistical results would have been inaccurate (Singer, 1998).

Observational variables and relationship conflict. Because male and female relationship conflict were not highly correlated, $r = .23, p = ns$, mixed model analysis was not necessary to examine the relative associations between the observational variables and relationship conflict. Therefore, a multiple regression analysis was conducted to determine whether female direct anger, hostility, and emotional attunement predicted female relationship conflict. A parallel multiple regression analysis was completed for male participants.

Prior to conducting the multiple regression analyses, case analyses found that there were two observations for males and one observation for females with standardized residuals greater than 2.5. However, sensitivity studies indicated that removing these observations did not greatly impact the study results. The data were also examined to ensure that the multiple regression assumptions were not seriously violated. The independence assumption seemed to be reasonable

given the recruitment procedures of the study and that no repeated measures were used. Examination of the data supported that there were no serious violations of the constant variance assumption for males and females, and well as the normality assumption for females. However, examination of the male relationship conflict variable indicated that it was not normally distributed in the sample and so may have violated the normality assumption. Square root transformations were conducted on the male relationship conflict variable, but it did not improve the distribution of the variable. Therefore, a nonlinear regression analysis was conducted using a binary outcome for relationship conflict, and the results did not greatly differ from those discussed below.

For females, the overall regression model of direct anger, hostility, and emotional attunement did not significantly predict relationship conflict, Adjusted $R^2 = -.02$, $F(3, 51) = .72$, $p = ns$. For males, the overall regression model of direct anger, hostility, and emotional attunement also did not predict relationship conflict, Adjusted $R^2 = .005$, $F(3, 52) = 1.09$, $p = ns$.

Emotional expression, relationship conflict, and relationship intimacy: Hypothesis 3

Self-reported emotional expression with romantic partners was predicted to be associated with relationship intimacy, and inversely associated with relationship conflict.

Self-reported emotional expression and relationship intimacy. Mixed model analysis was conducted to examine the association between self-reported emotional expression to romantic partners and relationship intimacy. As preliminary analyses, multiple regression analyses were conducted to explore the relative associations among the variables for men and women (refer to Appendix P). Prior to conducting the mixed model analyses, a case analysis identified two observations that were outliers in the dataset. However, a sensitivity study found that removing these couples from the dataset did not greatly impact the analysis results. As previously

described, the data was examined to ensure that the mixed model analysis assumptions were not seriously violated.

A mixed model analysis indicated that emotional expression significantly predicted relationship intimacy, $b = 1.34$, $t = 4.64$, $p < .001$. The model accounted for 14.23% of the explained within couple variance (Kreft & de Leeuw, 1998; Singer, 1988). In addition, a substantial proportion of the between couple variance was explained by self-reported emotional expression. The model reduced the between couple variance from 163.06 to 125.32, a 23.14% reduction in the unexplained variance between the predictors and relationship intimacy. The estimated intraclass correlation for these analyses was .48, indicating that without using mixed models to account for the non-independent nature of the couples data, statistical results would have been inaccurate (Singer, 1998).

Because depressive symptoms were correlated with self-reported emotional expression and relationship intimacy, an additional area of interest was whether the relationship between emotional expression and relationship intimacy would hold after accounting for depressive symptoms. Therefore, a mixed model analysis was conducted using depressive symptoms and self-reported emotional expression as fixed factors, and a random couples' level intercept to control for the dependence of the couple level data. When controlling for the depressive symptoms, emotional expression, $b = 1.29$, $t = 4.38$, $p < .001$ significantly predicted relationship intimacy. The model accounted for 2.54% of the explained within couple variance; that is, very little of the within couple variance was explained using this model (Kreft & de Leeuw, 1998; Singer, 1988). However, a substantial proportion of the between couple variance was explained by depressive symptoms and emotional self-disclosure. The model reduced the between couple

variance from 163.06 to 77.64, a 52.39% reduction in the unexplained variance between the predictors and relationship intimacy.

Self-reported anger expression and relationship intimacy. Because the subscales of anger expression to romantic partners for males and females were not highly correlated, $r = .09$, $p = ns$, mixed model analysis was not necessary to examine the relative associations between self-reported anger expression and relationship intimacy. Therefore, a multiple regression analysis was conducted to determine whether the female subscale of anger expression predicted female relationship intimacy. A parallel regression analysis was conducted for males.

Prior to conducting multiple regression analyses, case analyses found that there was one observation for males and two observations for females with standardized residuals greater than 2.5. Sensitivity studies indicated that removing these observations greatly impacted the study results, and so these couples were dropped from the analyses. As previously described, the data was examined to ensure that the multiple regression assumptions were not seriously violated.

For females, the overall regression model significantly predicted relationship intimacy, Adjusted $R^2 = .09$, $F(1, 51) = 5.89$, $p = .02$. Female anger expression to romantic partners was associated with relationship intimacy, $\beta = .32$, $t = 2.43$, $p = .02$. For males, the overall regression model did not significantly predict relationship intimacy, Adjusted $R^2 = .02$, $F(1, 52) = .86$, $p = ns$.

Because depressive symptoms were correlated with self-reported anger expression and relationship intimacy, an additional area of interest was whether the relationship between female anger expression and relationship intimacy would hold after accounting for depressive symptoms. Therefore, a multiple regression analysis was conducted using self-reported anger expression to predict relationship intimacy, controlling for depressive symptoms. The overall

regression model significantly predicted relationship intimacy, Adjusted $R^2 = .17$, $F(2, 50) = 6.41$, $p = .003$. Controlling for depressive symptoms, female anger expression to romantic partners was associated with relationship intimacy, $\beta = .30$, $\Delta R^2 = .09$, $t = 2.40$, $p = .02$.

Self-reported emotional expression and relationship conflict. Because male and female relationship conflict were not highly correlated, $r = .23$, $p = ns$, mixed model analysis was not necessary to examine the relative associations between emotional expression and relationship conflict. Therefore, a multiple regression analysis was conducted to determine whether female emotional expression predicted female relationship conflict. A parallel multiple regression analysis was completed for male participants.

Prior to conducting the multiple regression analyses, case analyses found that there were two observations for males and one observation for females with standardized residuals greater than 2.5. However, sensitivity studies indicated that removing these observations did not greatly impact the study results. The data was also examined to ensure that the multiple regression assumptions were not seriously violated. The independence assumption seemed to be reasonable given the recruitment procedures of the study and that no repeated measures were used. Examination of the data supported that there were no serious violations of the constant variance assumption for males and females, as well as the normality assumption for females. However, examination of the male relationship conflict variable indicated that it was not normally distributed and so may have violated the normality assumption. Square root transformations were conducted on the male relationship conflict variable, but it did not improve the distribution of the variable. Therefore, a nonlinear regression analysis was conducted using a binary outcome for male relationship conflict, and results did not greatly differ from the results discussed below.

For females, the overall regression model significantly predicted relationship conflict, Adjusted $R^2 = .07$, $F(1, 50) = 4.57$, $p = .04$. Female emotional self-disclosure to romantic partners was inversely associated with relationship conflict, $\beta = -.89$, $t = -2.14$, $p = .04$. For males, there was a trend of the overall regression model significantly predicting relationship conflict, Adjusted $R^2 = .04$, $F(1, 53) = 3.03$, $p = .09$. Male emotional self-disclosure was inversely associated with relationship conflict, $\beta = -.23$, $t = -1.74$, $p = .09$.

Because depressive symptoms were correlated with self-reported anger expression and relationship conflict, an additional area of interest was whether the relationship between anger expression and relationship intimacy would hold after accounting for depressive symptoms. Therefore, a multiple regression analysis was conducted using female self-reported anger expression to predict female relationship conflict, controlling for female depressive symptoms. A parallel multiple regression analysis was completed for male participants.

For females, the overall regression model significantly predicted relationship conflict, Adjusted $R^2 = .24$, $F(2, 49) = 8.99$, $p < .001$. Female emotional self-disclosure to romantic partners was not significantly associated with relationship conflict when controlling for depressive symptoms, $\beta = -.15$, $\Delta R^2 = .02$, $t = -1.19$, $p = ns$. For males, the overall regression model significantly predicted relationship conflict, Adjusted $R^2 = .12$, $F(2, 52) = 4.71$, $p = .01$. Male emotional self-disclosure was not significantly associated with relationship conflict when controlling for depressive symptoms, $\beta = -.16$, $\Delta R^2 = .02$, $t = -1.23$, $p = ns$. Therefore, although there was a relationship between self-reported emotional expression and relationship conflict, it became non-significant when depressive symptoms were added into the regression models.

Self-reported anger expression and relationship conflict. Regression analyses were also completed using the one-item subscale of anger self-disclosure to romantic partners. Prior to

conducting multiple regression analyses, case analyses found that there were two observations for males and one observation for females with standardized residuals greater than 2.5.

Sensitivity studies indicated that removing these observations greatly impacted the study results, and so these observations were dropped from the analyses. As previously described, the data was examined to ensure that the multiple regression assumptions were not seriously violated.

For females, the overall regression model of self-reported anger expression did not predict relationship conflict, Adjusted $R^2 = -.02$, $F(2, 52) = .01$, $p = ns$. For males, the overall regression model of self-reported anger expression did not significantly predicted relationship conflict, Adjusted $R^2 = -.02$, $F(1, 52) = .06$, $p = ns$.

Gender differences in anger expression: Hypothesis 4

It was predicted that the FD and ND women would express less direct anger and more hostility than their male partners during the observational interaction task.

A univariate repeated measures ANOVA was used to examine female and male direct anger, in order to take into account the paired couples' level data. Prior to conducting the analysis, the data was examined to ensure that the repeated measures ANOVA assumptions were met. Because couples were assessed independently of each other and no repeated measures were used, the independence assumption seemed reasonable. There were no serious violations of the constant variance and sphericity assumptions; for example, Mauchly's test supported the assumption of equal population variances for the all pairs of the repeated measures at the .05 level.

Examining female and male direct anger, the effect of gender was significant, (Mean_{female} = 4.38; Mean_{male} = 3.46), Wilks' lambda = .53, $F(1, 55) = 48.61$, $p < .001$. Contrary to predictions, females exhibited more direct anger during the interaction task than their male

partners. Female and male direct anger expression were not correlated with depressive symptoms, $r_{\text{female}} = -.02, p = ns$; $r_{\text{male}} = -.16, p = ns$; and so the BDI was not entered as a covariate in the ANOVA analysis. Means and standard deviations of male/ female direct anger are shown in Table 8.

As shown in Table 8, a repeated measures ANOVA analysis parallel to that described above was used to examine hostility expression between men and women. Prior to conducting the ANOVA, a case analysis identified one observation in the dataset that had a standardized residual larger than 2.5. However, a sensitivity study found that removing this couple did not greatly impact the analysis results. As described above, the data was examined to ensure that there were no serious violations of the repeated measures ANOVA assumptions. The effect of gender was not significant, ($\text{Mean}_{\text{female}} = 3.09$; $\text{Mean}_{\text{male}} = 2.80$), Wilks' lambda = .22, $F(1, 55) = 1.43, p = ns$.

Because female hostility was correlated with depressive symptoms, $r_{\text{female}} = .31, p < .05$; $r_{\text{male}} = .13, p = ns$, male and female hostility was also examined using mixed model analysis in order to include the BDI as a covariate. The fixed effects were gender and depressive symptoms, and a random couple-level intercept was included to control for the dependence within couples. A case analysis was conducted prior to data analysis, but it did not identify any potential outliers in the dataset. As previously discussed, the data was examined to ensure that the mixed model analysis assumptions were not seriously violated.

Depressive symptoms were associated with hostility when accounting for gender, $b = .05, t = 2.08, p < .05$. As in the repeated measures ANOVA analysis, the effect of gender was not significant when accounting for depressive symptoms, $b = -.21, t = -.87, p = ns$. The model only reduced .15% of the within couple variance, that is, it did not substantially reduce the

unexplained within couple variance (Kreft & de Leeuw, 1998; Singer, 1988). However, a substantial amount of the between couple variance was explained by depressive symptoms. The model reduced the unexplained between variance from .94 to .83, an 11.41% reduction in unexplained variance between gender, depressive symptoms, and hostility. The estimated intraclass correlation for these analyses was .37, indicating that statistical results would have been inaccurate when collapsing across male and female participants without using mixed models to account for the non-independent nature of the couples data (Singer, 1998).

Additional exploratory analyses

In addition to the relationships among the study variables that were hypothesized, I was interested in exploring how individuals' patterns of communication exhibited during the conflict interaction task were associated with their ratings of the behaviors (shown in Table 9). For instance, males who were emotionally attuned to their partners during the interaction task, such as reflecting their partners' feelings and using consistent eye contact, reported higher levels of intimacy in their relationships ($r = .37, p < .01$). The partners of emotionally attuned men also reported feeling closer and more connected in their relationships ($r = .28, p < .05$). When women exhibited patterns of being emotionally attuned with their partners, they reported somewhat higher levels of intimacy in their relationships, but to a much lesser extent than men ($r = .16, p = ns$). Similarly, the partners of emotionally attuned women reported higher levels of relationship intimacy ($r = .43, p < .01$). These findings suggest that even when one partner exhibits patterns of emotional attunement, the couple will report feeling closer and more connected with one another.

