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**Attachment and Depressive Symptoms in Romantic Relationships: The Mediating  
Role of Excessive Reassurance Seeking and Dysfunctional Attitudes**

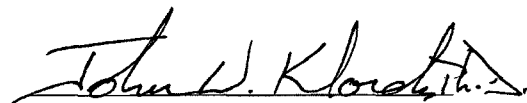
by

Elizabeth A. Harwood  
B.A., Middlebury College, 2000

Presented in Partial Fulfillment of the Requirements for the Degree of Master of Arts  
The University of Montana

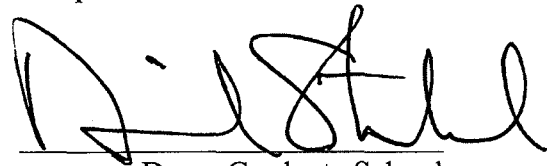
May 2005

Approved By:



John W. Klocek, Ph.D.

Chairperson of Thesis Committee



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Psychology

## Attachment and Depressive Symptoms in Romantic Relationships: The Mediating Role of Excessive Reassurance Seeking and Dysfunctional Attitudes

Chairperson: John W. Klocek, Ph.D.

JK

Previous research has identified dysfunctional attitudes, insecure attachment, and excessive reassurance seeking as possible risk factors in the etiology of depression. This research study examines the relationship between these factors by integrating Beck's cognitive vulnerability theory, Bowlby's attachment theory, and Coyne and Joiner's theories on reassurance seeking. At time one, undergraduate psychology students completed measures of parental attachment, romantic attachment for self and partner, dysfunctional attitudes, reassurance seeking and depression. Their romantic partners completed a measure of romantic attachment for self and partner as well. At time two, approximately six weeks later, undergraduate psychology participants were administered the measures a second time and a measure of negative life events. Results indicated main effects for dysfunctional attitudes, reassurance seeking, low parental care and anxious attachment on depression at Time 1. Partner's attachment style and other perceptions of attachment did not significantly predict depression at Time 1. Independent analyses demonstrated that both dysfunctional attitudes and excessive reassurance seeking acted as partial mediators of the relationship between the anxiety scale of the adult, romantic attachment measure and depressive symptoms. However, when the anxiety scale, dysfunctional attitudes and reassurance seeking were tested simultaneously within a full model, the two-way interaction between dysfunctional attitudes and excessive reassurance seeking emerged as the only significant predictor of depressive symptoms and accounted for 29% of the variance. Thus, results suggest that insecure attachment does not add to the model when both dysfunctional attitudes and reassurance seeking are present. However, in the presence of either dysfunctional attitudes or reassurance seeking alone, anxious attachment appears to act as an additional vulnerability factor for depression. Longitudinal analyses, which would have added to a better understanding of the vulnerability process, were not significant. Limitations and directions for future research are discussed.

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## Chapter One

### Introduction

Major Depression is becoming more common in our society, with an approximate lifetime prevalence rate of 15 percent (Kaplan & Sadock, 1998). Recent epidemiological studies also suggest that its prevalence has been steadily increasing in recent generations (Kaelber, Moul, & Farmer, 1995). Often comorbid with other disorders including Anxiety Disorders and Alcohol or other Substance Abuse Disorders, Major Depression causes significant impairment in social and occupational functioning and increases the risk for suicide (*Diagnostic and Statistical Manual for Mental Disorders, 4<sup>th</sup> edition*; American Psychiatric Association, 1994). Unfortunately, only about half of all people with Major Depression receive treatment (Kaplan & Sadock, 1998). With these facts in mind, the importance of the accurate assessment, treatment, and prevention of Major Depression is readily apparent. Understanding the etiology of depression more thoroughly will help in the creation of effective prevention plans and treatment strategies.

The etiology of depression, just like any other psychological disorder, involves multiple causal factors that are intricately intertwined and not fully understood. Nonetheless, there are several theories that have greatly advanced our understanding of depression. Cognitive theories of depression in particular have contributed to the development of especially effective treatment interventions. In addition, the link proposed by cognitive theorists between the proximal factor of dysfunctional attitudes and depression has received empirical support in numerous studies (Abramson et al., 1999; Hedlund & Rude, 1995; Ingram & Ritter, 2000; Joiner, Metalsky, Lew, & Klocek, 1999).