Building on these findings, I was interested in the role that emotional attunement may play in the link between depressive symptoms and disruptions in relationship intimacy. When

individuals reported higher levels of depressive symptoms, they also indicated reduced closeness and intimacy with their romantic partners ($r_{\text{females}} = -.32, p < .05; r_{\text{males}} = -.54, p < .01$). The more depressive symptoms individuals reported, the less behaviors of emotional attunement and engagement they exhibited with their partners ($r_{\text{females}} = -.17, p < .05; r_{\text{males}} = -.29, p < .05$). In addition, lower levels of men's emotional attunement during the interaction task was associated with perceptions of reduced intimacy with their partners ($r = .37, p < .05$); a similar relationship existed for women to a lesser extent ($r_{\text{females}} = .16, p = ns$). While it is possible that this lack of emotional attunement may reflect symptoms of depression, the impaired emotional attunement with romantic partners may be a mechanism through which depression leads to disruptions in relationship intimacy.

Another area of interest was how individuals' behaviors affected their partners and their romantic relationships. Specifically, I was interested in the role that hostility plays in interpersonal relationships, and how individuals feel about their relationships when their partners are hostile, critical, and passive-aggressive. Females who were hostile with their partners during the interaction task did not report elevated levels of relationship conflict ($r = .12, p = ns$) or disruptions in relationship intimacy ($r = -.06, p = ns$). Interestingly, the partners of these women did report elevated levels of relationship conflict ($r = .30, p < .05$) and disruptions in relationship intimacy ($r = -.34, p < .05$). It is possible that the men reacted negatively to their partners' hostility and exaggerated relationship discord when reporting the quality of the relationship. Alternatively, women who were hostile during the interaction task may have been underreporting the levels of conflict and the impaired intimacy with their partners.

I was also interested in the constructive role that behaviors such as direct anger expression and emotional engagement may have on psychological well-being. Specifically,

findings indicated that the more women expressed angry feelings in open and constructive ways during the conflict interaction task, the less depressive symptoms their partners reported experiencing ($r = -.36, p < .01$). In addition, when women were emotionally connected, attuned, and sensitive to their partners' feelings while discussing an area of conflict, their partners reported less depressive symptoms ($r = -.47, p < .01$).

Another area of interest involved the impact that individuals' depressive symptoms had on the quality of their interpersonal relationships. When women reported higher levels of depressive symptoms, both members of the couple rated the relationship as being less intimate ($r_{\text{female}} = -.32, p < .05; r_{\text{male}} = -.33, p < .05$) and having more conflict ($r_{\text{female}} = .50, p < .01; r_{\text{male}} = .27, p < .05$). A similar relationship existed between male depressive symptoms and the couples' perceptions of the relationship quality. The more depressive symptoms that men endorsed, the more relationship conflict ($r_{\text{female}} = .32, p < .05; r_{\text{male}} = .34, p < .05$) and less intimacy ($r_{\text{female}} = -.30, p < .05; r_{\text{male}} = -.54, p < .01$) the couples reported.

Finally, I was interested in whether individuals' ratings of their emotional expression to romantic partners would be associated with the quality of their relationships. The more that men reported being emotionally expressive with their partners, the more intimate and close both members of the couple perceived the relationships to be ($r_{\text{female}} = .28, p < .05; r_{\text{male}} = .41, p < .01$). When women reported higher levels of emotional expression, they rated the relationship as being more intimate ($r = .48, p < .01$). Their partners also reported that the relationships were more intimate ($r = .17, p = ns$), but to a much lesser extent than women's perceptions.

CHAPTER 5: DISCUSSION

Review of Findings

The present study had three main objectives. First, it examined patterns of direct anger and hostility expression in women with a history of depression, compared to women who had never been depressed. Second, this study assessed whether couples' observational and self-reported anger expression was associated with their relationship intimacy and conflict. Third, the study examined gender differences in direct anger and hostility expression. The main results of the study are reviewed below, along with a discussion of these findings in the context of previous research.

Anger expression in FD and ND women

The prediction that FD women would exhibit less direct anger expression and more hostility than ND women was not supported. These results were contrary to previous self-report findings that depressed individuals had difficulty expressing anger directly (Goldman & Haaga, 1995; Riley et al., 1989) and reported higher levels of hostility than nondepressed individuals (Biaggio & Godwin, 1987; Sperberg & Stabb, 1998). The present findings were also contrary to previous observational studies which found that depressed individuals exhibited more negative and hostile patterns of emotional expression than nondepressed individuals (Biglan et al., 1985; Hops et al., 1987; McCabe & Gotlib, 1993).

One possible explanation is that formerly-depressed women exhibit more subtle patterns of anger expression than previously found in clinically depressed women (Goldman & Haaga, 1995; Biaggio & Godwin, 1987), and these communication styles were too subtle to be assessed using the existing observational coding system. This explanation is consistent with previous

findings that formerly-depressed individuals exhibit negative processing biases that are similar to, but more subtle than, those observed in depressed groups (Hedlund & Rude, 1995, Ingram et al., 1998; Rude et al., 2001; Wenzlaff et al., 2002). In addition, while the differences between the FD and ND groups were not significant, the means were in the expected directions. It is possible that examining anger expression in a larger sample size would be better able to detect these subtle differences in anger expression between FD and ND women. If formerly-depressed women did exhibit less direct anger expression and more hostility than never-depressed women, it would suggest that FD women experience residual patterns of maladaptive anger expression long after depressed episodes have ended. Research has yet to determine why experiencing depression makes women more vulnerable to future episodes of depression (Keller et al., 1992), but it is plausible that residual patterns of maladaptive anger expression may play a role in FD women's increased vulnerability to depression. When FD women express angry feelings through hostility instead of constructive anger expression, they may develop feelings of isolation and disconnection with themselves and their romantic partners (Jack, 1991; Davanloo, 1980; Cox, Brucker, & Stabb, 2003). Therefore, FD women's patterns of impaired direct anger expression and increased hostility may lead them to be more vulnerable to psychological problems such as depression.

An alternative explanation is that the patterns of emotional expression previously found in depressed women (Goldman & Haaga, 1995; Biaggio & Godwin, 1987) are not present in formerly-depressed women. It is possible that maladaptive emotional expression is associated with depression itself, and FD individuals do not exhibit these patterns of communication outside an episode of depression. This explanation supports the viewpoint that impaired anger expression may be a symptom of depression, rather than a cause or risk factor for developing

depression. No studies to date have been able to assess the causal association between emotional expression and depression using the depression-vulnerable paradigm, or alternative studies assessing the emergence of depression in women longitudinally. Therefore, the present study provides a first step in clarifying the complex relationship between emotional expression and depression in women.

Anger expression, relationship intimacy, and relationship conflict

Direct anger, hostility, and emotional attunement. The predictions that observational ratings of direct anger, hostility, and emotional attunement would be associated with relationship intimacy and conflict were not supported. Few observational studies have examined the construct of direct anger expression in couples, and so it is difficult to examine these findings in the context of previous studies. However, the present results were contrary with a previous study that has examined a construct similar to direct anger, in which the researchers found that women's anger expression was associated with increased relationship satisfaction (Cohan & Bradbury, 1997). The findings that hostility was not associated with relationship intimacy were also contrary to previous observational studies which found a link between hostility and negative relationship outcomes (Gottman, 1994, 1999; Gottman & Krokoff, 1989; Roberts, 2000). In addition, few observational studies to date have examined the relationship between couples' emotional attunement, engagement, and relationship outcomes. Yet, the study findings were inconsistent with previous results that emotional disengagement has negative impacts on family interactions (Kretchmar & Jacobvitz, 2002). It is possible that the present study's relatively small sample size reduced its ability to detect the mild to moderate associations between direct anger, hostility, emotional attunement, and relationship outcomes.

Although the observational variables did not predict relationship intimacy and conflict, there is still may be a relationship between these variables. Further examination of the dataset provides evidence consistent with this explanation. For instance, male's patterns of emotional attunement and engagement exhibited during the interaction task were correlated with their perceptions of intimacy with their romantic partners. These findings suggest that when individuals exhibit patterns of being attuned, connected, and engaged during times of conflict with their partners, they feel more intimate in the relationship overall. In addition, the results suggest that the patterns of communication such as emotional attunement observed during the interaction tasks were consistent with individual's perceptions of these behaviors. In other words, the observational ratings of direct anger, hostility, and emotional attunement during the 10-minute interaction task seemed to accurately target patterns of behavior that were present in couples' daily lives. Some previous studies have found conflicting results between self-report and observational findings (i.e. Biaggio, 1989), and so the present findings make an important contribution towards integrating self-report and observational methodology to examine couples' patterns of emotional expression.

Self-reported emotional expression and relationship intimacy. The prediction that self-reported emotional expression to romantic partners would be associated with relationship intimacy was supported. Individuals' ratings of emotional expression were strongly associated with their perceptions of closeness with their partners, even when controlling for the effects of depressive symptoms. These results were consistent with previous studies which found that self-reported emotional expression was associated with relationship outcomes such as satisfaction (King, 1993). The present findings suggest that, regardless of depressive symptoms, individuals feel intimate in their romantic relationships when they express feelings to their partners.

In addition, results indicated that the subscale of anger expression to romantic partners was associated with relationship intimacy for women. Women's self-reported anger expression was related to feeling intimate with their partners, even when controlling for depressive symptoms. Interestingly, men's reports of anger expression were not associated to feelings of closeness with their partners. Therefore, only women seem to feel more intimate with their partners when they openly express angry feelings. One potential explanation for these findings is that men feel comfortable expressing anger regardless of the interpersonal situation, and so they do not need to express angry feelings in order to feel close and connected with their partners. Alternatively, women may have difficulty expressing anger in romantic relationships, and so they feel intimate with their partners when they are able to express these negative feelings without fear of harming the relationship. These explanations are consistent with previous theoretical models examining women's beliefs about anger expression within the context of romantic relationships (Jack, 1991), as well as study findings that men feel more comfortable expressing anger than women (Cox, Bruckner, & Stabb, 2003; Sharkin, 1993; Biaggio, 1989).

Self-reported emotional expression and relationship conflict. The prediction that self-reported emotional expression to romantic partners would be inversely associated with relationship conflict was supported. The results indicated that when individuals expressed emotions to their romantic partners, they perceived that there was less conflict and discord in the relationship. Combined with the above findings that self-reported emotional expression was associated with relationship intimacy, these results indicate that there is a clear relationship between emotional expression and relationship quality. However, the relationship between emotional expression and relationship conflict became non-significant when controlling for depressive symptoms. These findings suggest that depression overlaps with the effects that

emotional expression has on relationship conflict, which is reasonable based on the strong association between depressive symptoms and relationship conflict.

One explanation for the present link between emotional expression and relationship quality is that expressing emotions to romantic partners improves the lines of communication and makes partners feel closer with each other, and so daily problems are less likely to develop into overall conflict in the relationship. This conceptualization is consistent with previous findings that self-reported emotional expression was associated with positive relationship outcomes such as relationship satisfaction (King, 1993). In addition, depression may reduce emotional expression as well as increase relationship conflict, and so the association between emotional expression and relationship conflict becomes obscured. Previous findings support the explanation that depression is associated with reduced emotional expression and increased relationship conflict (Goldman & Haaga, 1995; Coyne et al., 2002).

The present study did not find an association between self-reported anger expression and relationship conflict. It is interesting that women's anger expression to romantic partners was associated with their perceptions of relationship intimacy, but not relationship conflict. It is possible that there is an association between self-reported anger expression and relationship conflict, but the relatively small sample size of the study made it difficult to detect the mild to moderate effects of this relationship. Alternatively, anger expression may play a role in relationship intimacy but has little impact on relationship conflict. It is plausible that when couples openly express anger to their partners, they are better able to discuss areas of conflict and subsequently feel closer to one another. While couples may resolve issues more effectively through expressing anger, they still may experience similar levels of conflict in the relationship.

Because the AOD is only able to measure self-reported levels of overall relationship conflict, it may not be sensitive enough to assess the subtle impacts that anger has on relationship quality.

Gender differences in anger expression

The prediction that women would express less direct anger than men was not confirmed; instead, results indicated that women expressed more direct patterns of anger expression than men. These results were contrary to previous self-report studies which found that men express anger more frequently and openly than women (Biaggio, 1989; Fehr et al., 1999; Averrill, 1983), as well as other findings that there are no gender differences in anger expression (i.e. Stoner & Spencer, 1987).

There are several possible explanations for this unexpected finding. One explanation is that women may have exhibited more direct anger expression during the conflict interaction task because of their investment to resolve the area of conflict and strengthen the relationship with their romantic partners. This idea is supported by Jack's (1991) conceptualization that women define themselves in terms of their important relationships, and so may be more likely than men to be committing to resolving interpersonal conflicts. In addition, Fehr et al. (1999) suggested that women are more attuned to the quality of their relationships than men, as they found that women were more likely to report that they would express anger in interpersonal contexts in which their partners were inconsiderate or neglectful. Another explanation for these results is that the observational coding system was more sensitive to patterns of anger expression in women than men. The development and analysis of the observational coding system was conducted by women, and so it is conceivable that the variables were inadvertently biased to focus on positive attributes of anger expression in women.

In addition, the prediction that women would express more hostility than men was not confirmed. The results were contrary to previous studies which found that women were more likely than men to express anger through hostile and passive aggressive ways (Miller, 1976; Jack, 1991). One explanation for these findings is that women felt comfortable enough to express their angry feelings directly to their partner, and so they did not need to rely on maladaptive patterns of anger expression such as hostility. This explanation is consistent with previous conceptualizations that individuals exhibit maladaptive patterns of anger expression only when they cannot adequately express their angry feelings in open and direct ways (Davanloo, 1980; Cox, Bruckner, & Stabb, 2003).

Alternatively, it is possible that women's communication styles were vulnerable to social desirability influences, and they did not engage in patterns of hostility usually exhibited in their relationships. Although many researchers use similar 10-minute observational task to assess couples' communication patterns (Heyman et al., 2001), some researchers have used 20 to 30 minutes of observational tasks to examine a broader sample of couples' behavior (i.e. Jacobvitz et al., 2004; Kretchmar & Jacobvitz, 2002). A longer sample of observational data may better capture negative communication styles such as hostility because couples become more involved in the observational task and are less likely to censor negative behaviors due to social desirability.

Additional exploratory findings

In addition to the relationships among the study variables that were hypothesized, I was interested in exploring how individuals' patterns of communication observed during the conflict interaction task were associated with their self-reported ratings of the behaviors. Results indicated that males who exhibited patterns of emotional attunement and engagement during the

observational interaction task reported higher levels of relationship intimacy. The partners of emotionally attuned men also reported feeling closer and more connected in their relationships. A similar but somewhat weaker relationship existed for women. That is, when women were emotionally attuned during the observational task, both members of the couple reported higher levels of relationship intimacy. These findings suggest that when individuals exhibit patterns of being attuned, connected, and engaged with their partners, both members of the couple feel intimate in the relationship. In addition, it is of interest that the observational ratings of individuals' emotional attunement were consistent with their self-reported relationship intimacy. The congruence between observational and self-reported behavior highlights the ability of the observational coding system to assess patterns of communication that individuals experience in their relationships. The impact of the results is magnified due to the fact that previous studies have had difficulty finding consistency between self-report and observational methods (i.e. Biaggio, 1989). Therefore, these findings provide strong support for the association between emotional attunement and relationship intimacy.

Another area of interest was exploring the possible role that emotional attunement plays in the relationship between depressive symptoms and disruptions in relationship intimacy. When individuals reported higher levels of depressive symptoms, they experienced reduced intimacy and closeness with their romantic partners. The more depressive symptoms individuals reported, the less emotionally attuned they were with their partners during the conflict interaction task. In addition, reduced emotional attunement with romantic partners was associated with disruptions in relationship intimacy. Although the causal relationship between these variables has yet to be established, one explanation for the results is that depressive symptoms lead to problems with being emotionally attuned to others, and these disruptions in emotional attunement exacerbate

the difficulties that depressed individuals experience with relationship intimacy. These findings provide support for a new conceptual mechanism of the link between depressive symptoms and disruptions in relationship quality.

I also wanted to examine how individuals' behaviors such as hostility affected their interpersonal relationships. Results indicated that women who were hostile, critical, and passive-aggressive with their partners during the interaction task did not report elevated relationship conflict or disruptions in relationship intimacy. Interestingly, these women's partners reported feeling less intimate in the relationship, and indicated higher levels of discord and conflict. One explanation for these findings is that women play a central role in maintaining the well-being of romantic relationships, and in order to preserve intimacy with their partners, they resist expressing hostility and conflict. Therefore, when women do express hostility in romantic relationships, it has a great impact on their partners' perceptions of relationship conflict and intimacy. This explanation is consistent with Jack's (1991) findings about the impact of societal beliefs on women's inhibition of angry feelings in close relationships. The present findings also support previous studies which have found that women who express hostility are perceived more negatively than men (MacGregor & Davidson, 2000).

It is interesting that women's hostility was not associated with their own ratings of relationship conflict and intimacy, as would be expected based on previous observational findings of the link between hostility and relationship discord (i.e. Gottman & Krokoff, 1989; Roberts, 2000). It is possible that women were underreporting their own levels of relationship conflict and intimacy based on social desirability influences, or that men were exaggerating the problems in the relationship based on the negative perceptions of their female partners. Regardless, further exploration is warranted into understanding female anger expression in the

context of interpersonal relationships, as well as the impact that anger expression has on the quality of romantic relationships.

Another area of interest involved exploring the constructive role that behaviors such as direct anger expression and emotional attunement had on partners' psychological well-being. When women expressed angry feelings openly and were attuned to their partners' feelings during the conflict interaction task, their partners reported less depressive symptoms. However, when men exhibited patterns of direct anger expression and emotional attunement, their partners did not report reduced levels of depression. It is interesting that only females' direct anger and emotional attunement was associated with decreased depressive symptoms in their partners. One explanation for these findings is that women play an important role in their partners' psychological and physical health, but men do not have such a strong impact on their partners' well-being. Little research to date has examined the effects of women's emotional expression and attunement on men's psychological well-being. However, the explanation that men benefit from their partners' behaviors more than women is consistent with health psychological literature which has found that the social support of marriage leads to a greater improvement in men's psychological health than it does for women (Segraves, 1987).

Finally, I was interested in the impact that individuals' depressive symptoms had on the quality of their interpersonal relationships. Results indicated that when individuals had higher levels of depressive symptoms, both members of the couple rated the relationships as being less intimate and having more conflict. One explanation for these findings is that depression has a variety of effects on individuals, including impairing their ability to maintain close interpersonal relationships. The present results were consistent with previous studies about the association

between depression and disruptions in the quality of interpersonal relationships (Coyne et al., 2002).

Strengths of the Study

One of the strengths of the present study involved the integrative conceptualization of anger expression, including the distinction between different forms of anger expression such as direct anger and hostility. The cohesive definition of anger expression and exploration of possible mechanisms through which maladaptive patterns of anger expression develop (Jack, 1991; Davanloo, 1980; Cox, Bruckner, & Stabb, 2003) may clarify discrepant findings of previous studies examining anger expression. The construct of direct anger links several bodies of research, including health psychology, self-report, and observational research, which have separately begun examining the adaptive outcomes of the constructive anger expression. Results of the present study, such as those indicating that women differ from men in direct anger expression but not hostility expression, emphasize the value of assessing different forms of anger expression. The gender differences in direct anger expression found in the present study also underline the importance of continuing to examine how men and women develop differing patterns of anger expression.

Another positive aspect of the present study is the use of observational and self-report methods to examine patterns of anger expression. Self-reported emotional expression was associated with relationship intimacy and conflict, and the specific construct of anger expression to romantic partners was associated with relationship intimacy. However, the observational measures of anger expression were not associated with the relationship outcomes. Previous studies have found similar discrepancies between self-report and observational methods of anger expression; for example, Biaggio (1989) found gender differences using self-reported measures

of anger expression, but he was unable to replicate these findings using a confederate design to observe patterns of anger expression. These findings highlight the importance of continuing to develop observational methodology to reduce social desirability and demand characteristics in interaction tasks, as well as refine observational coding systems to capture couples' subtle patterns of anger expression.

A third strength of the study involved using a community sample of formerly-depressed and never-depressed women and their partners. Many previous studies examining anger expression and depression have relied on nonclinical, college-age populations, and so it was important to determine whether similar relationships existed for a sample of adult couples from the community. In addition, no studies to date had examined the patterns of anger expression and FD and ND women. It is possible that there were no differences in FD and ND women's anger expression because FD individuals' patterns of emotional expression were more subtle than could be detected using the existing observational methods. However, it is also possible that FD individuals do not exhibit patterns of anger expression similar to those found in depressed individuals (Goldman & Haaga, 1995; Biaggio & Godwin, 1987). Further examination of anger expression in FD women is necessary to clarify whether the patterns of anger expression previously found in depressed women represent risk factors or residual effects of depression.

Finally, the study has several important clinical implications. Results that women expressed more direct anger than men suggest that constructive anger expression is an important aspect of women's communication during interpersonal conflicts. Based on the unexpected direction of these findings, therapists should be aware of not making assumptions about the patterns of emotional expression and anger expression in their male and female clients. Consistent with Davanloo's (1980) theory, therapists should also recognize the role of anger

expression in interpersonal relationships, depression, and overall psychological well-being. Clients that have difficulty expressing anger may also experience disconnection, decreased intimacy, and increased conflict in relationships. Based on the correlations in the present study between depressive symptoms and anger expression patterns such as hostility, therapists should also be aware of that even clients with subclinical depressive symptoms may have difficulty expressing their angry feelings in constructive ways.

Limitations of the Study

There were several limitations in the study. First, the present study focused on patterns of anger expression in a community sample of FD women and their male partners, and serves as a foundation to examining emotional expression in other populations. However, in using this approach, the study findings have limited generalizability to other populations of participants. The results may not apply to a diverse racial/ ethnic population given the predominately Caucasian sample. Participants were limited to heterosexual individuals who had been married or living together for at least 6 months, and so the study results may not apply to GLBT couples or couples who are not in committed relationships. Couples were recruited based on the depression history of the female partners, and so the results may also not generalize to couples in which only the male partner has a history of depression. In addition, the results based on a community sample of FD women with a clinically diagnosed history of depression may not generalize to nonclinical, college-age populations.

Second, there are several limitations related to the measurement of self-report variables. The study found it was important to examine perceptions of relationship intimacy and conflict, as well as compare self-report measures to observational ratings of similar behaviors. Nevertheless, the variables of emotional expression, depressive symptoms, relationship conflict, and

relationship intimacy were measured by self-report, and so were vulnerable to issues such as inaccurate reporting and social desirability. Analyses involving self-reported anger expression with romantic partners were based on the one-item subscale of the ESDS measure, and so the results were tentative. Although the reliability and validity of the AOD in the present sample yielded adequate temporal stability, convergent validity, and divergent validity, findings involving relationship conflict were restricted by the experimental nature of the AOD and limited availability of reliability and validity data in previous samples.

There were also limitations involved in the measurement of the observational variables of direct anger, hostility, and emotional attunement. The present sample yielded adequate interrater reliability ratings, expected intercorrelations of observational variables, and expected associations between the observational and self-report variables. However, the study results were tentative given the limited reliability and validity of the observational coding scales in previous samples. The construct of direct anger and behavioral indices were based on theoretical and research findings about constructive patterns of anger expression (i.e. Cox, Bruckner, & Stabb, 2003; Spielberger et al., 1985; Davidson et al., 2000; Fleeson, 1988), but the direct anger coding scale was developed for the present study and so there was no reliability or validity data based on previous samples. Reliability and validity data in previous samples for the hostility (Jacobvitz, 2005) and emotional attunement (Booher, 2000) scales were based on the original, dyadic versions of the scales rather than the individual-level revised scales. In addition, while many researchers use a similar 10-minute observational task to assess couples' communication patterns (Heyman et al., 2001), some researchers have used 20-30 minutes of observational tasks to examine a broader sample of couples' behavior (i.e. Jacobvitz et al., 2004; Kretchmar &

Jacobvitz, 2002). Therefore, the observational ratings of behavior in the present sample may not have examined a complete spectrum of couples' interactions.

Another area of limitations involved the potential confounding variables that may have impacted the study results. Based on the recruitment of participants who had been depressed in the past, depressive symptoms represented an important possible confounding variable in the analyses. In fact, results indicated that depressive symptoms were associated with several of the observational and self-report variables, and so depressive symptoms were included as a covariate in the relevant analyses to reduce confounding effects. Other variables that may have affected the study results were demographic variables which differed between the FD and ND groups, such as relationship length and education level in males. It is also possible that race and ethnicity was a confounding variable in the present results, because analyses to determine whether the study groups differed in terms of race and ethnicity could not be completed due to the small number of non-Caucasian participants. In addition, there may have been other variables that affected the study results, but were not examined in the present study. For example, some previous research has suggested that marital conflict mediates the association between depression and negative communication styles (Gotlib & Whiffen, 1989; Schmaling & Jacobson, 1990), but marital conflict could not be assessed in the present study design comparing FD and ND couples.

Finally, there were some limitations regarding the statistical analyses. First, the relatively small sample size of the study may have limited the power of the statistical analyses to detect mild or moderate effects. Second, although mixed model analyses were used for the relationship intimacy hypotheses to take into account the dependent nature of the couples' level data, male and female relationship conflict was not highly correlated and so mixed model analyses were not

necessary. Therefore, multiple regression analyses were conducted for male and female participants, but it is possible that some relationships were difficult to detect by completing separate male and female analyses. Third, the male relationship conflict variable was not normally distributed in the sample, and so the normality assumptions in several analyses may have been violated. Because nonlinear multiple regression analyses supported the study findings, it is expected that the violation of the normality assumption did not severely impact the results. However, these findings should still be considered tentative. In addition, the supplemental exploratory analyses examining the relationships between the observational and self-report variables were conducted using Pearson correlations, and so these results should also be interpreted with caution.

Recommendations for Future Research

The present study presents several implications for future observational and self-report studies examining the links between anger expression and depression in women. In the growing field of observational research, it is important to continue developing observational coding systems to enable researchers to assess couples' subtle patterns of communication. Studies should further examine the proposed construct of direct anger, as well as contrast direct anger expression with other modes of emotional expression. Researchers should also determine whether there are gender differences in the adaptive and maladaptive patterns of anger expression in larger sample populations. In addition, research should assess whether direct anger expression has any adaptive impacts on individuals' well-being, such as decreasing depressive symptoms and improving relationship quality. In order to improve researchers' abilities to assess couples' maladaptive anger expression and other negative communication styles, studies should also explore ways to reduce demand characteristics, such as increasing the length of the

observational interaction tasks. It is also important to explore ways to supplement self-report measures of relationship conflict and intimacy, due to the potential impact of social desirability on the study findings.