In an attempt to understand the etiology of depression further as well as the etiology of dysfunctional attitudes, recent research has been connecting cognitive theories of depression, especially Beck's vulnerability theory, with Bowlby's attachment theory (Reinecke & Rogers, 2001; Roberts, Gotlib & Kassel, 1996). Beck's theory hypothesizes that dysfunctional attitudes are formed through childhood experiences. Bowlby's theory of attachment (1958; 1977; 1982) proposes that early childhood experiences with the primary caregiver play a key role in determining internal working models of self and others, which, in turn, affect interpersonal and emotional relationships in adulthood. Bowlby's theory provides a possible explanation as to how dysfunctional attitudes may form. Therefore, an integration of Beck's theory with Bowlby's theory suggests that insecure attachment in childhood predisposes an individual to dysfunctional attitudes about self, others and the world, which result in a vulnerability to depression throughout the life-span.

#### Beck's cognitive theory of depression

Currently one of the most prominent and most widely supported cognitive theories of depression is Beck's theory of cognitive vulnerability, which is based on an information-processing model (Beck, 1987; Ingram, Miranda & Segal, 1998). Beck (1987) states that individuals have to continuously think about and interpret their environment in order to survive. In any situation, an individual must choose what stimuli to focus on and how to interpret them. This process differs for each individual and is a major reason why individuals act differently in the same situation. Underlying Beck's theory is the assumption that people can experience emotional distress as a result of

selectively focusing on negative stimuli or by having unrealistic interpretations of specific situations (Beck, 1987).

Beck's theory includes the concept of a negative cognitive triad. The cognitive triad is made up of three cognitive patterns, which lead the depressed individual to interpret the self, the world and the future in a dysfunctional, negative manner (Beck, Rush, Shaw, & Emery, 1979). First, the depressed individual believes that he/she is flawed and will consistently attribute negative experiences to personal failure. Because of these perceived failings, the depressed individual believes that he/she is unworthy and unlovable (Beck et al., 1979). Second, the depressed individual interprets daily experiences in a negative manner even when there is contrary evidence (Beck et al., 1979). The depressed individual seems to either focus on the negative or misinterpret or downplay the positive in his/her interpersonal interactions. And third, the future, as a result of the view of the self and world, is seen as dark and fraught with failures. This view of the future makes suicide an appealing option to the depressed (Beck et al., 1979).

Beck's theory also includes the concept of schemas (Beck, 1964; Beck et al., 1979). Beck proposes that some individuals demonstrate consistency in their interpretations of similar situations. This consistency is the result of cognitive patterns called schemas which provide the individual with information on what to attend to, what to remember, and how to act based on previous, similar experiences and their results (Beck, 1964; Beck et al., 1979). A schema is usually latent until a situation related to the schema activates it. Depressed individuals may be more susceptible to negative and even neutral stimuli activating negative schemas than non-depressed individuals (Beck, 1963; Beck et al., 1979). For example, Beck (1963) found in interviews with depressed clients

that in any situation in which the client's personal attributes were concerned, the client consistently maximized his/her negative attributes, minimized his/her positive attributes, and misattributed negative consequences to his/her inadequacies (Beck, 1963; 1987).

These interpretations were automatic and often became more prevalent as the individual's depression increases (Beck, 1963; 1964; Beck et al., 1979). Even in the face of obvious and continuous positive feedback, the depressed individual's schemas lead him/her to focus on the negative and minimize the positive (Beck et al., 1979; Beck, 1987). In these instances, the individual may not question the validity of his/her interpretations and not take into account current stimuli (Beck et al., 1979; Beck, 1987).

Overall, Beck's theory (1987) is considered to be a diathesis-stress model.

However, this model is different from other diathesis-stress models of depression. Instead of a biological or hereditary factor acting as the diathesis, the depressogenic schema and the negative cognitive triad constitute the individual's vulnerability to depression. When a stressful or traumatic event occurs in conjunction with the diathesis, the individual is especially vulnerable to the onset of depression. Beck (1987) emphasizes the importance of the stressor being related to the negative schema. Stressors not related to the schema will not necessarily influence the onset of depression. In addition, Beck (1987) states that this cognitive model should be "restricted to the so-called reactive depression; that is, those that are brought about by socially relevant events." Beck (1987) is therefore suggesting that the cognitive vulnerability model takes part in the causation of only some depressive episodes.

More recently, Beck included in his theory two types of schemas that cause an individual to become especially susceptible to depression. These are referred to as

sociotropy and autonomy (Beck, 1987; Ingram et al., 1998). Sociotropic individuals highly value interpersonal relationships. Their sense of self-worth is based on how much others accept and support them. Autonomous individuals, on the other hand, highly value independence. Their sense of self-worth is dependent upon self-control and achievement. Stressors, which are congruent with sociotropy and autonomy, are proposed to activate dysfunctional attitudes and, in turn, cause depressive symptoms (Beck, 1987; Ingram et al., 1998).

Thus, Beck (1987) emphasizes that interactions with others can affect the maladaptive schemas of the depressed individual; this is called the reciprocal interaction model (Beck et al., 1979). For example, if the depressed individual withdraws, significant others may criticize the individual, thus confirming the negative view of the self and exacerbating or at least maintaining the depression (Beck et al., 1979). If, on the other hand, significant others consistently demonstrate support, acceptance and love to the depressed individual, they could act as a buffer against the onset of depression or perhaps help to alleviate it (Beck et al., 1979). Consistent with the reciprocal-interaction model, research has demonstrated that social support can influence the etiology and maintenance of depression (e.g., Coyne, Aldwin & Lazarus, 1981; Folkman & Lazarus, 1986).

### Hopelessness theory

In addition to Beck's model of cognitive vulnerability, there exist several other cognitive models of depression which have received empirical support, including the hopelessness model (Abramson, Metalsky, & Alloy, 1989). While Beck's theory of cognitive vulnerability focuses on a depressogenic schema as the diathesis for depression, hopelessness theory focuses on an attributional style as the diathesis for a specific

subtype of depression, hopelessness depression. Individuals with hopelessness depression tend to make global, stable and internal attributions about negative life events (Abramson et al., 1989). These types of attributions make the individual vulnerable to hopelessness, which is in of itself a sufficient cause for hopelessness depression (Abramson et al., 1989). However, to formulate more concise hypotheses about variables that may predict the onset and maintenance of depression, this investigation will only examine Beck's model because of its strong link with attachment theory.

#### Empirical support for Beck's model of depression

Numerous studies have found support for Beck's model of depression (Abramson et al., 1999; Hedlund & Rude, 1995; Ingram & Ritter, 2000; Joiner et al., 1999). For example, in a two site, prospective longitudinal study called the Temple-Wisconsin Cognitive Vulnerability to Depression (CVD) project, Abramson and colleagues (1999) have been testing the cognitive vulnerability hypothesis through a behavioral high-risk design. Retrospective and prospective results have provided support for the relationship between cognitive vulnerability and both mild and more severe forms of depression, even when controlling for initial levels of depressive symptomatology (Abramson et al., 1999). In addition, Joiner and colleagues (1999) found that college students who scored high in dysfunctional attitudes had higher levels of depression after a stressful event (low scores on their mid-term), which supports the diathesis-stress component of the cognitive vulnerability theory. Furthermore, Ingram & Ritter (2000) have found that previously depressed participants who performed a negative mood induction task were biased towards negative stimuli, which supports Beck's theory that vulnerable individuals tend to maximize the negative and minimize the positive. However, previously depressed and

never depressed individuals who did not enter a negative mood state did not differ in their attention to negative stimuli. These results raise the question of whether negative cognitions are stable traits that play a role in depression's etiology or whether they are just another symptom of depression that remits when the depression does.

In an attempt to resolve this issue, Persons and Miranda (1992) have delineated the "mood-state hypothesis." They "propose that dysfunctional attitudes and attributions are ... stable personality traits, but that an individual's ability to report them depends on current mood state. In particular, the more negative the mood, the more likely the vulnerable individual will be able to report negative cognition" (p.489). Therefore, an individual may have a belief that he/she is unaware of until some thought or action activates it. In this case, since the beliefs or attitudes are negative, then a negative mood state would be able to activate them, which would potentially account for the results in the study by Ingram and Ritter (2000). Thus, Persons and Miranda (1992) advocate using a design, which utilizes a negative mood induction technique in order to study dysfunctional attitudes.

On the other hand, Hedlund and Rude (1995) found that previously depressed individuals displayed the hypothesized depressogenic schemas, as measured by information processing tasks, even without a negative mood induction task. Although self-report measures did not find a significant difference between never depressed and formerly depressed individuals on negative cognitive biasing, two of the three information processing tasks did: the Scrambled Sentence Task and recall/intrusion measures (Hedlund & Rude, 1995). These results are especially significant in that a negative mood induction task was not utilized, which supports the notion that



depressogenic schema are not an artifact of current mood (Hedlund & Rude, 1995). Instead, it appears that self-report measures and some information processing tasks are not adequately sensitive to detect depressogenic schema when the individual is not currently depressed (Hedlund & Rude, 1995).