Although the study results did not support predictions that FD women would exhibit more maladaptive patterns of anger expression than ND women, the present study provides a foundation for further examination of the relationship between observed patterns of anger expression and depression. Future studies should examine observational ratings of direct anger and hostility in a larger sample of FD and ND women, as well as contrast observational and self-report ratings for specific aspects of anger expression. Researchers should also compare patterns of direct anger expression and hostility in depressed and formerly-depressed women to determine whether FD women exhibit distinct patterns of emotional expression.

Future studies should also examine the impact that women's anger expression with their partners has on the quality of their relationships. Based on the profound finding that women's hostility during interactions tasks was associated with their partners' ratings of relationship problems but not their own perceptions, researchers should continue examining this relationship using other types of observational coding systems. Further examination is also necessary to understand how females' direct anger expression and emotional attunement may improve their partner's psychological well-being and reduce symptoms of depression. In addition, researchers should examine the possible mechanism through which emotional attunement mediates the relationship between depression and disruptions in relationship intimacy.

Finally, research should examine additional confounding variables that may have affected the relationship between anger expression and depression. Because potential differences in race/ethnicity, relationship length, and educational level may have impacted differences between

the FD and ND groups, further examination is necessary to determine whether the present study results hold for a more diverse participant population. In addition, studies should explore the role of other variables that may be impacting the relationship between patterns of emotional expression and depression.

Concluding Comments

In conclusion, this was the first known study to examine self-report and observational patterns of emotional expression in depression-vulnerable women. One of the most important contributions of the present study was the integrative conceptualization of direct anger expression, as well as using observational methods to assess subtle patterns of couples' emotional expression. Constructive anger expression poses a new direction in emotional expression research, and deserves further clinical and research exploration to understand its role in women's psychological and interpersonal well-being.

Tables of Statistical Analyses

Table 1

Means and Standard Deviations for Demographic Variables

<i>Demographic Variable</i>	<i>FD group</i>		<i>ND group</i>		<i>t-value</i>	<i>df</i>	<i>p-value</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Participants' age (yr)							
Females	33.81	8.62	34.57	9.21	-.32	54	<i>ns</i>
Males	33.58	10.19	36.97	11.22	-1.18	54	<i>ns</i>
Length relationship (yr)	33.15 ¹	32.03	74.07 ¹	103.81	-1.78*	53	.10

¹ The variable length of relationship was not normally distributed in the FD and ND groups, and so square root transformations were completed on the data before conducting the independent sample t-test.

Note: yr = years

* $p < 0.10$

Tables of Statistical Analyses

Table 2

Group Percentages for Demographic Variables

<i>Variable</i>	<i>FD group</i>	<i>ND group</i>	χ^2 - <i>value</i>	<i>df</i>	<i>p-value</i>
Race/ Ethnicity					
Females	88.5% Caucasian	83.3% Caucasian	n/a ¹	--	--
	7.7% Hispanic/ Latina	6.7% Hispanic/ Latina			
	0% African American	3.3% African American			
	0% American Indian	3.3% American Indian			
	3.8% bicultural/ other	3.3% bicultural/ other			
Race/ Ethnicity					
Males	84.6% Caucasian	93.3% Caucasian	n/a ¹	--	--
	3.8% Hispanic/ Latino	0% Hispanic/ Latino			
	0% African American	3.3% African American			
	0% American Indian	3.3% American Indian			
	11.5% bicultural/ other	0% bicultural/ other			
Education					
Females	11.5% high school	3.3% high school	1.52	1, 56	<i>ns</i>
	23.1% some college	16.7% some college			
	15.4% prof. degree	3.3% prof. degree			
	23.1% college degree	43.3% college degree			
	26.9% graduate degree	33.3% graduate degree			

Table 2 (continued)

Group Percentages for Demographic Variables

<i>Variable</i>	<i>FD group</i>	<i>ND group</i>	χ^2 -value	<i>df</i>	<i>p-value</i>
Education					
Males	3.8% no high school	0% no high school	2.34	1, 56	.12
	23.1% high school	6.7% high school			
	26.9% some college	26.7% some college			
	3.8% prof. degree	3.3% prof. degree			
	38.5% college degree	40.0% college degree			
	3.8% graduate degree	23.3% graduate degree			
Relationship					
Relationship	61.5% married	60.0% married	.01	1, 56	<i>ns</i>
	38.5% living together	40.0% living together.			
Children					
Children	38.5% had children	30.0% had children	.01	1, 56	<i>ns</i>
	61.5% no children	70.0% no children			

Note: Prof. degree = individuals had completed a professional degree

¹ The expected cell sizes of Caucasian/ non-Caucasian cells were too small to perform chi-squared analyses, and so it is uncertain whether racial/ ethnic backgrounds differed between the FD/ ND groups.

Tables of Statistical Analyses

Table 3

Means and Standard Deviations for Female Observational and Self-Report Variables

<i>Study Variable</i>	<i>FD group</i>		<i>ND group</i>		<i>Total</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Coding System</i>						
Direct Anger	4.15	1.16	4.57	1.10	4.38	1.14
Hostility	3.23	1.63	2.97	1.46	3.09	1.52
Emotional Attunement	4.12	1.40	4.40	1.22	4.27	1.30
<i>Self-Report</i>						
BDI	10.69	7.42	5.83	5.14	8.09	6.70
ESDS	35.48	3.86	37.25	3.59	36.42	3.79
MSIS	150.77	14.64	150.55	20.49	150.65	17.80
AOD	272.16	217.82	225.37	163.80	246.64	189.86

Note: BDI = Beck Depression Inventory; ESDS = Emotional Self-Disclosure Scale; MSIS = Miller Social Intimacy Scale; AOD = Areas of Disagreement Scale.

Tables of Statistical Analyses

Table 4

Means and Standard Deviations for Male Observational and Self-Report Variables

<i>Study Variable</i>	<i>FD group</i>		<i>ND group</i>		<i>Total</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Coding System						
Direct Anger	3.31	.88	3.60	1.19	3.46	1.06
Hostility	3.12	1.51	2.53	1.78	2.80	1.67
Emotional Attunement	3.58	1.39	4.03	1.71	3.82	1.57
Self-Report						
BDI	7.65	6.013	5.60	5.01	6.55	5.54
ESDS	34.46	5.05	34.18	5.91	34.29	5.48
MSIS	143.42	20.45	149.48	13.74	146.62	17.34
AOD	293.73	230.64	221.83	187.24	255.21	209.70

Note: BDI = Beck Depression Inventory; ESDS = Emotional Self-Disclosure Scale; MSIS = Miller Social Intimacy Scale; AOD = Areas of Disagreement Scale.

Tables of Statistical Analyses

Table 5

Intercorrelations for Female Observational and Self-Report Data

Female Variable	1	2	3	4	5	6	7
1. Anger	-	.49**	.08	-.02	.11	.04	-.07
2. Hostility	-	-	-.54**	.31*	.06	-.06	.12
3. Attunement	-	-	-	-.19	-.08	.16	-.13
4. BDI	-	-	-	-	-.27*	-.32*	.50**
5. ESDS	-	-	-	-	-	.48**	-.29*
6. MSIS	-	-	-	-	-	-	-.57**
7. AOD	-	-	-	-	-	-	-

Note: BDI = Beck Depression Inventory; ESDS = Emotional Self-Disclosure Scale; MSIS = Miller Social Intimacy Scale; AOD = Areas of Disagreement Scale.

* $p < 0.05$. ** $p < 0.01$.

Tables of Statistical Analyses

Table 6

Intercorrelations for Male Observational and Self-Report Data

Male Variable	1	2	3	4	5	6	7
1. Anger	-	.49**	.08	-.02	.11	.04	-.07
2. Hostility	-	-	-.54**	.31*	.06	-.06	.12
3. Attunement	-	-	-	-.19	-.08	.16	-.13
4. BDI	-	-	-	-	-.22	-.54**	.34*
5. ESDS	-	-	-	-	-	.41**	-.23
6. MSIS	-	-	-	-	-	-	-.40**
7. AOD	-	-	-	-	-	-	-

Note: BDI = Beck Depression Inventory; ESDS = Emotional Self-Disclosure Scale; MSIS = Miller Social Intimacy Scale; AOD = Areas of Disagreement Scale.

* $p < 0.05$. ** $p < 0.01$.

Tables of Statistical Analyses

Table 7

Means and Standard Deviations for FD/ND Women's Direct Anger and Hostility

<i>Observational Variable</i>	<i>FD group</i>		<i>ND group</i>		<i>F-value</i>	<i>df</i>	<i>p-value</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Direct Anger	4.15	1.56	4.57	1.10	1.86	1	.18
Hostility	3.23	1.63	2.97	1.43	.04 ¹	1	<i>ns</i>

¹ ANCOVA results controlling for depressive symptoms.

Tables of Statistical Analyses

Table 8

Means and Standard Deviations for Male/ Female Direct Anger and Hostility

<i>Observational Variable</i>	<i>Females</i>		<i>Males</i>		<i>F-value</i>	<i>df</i>	<i>p-value</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Direct Anger	4.38	1.14	3.46	1.06	48.61*	1, 55	<.001
Hostility	3.09	1.52	2.80	1.67	1.43	1, 55	<i>ns</i>

* $p < .001$ level.

Tables of Statistical Analyses

Table 9
Intercorrelations for Female and Male Observational and Self-Report Data

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. F Anger	-	.49**	.08	-.02	.11	.04	-.07	.60**	.22	-.02	-.36**	.08	.13	-.10
2. F Hostility	-	-	-.54**	.31*	.06	-.06	.12	.25	.37**	-.46**	.23	-.12	-.34*	.30*
3. F Attunement	-	-	-	-.17*	-.08	.16	-.13	.17	-.25	.65**	-.47	.002	.43**	-.13
4. F BDI	-	-	-	-	-.27**	-.32*	.50**	.03	.08	-.07	.21	<.001	-.33*	.27*
5. F ESDS	-	-	-	-	-	.48**	-.29*	.11	-.16	.13	-.11	.17	.17	-.21
6. F MSIS	-	-	-	-	-	-	-.57**	.09	-.07	.28*	-.30*	.28*	.54**	-.33*
7. F AOD	-	-	-	-	-	-	-	-.02	.14	-.19	.32*	-.17	-.46**	.22
8. M Anger	-	-	-	-	-	-	-	-	.35**	.17	-.16	.12	.19	-.17
9. M Hostility	-	-	-	-	-	-	-	-	-	-.55**	.13	-.04	-.05	.03
10. M Attunement	-	-	-	-	-	-	-	-	-	-	-.29*	.01	.37**	-.20
11. M BDI	-	-	-	-	-	-	-	-	-	-	-	-.22	-.54**	.34*
12. M ESDS	-	-	-	-	-	-	-	-	-	-	-	-	.41**	-.23
13. M MSIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-.40**
14. M AOD	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: F= Female, M= Male, BDI = Beck Depression Inventory; ESDS = Emotional Self-Disclosure Scale; Anger subscale; MSIS = Miller Social Intimacy Scale; AOD = Areas of Disagreement Scale.

* $p < 0.05$. ** $p < 0.01$

APPENDIX A

Study Participant Newspaper Advertisements

1. *The Chronicle Newspaper*

Seeking couples for PAID UT Study. F >24 y.o recovered from depression.

StudyUT@hotmail.com 471-1160

2. *Craigslist Newspaper and Online Website*

Paid UT Study

Seeking couples for PAID UT Study. Women must be 25+ yrs and recovered from depression. If you and your spouse/partner are eligible, you can earn \$\$ for participating in a 2-hour session at the University of Texas that includes questionnaires, and talking to researchers and to each other about your relationship.

For study purposes, couples must be living together (at least 6 months) or married. Eligibility for the study will be determined by telephone interview (typically 30 minutes) conducted with each member of the couple. For more information: contact studyUT@hotmail.com or 471-1160.

Compensation: Payment is \$40 (per couple) for completing a 2 hour session. Most couples will be eligible for follow-up sessions and paid up to an additional \$50. Phone interviews to determine eligibility are not compensated.

APPENDIX B

Study Participant Flyer Advertisement for ND Couples

Paid UT Austin Study

*Are you interested in how people feel
about their relationships?*

If you and your partner are...

- 25 years or older
- Living together (at least 6 months) or married

You may be qualified to participate!

You and your partner may earn \$\$ for participation.

For more info, contact us at:

studyUT@hotmail.com

471-1160

Paid UT Couples Study <u>studyUT@hotmail.com</u> ; 471-1160
Paid UT Couples Study <u>studyUT@hotmail.com</u> ; 471-1160
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Paid UT Couples Study <u>studyUT@hotmail.com</u> ; 471-1160

APPENDIX C

Study Participant Flyer Advertisement for FD Couples

Paid UT Austin Study

*Are you a woman who is
recovered from depression
and in a relationship?*

If you are...