Remitted depression studies such as Hedlund & Rude's (1995) and Ingram & Ritter's (2000) are based on the idea that dysfunctional attitudes and schemas should be stable and continue beyond an episode of depression, if they are truly vulnerability factors (Just, Abramson, & Alloy, 2001). Their studies and similar ones support their hypothesis. However, Just and colleagues (2001) criticize this approach stating that it does not adequately test cognitive vulnerability as an antecedent of the onset of depression. It is still unclear whether depressogenic cognitions are present *before* an episode of depression or are a symptom of depression. Therefore, Just and colleagues (2001) advocate a prospective, behavioral high-risk design, such as the one being used in the Temple Wisconsin Cognitive Vulnerability to Depression (CVD) project.

Furthermore, empirical evidence has supported the notion that Beck's theory of cognitive vulnerability is specific to depression (Joiner et al., 1999; Stark, Schmidt, & Joiner, 1996). For example, in Joiner and colleague's study (1999) college students who had higher scores in dysfunctional attitudes had higher levels of depression after a stressful event, but not higher levels of anxiety. Moreover, Stark and colleagues (1996) found that having dysfunctional thinking and poor perceived parental messages increased a child's risk for depression, but not for anxiety. These studies indicate that dysfunctional attitudes specifically increase an individual's risk for depression, but not for anxiety, which is significant given the comorbidity of anxiety and depression.

However, research has indicated that dysfunctional attitudes may be related to symptoms of schizophrenia (Zimmerman, Coryell, Corenthal, & Wilson, 1986).

### Reassurance Seeking

While Beck's model focuses on dysfunctional thinking, he also believes that interactions with others can play a role in confirming or denying negative thoughts. One way in which interactions with others can affect depression and potentially dysfunctional attitudes and schemas is through excessive reassurance seeking, a concept first noted in the interpersonal model of depression developed by Coyne (1976).

Coyne (1976) argues that interpersonal dynamics play an important role in the development and maintenance of depression. He hypothesizes that the depressed individual acts in such a way that he/she receives negative feedback (Coyne, 1976). For instance, a negative event often occurs before the onset of depression. As a result, the depressed individuals may seek reassurance from significant others that they care about them and will be there for them (Coyne, 1976). However, depressed individuals question the genuineness of this reassurance because they have such negative views of themselves. Consequently, they ask for more reassurance and more reassurance until they end up being rejected by the significant other, or the reassurance becomes forced, which has been referred to as the "depressive spiral" (Coyne, 1976; Joiner, Alfano, & Metalsky, 1992). The depressed individual has thus created a rejecting and confusing environment in which his /her cognitive distortions are fueled (Coyne, 1976).

Joiner and colleagues (1992) have expanded Coyne's theory by indicating that excessive reassurance seeking is the most important contributor in the development and maintenance of depression. Several recent investigations have shown that excessive

reassurance seeking does occur among depressed individuals (Joiner et al., 1992; Joiner & Metalsky, 1995; Joiner, 1994; Joiner, Katz & Lew, 1999). For example, in Joiner and colleagues' (1992) study, excessive reassurance seeking among college roommates was associated with higher levels of depressive symptoms and higher levels of rejection. Interestingly, rejection due to reassurance seeking was only found in males. Perhaps, because males are stereotyped as unemotional, it is more unacceptable when they demonstrate excessive reassurance seeking (Joiner et al., 1992). Joiner and colleagues (1999) have also noted that excessive reassurance seeking is a relatively stable tendency. Furthermore, research has shown excessive reassurance seeking to be specific to depression (Joiner & Schmidt, 1998; Joiner & Metalsky, 1995). Since reassurance seeking appears to contribute to depressive symptoms, adding it as a component to the cognitive vulnerability model could strengthen its predictive power.

A potential explanation for the relationship between excessive reassurance seeking and depressive symptoms is that these individuals have internal working models in which they see themselves as unworthy of care (insecure attachment) and therefore, doubt others who seem to care. Davila (2001) has examined the relationship between insecure attachment, reassurance seeking and depression. The results from this study suggest that attachment is related to reassurance seeking, although Davila (2001) advocates further study.