- 25 years or older
- Living together (at least 6 months) or married

*You and your partner may be qualified to participate!
You may earn \$\$ for participation.*

For more info, contact us at:
studyUT@hotmail.com
471-1160

Paid UT Couples Study studyUT@hotmail.com ; 471-1160
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APPENDIX D

Precautions for Safety of Participants Training Guidelines

The Interviewer/ Experimenter will have responsibility on the phone for handling issues of suicidality, homicidality, and significant psychological distress. Through training with the Principle Investigator (Dr. Stephanie Rude), they will be prepared to complete crisis intervention, supportive counseling, and provide provisional resources to participants. If the Interviewer/Experimenter detects or has reason to suspect that participants are in danger of harming themselves or someone else, or if she suspects that they are experiencing distress to the point that they are having difficulty coping, she will also inform the Dr. Rude, who will consult and determine whether further intervention is warranted.. The Interviewer should use her judgment and the guidelines below to decide whether to make this contact while she has the person on the phone, or to contact Dr. Rude after ending the call. Dr. Rude will make the decision whether to contact the participant or to seek emergency assessment and intervention. For less urgent concerns, participants will be assisted in contacting their mental health care provider or referred to a public mental health clinic.

Instructions to the Interviewers/ Research Assistants

If, in the context of conducting telephone screening or the study session, a participant is in danger of harming him/herself or another person, it is important to follow the guidelines below to assess the risk and to provide information about resources as appropriate. Even if you determine that you think the risk is minimal and that further action is not needed, it is imperative that you consult with Dr. Rude about the situation right away. (Please refer to “What to do if someone is suicidal” flowchart.)

Concerns about Suicidal and Homicidal Ideas

Suicidality. The person is asked specifically in the SCID and BDI whether he or she has experienced suicidal ideation or suicide attempts, and the seriousness/lethality of these. The interviewer should contact the PI immediately after ending the call if the person reports any suicidal ideation within the past month or any serious attempts in their lifetime. A serious suicide attempt is defined as one that has the potential to be lethal, even if the participant claims that they did not really intend to die. So, for example, taking a lethal or near lethal dose of drugs shortly before another person is due to arrive would be considered a potentially lethal act. She should contact the PI immediately if the person reports having a current plan to commit suicide. This requires letting the person know that you are concerned for his or her safety and that you need to talk to your supervisor.

Definitions of Suicidality. Passive death thought occurs when the person expresses he/she “should have never been born” but has never thought about killing him or herself. Make sure there is no suicidal ideation, attempt, or plan before proceeding with the interview. Suicidal ideation is when the person thinks or has thought about killing him or herself. Suicide attempt is when the person attempted to kill him or herself.

Commonly Asked Questions. These guidelines are adapted from Clinical Psychologist Eric Stice, Ph.D.’s handout “Assessing Suicide Potential and Notification Guidelines” with permission from Dr. Stice. Important areas to cover include thoughts, intent, plan, method, and hopelessness. In other words, does the subject first endorse suicidal thoughts? Have they made any suicide plan? Do they have access to the method they are planning to use? Do they intend to harm his/herself? And are they hopeless about the future? If these first four questions are in

place and they also report hopelessness, i.e. “it’s not going to get any better and it never will” then be very concerned; their safety is possibly at risk and notification should be considered.

Another way to ask about suicidal ideation is using the SCID question, “Sometimes when people feel sad or down they think about hurting them selves. Did you ever feel so bad that you thought about death or that you would be better off dead? Have you ever thought of hurting yourself in any way?” Empathize with the person: “It sounds like you really have times when you feel very sad/lonely/angry/hopeless. What kinds of things do you think about?”

The following are other common questions you could use to assess the situation. How much danger do you perceive yourself in right now? How often do you have these thoughts about killing yourself? How much time do you spend thinking about killing yourself? Are there triggers, certain situations, that you find yourself thinking about killing yourself? Sometimes when people are going through difficult things like this, they feel like things won’t get better or feel hopeless about the future. Have you ever felt like that? Have you thought about how you may go about doing this? Are you doing anything risky right now (i.e. driving recklessly, etc)? How have you kept yourself safe so far? Do you have these things at home? (If pills, guns, etc.) Is there a reason that would keep you from doing this? Do you think you would do it? Even in your darkest moments, do you know that you would never do it? Have you ever tried to kill yourself before? If suicidal in the past: So you’re doing well now, but sometimes life throws us big curveballs and things get difficult. Do you have a sense that it would be different now, if that happened? Do you think you could be at risk to be suicidal again? Are you seeing a therapist, counselor, or psychiatrist? Does he/she know about your current plans? Be aware of any behavioral suggestions of suicide (i.e. self-injurious behavior like cutting or excessive drinking), presence of helplessness, hopelessness, and exhaustion.

If necessary, the following are some interventions that can be taken. Do you have friends or family that you can spend time with or talk to when you feel really down? Can you tell me any things you would really miss if you were to kill yourself? When you have these thoughts, what do you usually do? Have you ever thought about people's reaction if you were to die?

If after doing a thorough assessment, you feel this person is in imminent danger, call Stephanie. If you have a cellular phone or another line in the house, use it to call Stephanie. That way you don't have to hang up with the participant. If for some reason Stephanie is not available or does not get the message, you can request emergency assistance from the county by calling the Travis County Mental Health Unit of the Sheriff's Department (703-1344).

Homicidality. The same guidelines apply for homicidality. The interviewer should contact Dr. Rude immediately after ending the call if the person reports any homicidal intentions within the past month or any serious attempts to injure or kill another person in their lifetime. She should contact Dr. Rude immediately if the person reports having a *current plan* to seriously injure or kill another person. Call 911 if Stephanie is not available or you think that someone is in imminent danger.

Concerns about Significant Psychological Distress

Although individuals who are experiencing current depression, an anxiety disorder, or other forms of significant distress at the time of screening will not be eligible for the study, you will want to provide needed assistance to individuals we encounter during screening. In addition, it is possible that during the follow-up interviews some of the participants will be experiencing depression. You can say the following: "From what you're telling me, it sounds like things have been pretty difficult for you. Sometimes when people are dealing with a lot of things in their lives, it helps to talk to someone about it. Are you seeing a counselor or a doctor or

anyone else who's able to provide you with some support and help with the (stress/depression/anxiety) you've been experiencing? If no: if you want, I could give you a list of people in the area that you could talk to." Give mental health provider list and hotline number; contact PI to consult about the situation. If yes: And have you talked to him/her about this? Ok, good. I feel like you're pretty safe right now and you can talk to your therapist about these thoughts you've been having."

If the participant is actively homicidal or suicidal, the interviewer should contact the PI immediately if the person reports experiencing current significant distress that threatens to overwhelm their coping abilities. This requires letting the person know that you are concerned for his or her safety and that you need to talk to your supervisor.

The following are some common statements you can say in this situation. Express concern to the person and try to create an alliance with them. Say you're a little concerned for their safety. Reiterate what they've said to make sure you understand the situation, and they feel like they've been heard, for example: "It sounds like you think about this a fair amount, and sometimes it feels like you really could try to hurt yourself." Say that you want to consult with someone about it, but check in with him or her about it. Empathize and reiterate your concern for their safety, for example: "It sounds like things are really difficult right now, and I'm wondering how we can make sure that you stay safe. Is there someone you can call, or talk to at your house?" Give your contact information and/or counseling hotline number, for example: "We've talked about a lot of issues today, and I appreciate your honesty and openness with me. Sometimes people find that things come up later on, when we hang up the phone or over the next few days. Let me give you my phone number, if you think of anything or have any questions."

APPENDIX E

Beck Depression Inventory (BDI)

DIRECTIONS: On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1. 0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.
2. 0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.
3. 0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.
4. 0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.
5. 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.
6. 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.
7. 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.
8. 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.

9. 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.
10. 0 I don't cry anymore than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't even though I want to.
11. 0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I don't get irritated at all by the things that used to irritate me.
12. 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.
13. 0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.
14. 0 I don't feel I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.
15. 0 I can work about as well as usual.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.
16. 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.
17. 0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.
18. 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.

19. 0 I haven't lost much weight, if any, lately.
1 I have lost more than 5 pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.
- If purposely trying to lose weight by eating less, check here ____.
20. 0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am so worried about my physical problems, that I cannot think about anything else.
21. 0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

APPENDIX F

Emotional Self-Disclosure Scale (ESDS)

DIRECTIONS: Using the scale below, please write the number indicating your willingness to discuss the following topics with three different people: a male friend, a female friend, and a romantic partner. Fill in each box on the right with a number corresponding to the topics listed on the left.

1 2 3 4 5
 not at all willing neutral totally willing
 to discuss this topic to discuss this topic

Topic	<i>Willingness to discuss topic with</i>		
	Male Friend	Female Friend	Romantic Partner
1. Times when you felt depressed.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
2. Times when you felt happy.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3. Times when you felt jealous.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
4. Times when you felt anxious.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5. Times when you felt angry.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6. Times when you felt calm.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7. Times when you felt apathetic.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8. Times when you felt afraid.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9. Times when you felt discouraged.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10. Times when you felt cheerful.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
11. Times when you felt possessive.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
12. Times when you felt troubled.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
13. Times when you felt infuriated.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

14. Times when you felt quiet.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
15. Times when you felt indifferent.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
16. Times when you felt fearful.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
17. Times when you felt pessimistic.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
18. Times when you felt joyous.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
19. Times when you felt envious.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
20. Times when you felt worried.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
21. Times when you felt irritated.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
22. Times when you felt serene.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
23. Times when you felt numb.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
24. Times when you felt frightened.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
25. Times when you felt sad.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
26. Times when you felt delighted.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
27. Times when you felt suspicious.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
28. Times when you felt uneasy.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
29. Times when you felt hostile.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
30. Times when you felt tranquil.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
31. Times when you felt unfeeling.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
32. Times when you felt scared.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
33. Times when you felt unhappy.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
34. Times when you felt pleased.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

35. Times when you felt resentful.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
36. Times when you felt flustered.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
37. Times when you felt enraged.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
38. Times when you felt relaxed.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
39. Times when you felt detached.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
40. Times when you felt alarmed.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

APPENDIX G

Miller Social Intimacy Scale (MSIS)

Below are some questions about your relationship with your partner/spouse.

	Very Rarely				Some of the Time					Almost Always
1. When you have leisure time, how often do you choose to spend it with him/ her alone?	1	2	3	4	5	6	7	8	9	10
2. How often do you keep very personal information to yourself and do not share it with him/her?	1	2	3	4	5	6	7	8	9	10
3. How often do you show him/ her affection?	1	2	3	4	5	6	7	8	9	10
4. How often do you confide very personal information to him/ her?	1	2	3	4	5	6	7	8	9	10
5. How often are you able to understand his/ her feelings?	1	2	3	4	5	6	7	8	9	10
6. How often do you feel close to him/ her?	1	2	3	4	5	6	7	8	9	10
	Not Much				A Little					A Great Deal
7. How much do you like to spend time alone with him/ her?	1	2	3	4	5	6	7	8	9	10
8. How much do you feel like being encouraging and supportive to your partner when he/ she is unhappy?	1	2	3	4	5	6	7	8	9	10
9. How close do you feel to him/ her most of the time?	1	2	3	4	5	6	7	8	9	10
10. How important is it to you to listen to his/ her very personal disclosures?	1	2	3	4	5	6	7	8	9	10
11. How satisfying is your relationship with him/ her?	1	2	3	4	5	6	7	8	9	10
12. How affectionate do you feel	1	2	3	4	5	6	7	8	9	10

towards him/ her?										
13. How important is it to you that he/she understands your feelings?	1	2	3	4	5	6	7	8	9	10
14. How much damage is caused by a typical disagreement in your relationship with him/ her?	1	2	3	4	5	6	7	8	9	10
15. How important is it to you that he/she be encouraging and supportive to you when you are unhappy?	1	2	3	4	5	6	7	8	9	10
16. How important is it to you that he/she show you affection?	1	2	3	4	5	6	7	8	9	10
17. How important is your relationship with him/ her in your life?	1	2	3	4	5	6	7	8	9	10

APPENDIX H

Areas of Disagreement Scale (AOD)

Instructions: Below we have given you a list of 14 general topics (below) that generate conflict between many couples. We have given some examples to help make each topic a little more concrete for you, but keep in mind that these examples are in no way exhaustive of the kinds of issues covered by each of the 13 topics.

To fill out this form, indicate how much you and your partner disagree by writing in a number from 0 to 100 in the column labeled "How much?". A zero indicates that you don't disagree at all and 100 indicates that you disagree very much.

For example:

We disagree about...	How much?
A. Recreation	95
B. Religion	100

This would indicate that recreation and religion are things you have disagreed about very much.

We disagree about...	How much? (0-100)
1. Money (e.g., how to spend it, who should pay for what in the relationship, etc...)	
2. Communication (e.g., different styles of communicating/expressing emotion, misunderstandings, etc...)	
3. Family/Relatives (e.g., conflicted relations with family members, importance of family, child rearing issues, etc...)	
4. Sex (e.g., how much to have, where to have it, etc...)	
5. Religion (e.g., how important it should be in the relationship, different religious beliefs, etc...)	
6. Recreation (e.g., what to do in your free time, what you find fun (or not), opinions about each other's hobbies, etc...)	
7. Friends (e.g., how much time to spend with them, different opinions of each others' friends, etc...)	
8. Alcohol and/or drugs (e.g., if, when, where, how much to drink/do drugs, etc...)	
9. School/Academics/Jobs/Careers (e.g., priorities, different value systems, spending too much/too little time on work, how much time to spend together etc...)	
10. Jealousy (e.g., issues of trust, giving each other "space," security in the relationship, etc...)	
11. Future plans (e.g., what to do with your lives in terms of jobs, kids, the relationship, commitment issues, etc...)	
12. Domestic/household issues (e.g., housework duties, child-rearing issues, messiness, etc...)	
13. Politics/moral issues (e.g., political orientation, views on abortion, capital punishment, welfare, etc...)	

Please turn to the next page....

AOD CONTINUED

Please write down any other areas of disagreement that were not captured by the list on the previous page. They may be specific or general.

14.		
15.		

Of the areas of conflict listed on the previous page and those that you may have written in above: Which is currently the GREATEST area of disagreement in your relationship? Which is the SECOND GREATEST area of disagreement? Which is the THIRD GREATEST area of disagreement? *Please put only one topic per line.*

GREATEST: _____
Please put only one topic per line.

SECOND GREATEST: _____
Please put only one topic per line.

THIRD GREATEST: _____
Please put only one topic per line.

APPENDIX I

Observational Coding Manual

Direct Anger Individual Level Scale

Definition

Direct anger represents an active strategy of openly expressing feelings of anger, conflict, or disagreement. Individuals express their angry feelings clearly in a non-punitive way, that is, they do so without shaming or attacking their partners. Individuals exhibiting direct anger often use “I messages” to express their feelings, such as “I feel angry,” “It makes me mad when you say that,” or “When you do this, I get upset.” Individuals are able to communicate their thoughts and needs to their partners. They are able to focus the discussion on the area of conflict, rather than jumping around to different topics or bringing up unresolved issues. Because individuals are honestly expressing their feelings and thoughts, direct anger is constructive and leads to increased communication during the interaction task.

Verbal expression of anger and conflict is an important component of direct anger, but an individual does not necessarily have to use verbal expression to be considered direct anger. In other words, nonverbal body language that communicates anger is also considered on this scale. This includes assertive body language; focused, intense, alert eye contact; hand gestures indicative of conflict such as making fists or crossing arms. Other common signs of direct anger include loud voice; tones of irritation, frustration, or impatience in voice. It may also include physical signs of the “flight/ fight” response, such as flushed face, sweating, and increased movement.

In this scale, we are capturing direct anger as opposed to hostility. Based on Fleenor’s (1988) anger scale, two aspects distinguish direct anger from hostility:

- 1) The angry affect is *congruent* with the individual’s action or behavior.

2) The context is *current*. That is, the direct anger refers to the current topic of discussion or specific area of disagreement, rather than a general statement about the person or their character.

Example of direct anger. For example, a woman says to her partner, “I am so mad at you right now! You just said that you help out around the house, but you didn’t do the dishes at all last week.” Combined with behavioral indices of anger (i.e. angry tone, eye contact, facial expression of anger/ frustration), this would reflect direct anger. Her angry affect is congruent with her statements (#1), and she is focusing on the current context of the argument over housework (#2). In addition, her statement is focused on her partner’s behavior, rather than a generalized statement about his character/ personality.

Example of hostility. On the other hand, if she says, “Oh, right, you are *so* helpful around the house *all* the time. You’re so lazy; you never even lift a finger to do the dishes.” She is expressing hostility and sarcasm, as well as being judgmental and hurtful towards her partner. This interaction has a more hostile and shaming quality rather than direct anger. Unlike direct anger in which the affect is congruent with the actions (#1), she may be inwardly experiencing anger but she doesn’t openly express her emotions. In addition, she may generalize the argument to her partner never doing the dishes and being lazy overall. The partner cannot respond to context which is *not* current (#2).

Behavioral Indices of Direct Anger

- Focused, alert, engaged, intense eye contact and/or facial expressions
- Louder voice
- Tones of irritation, frustration, or impatience in voice
- Making fists, crossing arms, or increased muscle tension

- Physical signs of the “flight/ fight” response, such as flushed face, sweating, and increased movement.
- Increased affect, arousal, and/or energy in the discussion
- Centered, grounded, “planted” body language (i.e. squared shoulders, etc.)
- Close proximity to partner (i.e. leaning towards partner) while maintaining own interpersonal space
- Use of “I messages” and feelings (more often shown in women than men)
- Increased communication or understanding of conflict afterwards
- At lower levels of direct anger, it may look like assertive expression or exploration of conflict. At medium levels, it may look like frustration or irritation. At higher levels of direct anger, more emotional intensity of anger may be present.

Behavioral Indices That Do NOT Indicate Direct Anger

- Voice or statements seems tight, constricted, or like the individual is “holding back”
- Crying, tearfulness
- Inappropriate or nervous laughter
- Fidgety behavior (hair tossing, leg movements, etc.), restlessness, anxious movements
- Avoidance of conflict or anger (i.e. denying existence of conflict, steering conversation away from topic, or focusing on superficial topics)
- Minimizing conflict or anger (i.e. “It’s not that bad,” “Everybody argues.”), which can be captured on the Emotional Attunement coding scale
- Hostile behavior captured on the Hostility coding scale.

Scale Points for Direct Anger

7- Extremely marked direct anger. Direct anger seems to be the predominant emotion in the interaction. There are numerous behavioral indices of marked or pronounced direct anger during the task. In other words, there may be several intense expressions of direct anger, as well as exploration and expression of angry feelings throughout the interaction. These indices significantly impact the tone of the couple's interaction throughout the task. Individuals seem to be able to "make room" for direct anger through their body language and/ or verbal expression throughout the task.

6- Marked (high) direct anger. Direct anger expression is one of the predominant tones of the interaction. This scale point represents a similar pattern of direct anger expression as a 7-point response, but marked instances of direct anger are less intense or less frequent. The direct anger expression is still pervasive enough to strongly affect the interaction. Individuals seem to be able to "make room" for direct anger through body language and/ or verbal expression.

5- Moderate direct anger. The interaction shows a number of marked or pronounced behaviors indicative of direct anger. In other words, individuals may express rather intense direct anger several times during the task, or have low levels of direct anger throughout the task. However, they may express anger less intensely, or less frequently, than in a 6-point response.

4- Direct anger. There are several marked expressions of direct anger, such as 1-2 moderate to intense expressions of direct anger with assertive levels of direct anger in the rest of the task. Or, there may be low levels of direct anger sprinkled throughout the interaction. Direct anger is less frequent or intense than in a 5-point response, but there seems to be a consistent pattern of direct anger. The incidents of moderate direct anger have a temporary impact on the tone of the interaction, but do not affect the entire task interaction. Individuals may express

direct anger at the level of irritation or frustration. Individuals may be able to express their main thoughts/ feelings about the area of conflict.

3- Mild direct anger. There are several expressions of direct anger, but less marked and/or less consistent than in the 4-point response. Individuals may express low levels of direct anger several times. Or, they may express conflict and anger at an assertive level, but less consistently than a 4-point response. Individuals may have difficulty expressing direct anger during the rest of the interaction. Or, individuals may be discussing an area that does not involve much conflict or anger for them, and so they only express mild direct anger during the task. Direct anger behaviors minimally or temporarily impact the interaction at times, but do not affect the overall tone of the interaction.

2- Marginally expressed (minimal) direct anger. There may be fleeting moments of direct anger. There may be more discomfort in expressing direct anger than in a 3-point response. Or, individuals may be discussing an area that does not involve much conflict or anger for them, and so they only express minimal direct anger during the task. The behaviors may have a very minimal or temporary impact on the tone of the interaction, but to a lesser extent than in a 3-point response. Individuals may discuss more superficial topics, or may jump around to many topics without complete exploration of one area.

1- Absence of direct anger. There are little or no behavioral indices of direct anger during the task. There may be one fleeting moment of direct anger, but it has a very minimal or temporary impact on the tone of the interaction.

Hostility Individual Level Scale

Adapted from the Dyadic Hostility Scale (Jacobvitz, 2005)

Definition

Hostility involves active strategies that result in distance in the relationship. Individuals exhibiting a pattern of hostility are critical of their partners, as well as acting in a hurtful way. Hostility may be overt, such as blaming the partner. It may also be more covert or embedded in the conversation, which can have more of an impact on the interaction.

Behavioral Indices of Hostility

Primary indices.

- Hostile, sarcastic, or hurtful comments
- Judgmental or critical comments

Additional indices.

- Sneers, grimaces
- Fatalistic, cynical comments
- Impatient, derisive, or mocking voice tone and/or behavior
- Leaking anger (unnecessarily loud vocalizations/ yelling)
- Patronizing or condescending comments or behaviors
- Shaming, punitive quality to behaviors
- Defensiveness

Scale Points for Hostility

7- Extremely marked hostility. There are marked or pronounced behaviors that are evidence of a pattern of hostility. These behaviors must be pervasive enough to influence the

tone of the ongoing interaction. For example, the individual is constantly and highly critical of his/her partner, and the behavior is unrelenting.

6- Marked (high) hostility. There are several marked or pronounced behaviors indicative of hostility, but these behaviors are less pervasive than those seen in a 7-point response. These behaviors affect the interaction. For example, there are hurtful or critical comments mingled with some support; intimacy and affection seem conditional.

5- Hostile. The interaction is divided mostly into hostile behaviors and supportive behaviors. The hostile behaviors are quite hurtful to the partner and/or put significant distance in the relationship. Additionally, there should be several moments of real engagement or support. For example, there are hurtful or critical comments are mixed with genuine support.

4- Marked moments of hostility. There are several marked moments of hostility in which the individual displays apparent hostility towards his/her partner. The hostile behaviors are hurtful/ distancing, and may tend to be more deliberate than in a 3-point response. The incidents of hostility temporarily affect the tone of the interaction, but the individual is able to “recover” or resolve from these hostile moments. Despite the moments of hostility, genuine engagement and support is the overall tone of the interaction.

3- Mild hostility. There are fleeting moments of hostility. The hostility may be at the defensive level, rather than more intentional hostile behaviors at the 4-point response. However, these behaviors only minimally or temporarily change the overall tone of the interaction. For example, there is one profound comment that creates tension, or, there are several smaller sarcastic comments that “build” on each other to create hostility.

2- Fleeting hostility. There are very minimal displays of mild hostility. Hostile behaviors may include abrupt or abrasive comments during the task. Or, individuals may show mild

abrasive or insensitive behaviors that “build” to create minimal hostility. Similar to a 3-point response, these behaviors do not change the overall tone of the interaction.

1- Absence of direct hostility. There are no or relatively no signs of hostility.

Emotional Attunement/ Engagement Individual Level Scale

Adapted from the Dyadic Emotional Attunement/

Engagement Scale (Booher, 2000)

Definition

Emotional attunement is the degree to which individuals are “tuned in” to their partners’ thoughts, feelings, and/or behaviors. Emotional engagement is the degree to which individuals are engaged in the relationship and connected with their partners. Interactions with partners often show consistent eye contact, as well as “open” body language oriented towards partners. There is a sense that individuals are attentive to partners’ feelings, and “track” their partners’ thoughts/ emotions throughout the conversation. Individuals seem very present with their partners, and working to understand them. When coding this scale, be aware of the individual’s body language as well as the tone of the discussion.

When individuals are emotionally attuned to their partners, they may also show *reciprocity of affect*. Individual match their partners’ verbal and nonverbal level, that is, it seems like the couples are on the same “wavelength.”

Another behavior that may occur with emotional attunement is that individuals demonstrate *several emotions without escalation or disengagement*. For example, individuals feel safe and engaged with their partners to show hurt/ disappointment, sadness, anger, or other emotions during the conflict task. In addition, individuals are able to “reconnect” with their partners after negative or positive emotions are expressed.

Behavioral Indices of Emotional Attunement/ Engagement

- Consistent eye contact

- “Open” body language, oriented towards the partner (i.e. facing partner, shoulders squared, arms are not crossed or closed off)
- Rephrasing partner’s statements, or reflecting emotions (i.e. “So what you’re saying is that” or “You’re upset that I...”)
- Facilitating partner’s expression of thoughts/ feelings. (i.e. “What do you think about that?” “Is the issue that?” “How do you feel about it?”)
- Asking partner to clarify statements, or asking for the partner’s perspective on issues
- Matching partner’s emotions and/or level of intensity (i.e. matching a partner’s anger or seriousness, rather than laughing or making light of a situation)
- Several emotions are expressed without escalating (i.e. screaming) or disengaging (i.e. withdrawing or tuning out from the partner)
- Laughter and joking is mutual, rather than meant to make fun of or belittle the partner. It may reflect an acceptance of the couple’s differences.
- Humor may be used to lighten a potentially difficult situation or topic of conflict. It may also be a way to reconnect after a difficult phase of the discussion.
- “We” statements, or discussion of themselves as a couple
- There may be attempts to summarize the main points of the argument, or come to some tentative resolution to the conflict.
- Expressing vulnerability in themselves or the relationship, which serves to bring the partner closer (i.e. That is something that I really don’t like about myself...)

Behavioral Indices that are NOT Emotional Attunement/ Engagement

- Sense of disconnection or disengagement through eye contact or body language
- Increased criticism, blaming, or other hostile behaviors captured on the Hostility scale

- Increased lags, interruptions, and/or awkward silences during the discussion
- Individual does not pick up on a partner's seemingly significant statement, may miss subtleties of the partner's comment, or misunderstand factual statements.
- Shared affect may seem superficial and anxious.
- The individual's agenda seems to differ from the partner's agenda. For example, there may be superficial acknowledgement of the partner's comments, followed by a return to the individual's own agenda.
- Excessive concern for the task parameters (such as "talking" to the camera), which can disrupt the flow of the conversation.
- There may be instances of triangulation, in which the individual unites with the partner to disparage another person (i.e. a coworker or family member).
- Individual may appear enmeshed with the partner. For example, one partner's anger/hostility lead to the other to appease the demands, and halt the interaction.
- Minimization of conflict, when the partner thinks there is an important conflict present (i.e. "Everybody has problems with communication, it's not a big deal" when partner is expressing concerns.)

Scale Points for Emotional Attunement/ Engagement

7- Highly emotionally attuned/ engaged. There are marked or pronounced behaviors that are evidence of a pattern of emotional attunement/engagement with the partners. Individuals are engaged in the task, listening, and working to better understand their partners. These behaviors influence the tone of the ongoing interaction.

These individuals often show high reciprocity of affect with their partners. However, reciprocity of affect is *not* necessary if there are other significant behavioral indices indicating

high emotional attunement. These individuals may also be able to tolerate several emotions without escalation or disengagement, but again, it is *not* necessary if other factors are evident.

6- Marked emotionally attuned/ engaged. Individuals demonstrate engagement/ attunement with partners, but behaviors are less pervasive than at a 7-point level. It is apparent that individuals listen to their partners but interruptions may occur at times. For example, individuals show consistent eye contact/ open body language, rephrase the content of partners' statement, and may recognize the partners' emotions.

These individuals often show moderate to high reciprocity of affect. However, reciprocity of affect is *not* necessary if there are other significant behavioral indices indicating emotional attunement. These individuals may tolerate several emotions well, but show 1-2 incidences of brief disengagement. Demonstrating a range of emotions is *not* necessary if other attunement factors are evident.

5- Moderate emotional attunement/ engagement. There is a sense of attunement/ engagement with partners most of the time. For example, individuals show consistent eye contact/ open body language, rephrase the content of partners' statement, and may at times recognize the partners' emotions. However, there is a significant period of disconnection/ disengagement, or several smaller incidences that "build" on each other to form a sense of disconnection at times. There may be some occasional behaviors of not being attuned/ engaged with partners, such as criticism, blaming, or disengagement.

These individuals may show moderate reciprocity of affect most of the time. However, reciprocity of affect is *not* necessary if there are other significant behavioral indices indicating emotional attunement. These individuals may tend to avoid strong affect at times through

disengagement or escalation. Demonstrating a range of emotions is *not* necessary if other attunement factors are evident.

4- Emotional attunement/ engagement. There is a sense of attunement/ engagement with partners about half of the time, especially when couples agree. For example, individuals show marked eye contact/ open body language. They may rephrase the content of partners' statement several times, or may ask what the partner is thinking at times. Individuals seem to be listening to their partners, but may have difficulty when there is more conflict or disagreement. There are behavioral indices of not being attuned/engaged with partners, such as criticism or blaming.

These individuals may show reciprocity of affect about half of the time. However, reciprocity of affect is *not* necessary if there are other significant behavioral indices indicating emotional attunement. These individuals may tend to avoid strong affect through disengagement or escalation. Demonstrating a range of emotions is *not* necessary if other attunement factors are evident.

3- Low emotional attunement/ engagement. Most of the time, there is low attunement or engagement with their partners. There may be fleeting moments of attunement/ engagement throughout the task. For example, individuals show moderate eye contact/ open body language. They may ask what the partner is thinking at times, and seem to respond to the content of what the partner is discussing. However, attunement/ engagement may seem more superficial in the intensity or frequency of these behaviors. In addition, these behaviors only minimally or temporarily change the overall tone of the interaction.

These individuals may show reciprocity of affect at times, but overall, individuals do not match their partners' emotions/ intensity. Reciprocity of affect is *not* necessary if there are other significant behavioral indices indicating low emotional attunement. These individuals may tend

to avoid strong affect through disengagement or uncontrolled escalation. Demonstrating a range of emotions is *not* necessary if other low attunement factors are evident.

Please note if individuals score low on this scale because they are disengaged/ withdrawn OR not attuned to the partners.

2- Minimal emotionally attuned/ disengaged. There is a sense that individuals are not very attuned or engaged with their partners. For example, individuals show some eye contact/ open body language. However, they may not show many attunement/ engagement behaviors, such as asking for the partners' thoughts or responding directly to the partners' statements. There may be antagonistic or defensive behaviors present. Listening may occur at times, usually when couples agree.

These individuals may tend not to show reciprocity of affect. There may be rare times that individuals match their partners' emotion or intensity, which are likely to be focused around mutual criticism of others (triangulation). Reciprocity of affect is *not* necessary if there are other significant behavioral indices indicating minimal emotional attunement. These individuals may tend not to express emotions openly, or may be very volatile or anxious. Demonstrating this is *not* necessary if other attunement factors are evident.

Please note if individuals score low on this scale because they are disengaged/ withdrawn OR not attuned to the partners.

1- Not emotionally attuned/ engaged. There is a sense that individuals have little or no emotional attunement/ engagement with their partners. It may seem that individuals see the relationship as mostly a burden. They may respond in using predominately antagonistic or defensive behavior, or there may be intense distance in the relationship.

These individuals may tend not to show any reciprocity of affect. A sense of disconnection predominates. Reciprocity of affect is *not* necessary if there are other significant behavioral indices indicating minimal emotional attunement. These individuals may tend not to express emotions openly. The individual may seem very distant from their partner, or it may seem that the individual is excessively concerned about performing adequately or pleasing the partner. Demonstrating this is *not* necessary if other attunement factors are evident.

Please note if individuals score low on this scale because they are disengaged/ withdrawn OR not attuned to the partners.

APPENDIX J

Observational Coding Sheet

Coder _____

Date _____

Tape # _____

Coded first (randomized): M/F

FEMALE/ MALE Scores (circle one)

Scale	Score (1-7)	Rationale (include time of behavior)	
Direct Anger	<i>Score:</i>		
	<i>Summary:</i>		
Hostility	<i>Score:</i>		
	<i>Summary:</i>		
Emotional Attunement/ Engagement	<i>Score:</i>	<u>Emotional Attunement</u>	<u>Emotional Engagement</u>
	<i>Summary:</i>		

APPENDIX K

Telephone Script for Demographic Information and Verbal Consent

Introduction

“Hi, my name is __ from the UT Couples study. Is this still a good time for you to do the phone interview? Good, are you able to talk privately right now? (If not, the interviewer will reschedule the telephone screening.) As we discussed when we scheduled this appointment, I’m going to first ask you some background information, and then ask you some questions about feelings you may or may not have had in the past.

As I said when we talked before this is a research study, and so there are a lot of very specific guidelines that determine what makes a person eligible or not eligible for the study. I want to be sure you understand this up front and that you don't take it personally if it turns out that you aren't eligible, OK? (As appropriate, you can mention the possibility of other studies).”

Verify spelling and pronunciation of participant’s first and last name. Verify spelling and pronunciation of partner’s first and last name. What are your home and work phone #? Where would you prefer to be contacted and when is the best time to call you? (If you don’t want us to call you at work, that’s fine you don’t have to give me that number.)

Verbal Consent for Study and Telephone Recording

“I want to ask your permission to tape record this interview. If you say yes, I will tape record the interview for ensuring the accuracy and reliability of the interview. The tape will be labeled with a code number and will NOT be identified with your name. Only Dr. Rude and her graduate research assistants on this project will have access to the tape. Once the research project is completed, the tapes will be erased. Do I have your permission to record this

interview? (If yes, the interviewer will start the recorder and then verify with the participant once the recorder is on.)

“Ok, before we start, let me remind you that some of the questions I’ll be asking are personal. Your answers will be confidential- that is only Dr. Rude and her research assistants on the project will have access to your answers. We won’t keep your name together with any of the information you give us. Ok? The other thing I want to remind you of is that there is an exception to confidentiality I just mentioned: If you indicate that you are in danger of harming yourself or another person, we would make sure you got help. We would discuss this with your before requesting help on your behalf. In addition, if you tell us of any incidences of child abuse where the perpetrator may be a current danger to others, we would be required to report it. Finally, I want to remind you that if any of the questions I ask are too personal or you feel uncomfortable, you can ask that we skip them. In addition, if you decide you would like to stop the interview or the study at any time, you are free to do so.

Ok, do you have any questions before we start? I’m going to be taking notes, so if I pause for a little bit, I’m just catching up. Let’s begin.”

Demographic Information

1. How old are you? What is your date of birth?
2. What is your marital status? How long have you been married? If not married, how long have you lived together?

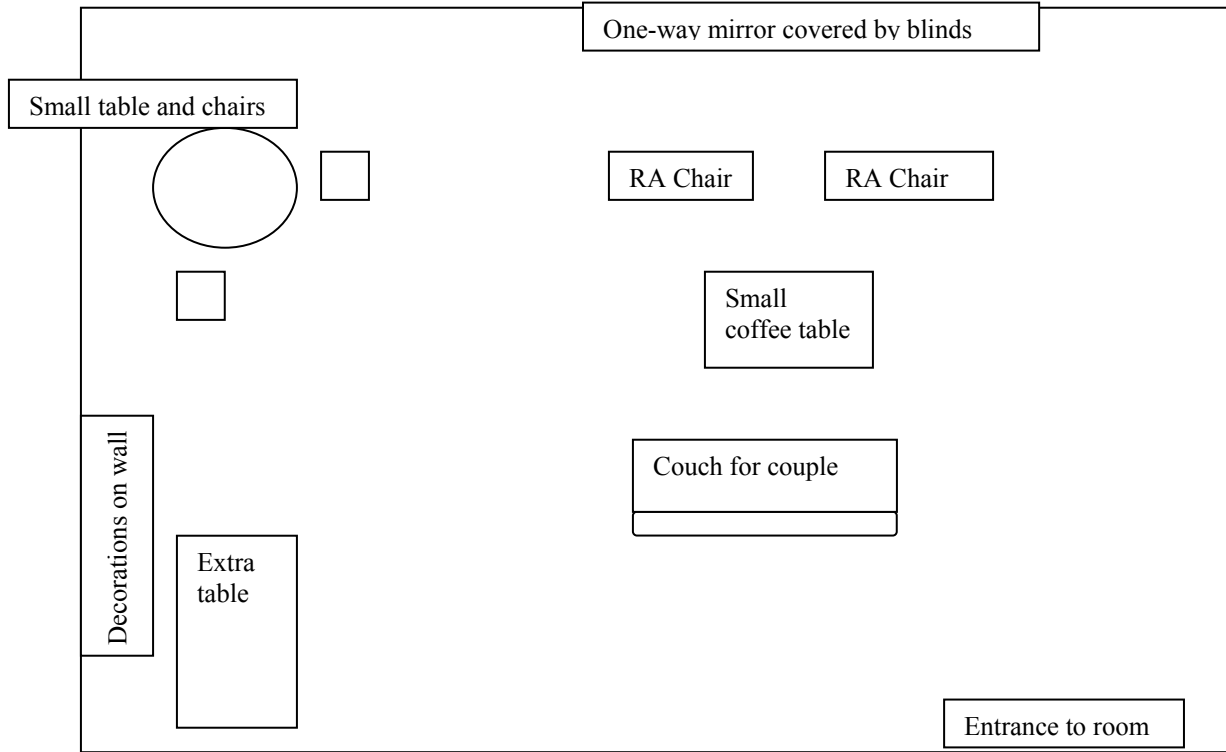
If participants are not 25 years old and married or in a heterosexual committed relationship for at least 6 months, the interviewer will inform the participant that they are not eligible for the study and terminate the screening.

3. What is your race or ethnicity?

4. Do you have any children, and if yes how many? What are their ages?
5. What is your highest level of education?
6. For research purposes, we need to ask you what (if any) medications you're taking right now.
7. May I have your mailing address, so that we can send you the check when you've completed the study?
8. Could I have an emergency contact number (other than your partner) - in case you move and we need to get in touch with you?

APPENDIX L

Schematic of research session room



APPENDIX M

Consent form for ND couples

ND version
IRB# _____

Informed Consent to Participate in Research

The University of Texas at Austin

You and your partner are being asked to participate in a research study. This form provides you with information about the study. The Principal Investigator (the person in charge of this research) or his/her representative will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study: **Cognitive and Interpersonal Factors in Depression**

Principal Investigator(s) (include faculty sponsor), UT affiliation, and Telephone Number(s):

Principal Investigator: Stephanie Rude, Ph.D.
 Department of Educational Psychology, Counseling Psychology
Co-Investigators: Amy Amidon, M.A., Jill Garroway Chrisman, B.S., and Kacey Little, B.A.
 Department of Educational Psychology, Counseling Psychology
 Phone: (512) 471-1160

Funding source: Private foundation

What is the purpose of this study?

The purpose of this project is to study how depressed and non-depressed individuals feel about themselves and their partners and their relationships. We are interested in how people communicate with each other and what impacts this has on their personal and relationship adjustment. From this project, we would like to develop ways to help people achieve better relationship satisfaction and reduce their risk for depression and relapses of depression.

Who is eligible for the study?

Eligibility is determined based on demographic variables, responses to interview questions, and availability and willingness of both members of a couple to participate in the study. You and your spouse or partner have already been determined to be eligible for the study based on the telephone interviews that each of you completed.

What will be done if you take part in this research study?

In the current session, which is expected to last about 2.0 hours, you and your partner will be videotaped while you talk about a topic in your relationship that you disagree about. Then, you and your partner will complete some questionnaires about any feelings of depression, anxiety, and emotions you may have experienced. There will be some questions about how you feel about yourself and your partner and the relationship. Your partner will also be asked how he/she feels about you and the relationship. You and your partner's responses to these questions are completely confidential. In other words, your partner will not be told what you say about him/her and you will not be told what he/she says about you. Only the researchers

will have access to the information you provide in the study. The only exception to this would be that if either of you indicated that they were in imminent danger of harming themselves or another person, we would make sure that you received help. This might involve contacting emergency personnel if necessary.

What are the possible discomforts and risks?

There are no anticipated risks involved in this study, but there may be risks that are not known at this time. In addition, some of the questions asked in this study may lead you to think about unpleasant topics or experience strong emotions. Treatment will not be provided in this study. If you have any distress during or following the study, you are encouraged to contact the researchers (see top of this form) who will provide you with information about possible resources you may find useful. You may also call the Austin-Travis County Mental Health Services Counseling Helpline at 472-4357. If you wish to discuss the information above or any other risks you may experience, you may ask questions now or call the Principal Investigator listed on the front page of this form.

What are the possible benefits to you or to others?

This study will contribute to research examining the links between self-esteem, relationship difficulties, and depression-vulnerability.

If you choose to take part in this study, will it cost you anything?

There is no cost involved in this study.

Will you receive compensation for your participation in this study?

Each couple will receive \$40 if both members complete the session at UT.

What if you are injured because of the study?

There is no known physical risk involved in participating in this study. If injuries occur as a result of study activity, continuing medical care and/or hospitalization for research-related injuries will not be provided free of charge nor will financial compensation be available.

If you do not want to take part in this study, what other options are available to you?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with the University of Texas at Austin.

How can you withdraw from this research study and who should I call if I have questions?

If you wish to stop your participation in this research study for any reason, you should contact *Jill Garroway* at (512) 797-0795. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, please contact *Clarke A. Burnham, Ph.D.*, Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 232-4383.

How will your privacy and the confidentiality of your research records be protected?

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also has the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order.

If the results of this research are published or presented at scientific meetings, you and your partner's identities will not be disclosed.

Because you and your partner will be videotaped during the study, we will do several things to maintain your confidentiality. First, all experiment materials including the videotapes will be coded so that no personal identifying information is visible on them. The tapes will be stored in a file cabinet in a locked office at all times. Only the researcher and her associates will have access to the videotapes and other materials. Finally, the tapes will be destroyed after the researchers have coded the data and completed the study.

Will the researchers benefit from your participation in this study?

The researchers will not benefit from your participation in this study, beyond publishing the results of the study.

Signatures:

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

Signature and printed name of person obtaining consent **Date**

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this Form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.

Printed Name of Research Participant **Date**

Signature of Research Participant **Date**

Printed Name of Research Participant (Partner) **Date**

Signature of Research Participant (Partner) **Date**

Signature of Principal Investigator **Date**

APPENDIX N

Consent form for FD couples

FD version
IRB# _____

Informed Consent to Participate in Research

The University of Texas at Austin

You and your partner are being asked to participate in a research study. This form provides you with information about the study. The Principal Investigator (the person in charge of this research) or his/her representative will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study: **Cognitive and Interpersonal Factors in Depression**

Principal Investigator(s) (include faculty sponsor), UT affiliation, and Telephone Number(s):

Principal Investigator: Stephanie Rude, Ph.D.
Department of Educational Psychology, Counseling Psychology
Co-Investigators: Amy Amidon, M.A., Jill Garroway Chrisman, B.S., and Kacey Little, B.A.
Department of Educational Psychology, Counseling Psychology
Phone: (512) 471-1160

Funding source: Private foundation

What is the purpose of this study?

The purpose of this project is to study how depressed and non-depressed individuals feel about themselves and their partners and their relationships. We are interested in how people communicate with each other and what impacts this has on their personal and relationship adjustment. From this project, we would like to develop ways to help people achieve better relationship satisfaction and reduce their risk for depression and relapses of depression.

Who is eligible for the study?

Eligibility is determined based on demographic variables, responses to interview questions, and availability and willingness of both members of a couple to participate in the study. You and your spouse or partner have already been determined to be eligible for the study based on the telephone interviews that each of you completed.

What will be done if you take part in this research study?

In the current session, which is expected about 2.0 hours, you and your partner will be videotaped while you talk about a topic in your relationship that you disagree about. Then, you and your partner will complete some questionnaires about any feelings of depression, anxiety, and emotions you may have experienced. There will be some questions about how you feel about yourself and your partner and the relationship. Your partner will also be asked how he/she feels about you and the relationship. You and your partner's responses to these questions are completely confidential. In other words, your partner will not be told what you say about him/her and you will not be told what he/she says about you. Only the researchers

will have access to the information you provide in the study. The only exception to this would be that if either of you indicated that they were in imminent danger of harming themselves or another person, we would make sure that you received help. This might involve contacting emergency personnel if necessary.

You are also being asked to participate in three follow-up sessions. These sessions will be held every 6 months for 18 months after the initial session. For each session, you and your partner will complete some questionnaires on a secure website. We will also contact you and your partner on the telephone (in separate telephone conversations) to ask some questions about depression, anxiety, marital satisfaction, and any significant things that have recently happened in your lives.

What are the possible discomforts and risks?

There are no anticipated risks involved in this study, but there may be risks that are not known at this time. In addition, some of the questions asked in this study may lead you to think about unpleasant topics or experience strong emotions. Treatment will not be provided in this study. If you have any distress during or following the study, you are encouraged to contact the researchers (see top of this form) who will provide you with information about possible resources you may find useful. You may also call the Austin-Travis County Mental Health Services Counseling Helpline at 472-4357. If you wish to discuss the information above or any other risks you may experience, you may ask questions now or call the Principal Investigator listed on the front page of this form.

What are the possible benefits to you or to others?

This study will contribute to research examining the links between self-esteem, relationship difficulties, and depression-vulnerability.

If you choose to take part in this study, will it cost you anything?

There is no cost involved in this study.

Will you receive compensation for your participation in this study?

Each couple will receive \$40 if both members complete the session at UT and up to \$50 for completing all three follow-up sessions.

What if you are injured because of the study?

There is no known physical risk involved in participating in this study. If injuries occur as a result of study activity, continuing medical care and/or hospitalization for research-related injuries will not be provided free of charge nor will financial compensation be available.

If you do not want to take part in this study, what other options are available to you?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with the University of Texas at Austin.

How can you withdraw from this research study and who should I call if I have questions?

If you wish to stop your participation in this research study for any reason, you should contact *Jill Garroway at (512) 797-0795*. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, please contact *Clarke A. Burnham, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 232-4383*.

How will your privacy and the confidentiality of your research records be protected?

APPENDIX O

Resources Referral List for Study Participants

Emergency Hotline and Help

- Counseling Helpline and Crisis Counseling/ “Hotline to Help”

Hotline to Help is Austin and Travis County's 24-hour crisis intervention and suicide prevention program.

(512) 472-HELP (4357) or TTY: (512) 703-1395, Option 1

Services Provided Include:

-Suicide Prevention

-24-hour Confidential Crisis Counseling

-Linkage to Emergency Mental Health Services

-Teletype Crisis Intervention Service for the Hearing Impaired

-Community Education Presentations on Suicide & Prevention

Mental Health Provider Referrals

- Capital Area Mental Health: 302-1000

Address: 1106 Clayton LN, Austin, Texas 78723

Hours: We offer appointments 7 days a week, with evenings available Mondays through Fridays

Capital Area Mental Health Center offers affordable counseling to Central Texans. We have a diverse therapist pool of more than 50 clinicians, with experience in all areas. We do not accept 3rd party payments (insurance) to insure your confidentiality, and focus on your specific needs. Our sliding scale fee goes as low as \$10 per session.

Please call 302-1000 for any questions or to schedule an appointment.

For additional information, feel free to visit their website at <http://www.camhc.org/>

- YWCA of Austin: 326-1222

Address: 2015 S. IH-35, Ste. 110; Austin, Texas

Hours: 8:30 am- 7:00 pm Monday through Thursday, 8:30 am- 5:00 pm on Fridays

The YWCA of Greater Austin works to help build better lives for women and their families. We accomplish this by partnering with other local and national organizations to offer various community programs such as mental health counseling, substance abuse counseling and case management, youth programs, wellness programs, and professional education trainings.

Please call 326-1222 for any questions or to schedule an appointment. For additional information, feel free to visit their website at <http://www.ywcaustin.org/>

APPENDIX P

Preliminary Multiple Regression Analyses for Relationship Intimacy

Analyses for Hypothesis 2

As preliminary analyses, multiple regression analyses were conducted to assess the relative associations between the observational variables and relationship intimacy. A regression analysis was conducted to examine whether female direct anger, hostility, and emotional attunement predicted female relationship intimacy. A parallel regression analysis was conducted for male participants.

Because female and male depressive symptoms were correlated with relationship intimacy, BDI scores were also entered into the regression models. For females, depressive symptoms significantly relationship intimacy, Adjusted $R^2 = .09$, $F(1, 53) = 6.11$, $p = .02$. For males, depressive symptoms significantly predicted relationship intimacy, Adjusted $R^2 = .27$, $F(1, 53) = 21.32$, $p < .001$.

For females, the overall regression model did not significantly predict relationship intimacy, Adjusted $R^2 = .06$, $F(4, 50) = 1.87$, $p = .13$. Controlling for the other predictor variables, female depressive symptoms were negatively associated with female relationship conflict, $\beta = -.35$, $t = -2.44$, $p < .05$. Direct anger, $\beta = -.07$, $t < 1.0$, $p = ns$; hostility, $\beta = .19$, $t < 1.0$, $p = ns$; and emotional attunement, $\beta = .21$, $t = 1.19$, $p = ns$; were not significantly related to relationship intimacy when controlling for the other predictors.

For males, the overall regression model significantly predicted relationship intimacy, Adjusted $R^2 = .32$, $F(4, 50) = 7.33$, $p < .001$. Controlling for the other predictor variables, male depressive symptoms were negatively associated with male relationship intimacy, $\beta = -.47$, $t = -3.94$, $p < .001$. Emotional attunement was associated with relationship intimacy, controlling for

other predictor variables, $\beta = .37, t = 2.39, p < .05$. Controlling for other predictor variables, direct anger, $\beta = -.04, t < 1, p = ns$, and hostility, $\beta = .24, t = -3.94, p = ns$, were not significantly associated with relationship intimacy.

Analyses for Hypothesis 3

As preliminary analyses, a multiple regression analysis was conducted to assess the relative associations between female self-reported emotional expression and female relationship intimacy. A parallel regression analysis was conducted for male participants.

Because female and male depressive symptoms were correlated with relationship intimacy, BDI scores were also entered into the regression models. For females, depressive symptoms significantly predicted relationship intimacy, Adjusted $R^2 = .09, F(1, 53) = 6.11, p = .02$. For males, depressive symptoms significantly predicted relationship intimacy, Adjusted $R^2 = .27, F(1, 53) = 21.32, p < .001$.

For females, the overall regression model significantly predicted relationship intimacy, Adjusted $R^2 = .24, F(2, 49) = 8.85, p < .001$. Controlling for emotional self-disclosure, female depressive symptoms did not significantly predict relationship intimacy, $\beta = -.19, t = -1.51, p = .14$. Controlling for BDI symptoms, female emotional self-disclosure was correlated with relationship intimacy, $\beta = .43, t = 3.35, p < .05$. Regression analyses were also completed including the one-item subscale of anger self-disclosure to romantic partners. The overall regression model significantly predicted relationship intimacy, Adjusted $R^2 = .10, F(2, 52) = 3.90, p = .03$. Controlling for anger self-disclosure to romantic partners, female depressive symptoms were associated with female relationship intimacy, $\beta = -.31, t = -2.42, p = .02$. Female anger self-disclosure to romantic partners did not significantly predict relationship intimacy when controlling for depressive symptoms, $\beta = .16, t = 1.27, p = ns$.

For males, the overall regression model significantly predicted relationship intimacy, Adjusted $R^2 = .35$, $F(2, 51) = 15.22$, $p < .001$. Controlling for emotional self-disclosure, male depressive symptoms were inversely associated with male relationship intimacy, $\beta = -.47$, $t = -4.01$, $p < .001$. Controlling for BDI symptoms, male emotional self-disclosure was correlated with relationship intimacy, $\beta = .30$, $t = 2.66$, $p < .01$. Regression analyses were also completed including the one-item subscale of anger self-disclosure to romantic partners. The overall regression model significantly predicted relationship intimacy, Adjusted $R^2 = .26$, $F(2, 52) = 10.49$, $p < .001$. Controlling for anger self-disclosure to romantic partners, male depressive symptoms were associated with male relationship intimacy, $\beta = -.54$, $t = -4.57$, $p < .001$. Male anger self-disclosure to romantic partners did not significantly predict relationship intimacy when controlling for depressive symptoms, $\beta = -.03$, $t < 1.0$, $p = ns$.

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