### Bowlby's attachment theory

Beck's (1987) theory of cognitive vulnerability and Coyne's (1976) theory of excessive reassurance seeking propose that internal thought patterns and interactions with significant others can affect the onset, maintenance and recovery in depression. The

question is how these maladaptive cognitions and interpersonal patterns originate.

Bowlby's theory on attachment provides a way in which to conceptualize the answer. In his theory, parents who consistently criticize their child, are rejecting and threatening or are not available confirm the child's expectations that he/she is worthless and that others are unreliable. The child then expects to be rejected as new relationships are formed and takes on a negative view of self and others. In this conceptualization, insecure attachment could be viewed as a possible precursor to the maladaptive schemas and excessive reassurance seeking of Beck and Coyne's theories.

Attachment has been defined as "any form of behavior that results in the person attaining or maintaining proximity to some other clearly defined individual who is conceived as better able to cope with the world" (Bowlby, 1977, p. 669). Bowlby's theory is based on a combination of psychoanalytic, ethological, and cognitive theory (Bowlby, 1958). The psychoanalytic perspective argues that a child forms an attachment to his/her primary caretaker in order to fulfill physiological needs. Any sort of emotional or comfort fulfillment is secondary and is the result of associating the mother with food and physical fulfillment. Bowlby labels this conceptualization of attachment as Secondary Drive theory (Bowlby, 1958; 1977). However, as Bowlby (1958) artfully points out, when psychoanalysts (such as S. Freud, A. Freud, and M. Klein) talk about their observations of parent-child interactions rather than about their theories, social contact with the mother seems to be as important as obtaining food. In relation to this, the ethological perspective theorizes that animals have many inborn responses, which are independent of physiological needs and which work to increase social interactions (Bowlby, 1958; 1977). Bowlby extrapolates that ethologists would believe an infant's

attachment goes beyond a Secondary Drive and includes some inherent, instinctual tendencies for social interaction.

Bowlby (1958) combines psychoanalytic, ethological, and cognitive theory by hypothesizing that infants have developed inherent instinctual responses, such as sucking, clinging, following, crying and smiling in order to stay close to and elicit responses from the primary caregiver, which will, in turn, ensure their survival. Thus, these observable behavior patterns have been chosen as species-specific to humans through the process of natural selection because of their importance in survival and subsequently future reproduction (Bowlby, 1958). Bowlby proposes that the emotional bond not only fulfills physiological needs (eg., sucking), but emotional and social needs as well (eg., smiling).

The five instinctual responses, which constitute the infant's attachment behavior, can be divided into two areas. The first category consists of sucking, clinging and following; the end result of these is food and being in close proximity with the mother. The mother has a limited reciprocal role in this case. The second category consists of crying and smiling, which Bowlby believes act as social cues for the mother, who responds immediately to the infant (Bowlby, 1958). In fact, smiling seems to be particularly powerful in activating the mother's attachment. Events in the environment as well as internal events can activate and terminate these instinctual responses. For example, the physiological sensation of hunger will activate the instinctual response of crying and then sucking when the infant is placed near the breast. Satisfying that hunger will end the instinctual response. However, when the instinctual response system is not free to end, the infant may feel anxiety (Bowlby, 1958). In cases of separation from the mother, the infant will feel even more intense anxiety and, once the mother returns, the

infant will often cling or follow (Bowlby, 1958). Bowlby further hypothesizes that the infant being able to follow and to cling in the early years is especially important to normal development. However, all of the instinctual responses are in different states of activity or latency at different points in development and may be combined throughout adulthood (Bowlby, 1958).

Bowlby (1977) also proposes that several types of psychological maladjustment, such as anxiety, anger, depression and emotional detachment, can be explained by deviations in the development of attachment or the failure to attach altogether. Bowlby states that “many of the most intense emotions arise during the formation, the maintenance, the disruption and the renewal of attachment relationships. The formation of a bond is described as falling in love, maintaining a bond as loving someone, and losing a partner as grieving over someone” (Bowlby, 1977, p. 203). Thus, a person’s wellbeing and psychological adjustment are intricately tied to both the wellbeing and psychopathology of their attachment bonds. These bonds can include not only the attachment between mother and child, but also attachments in adulthood, such as with spouses and children, which are influenced by the earlier attachment. Each attachment provides a base for which the individual explores his/her environment and to which the individual always returns. The caregiver is available during these periods of exploration and intervenes when the individual is headed for trouble. How the caregiver intervenes is very important in the psychological wellbeing of the individual. When the caregiver is consistently nurturing and protective and allows the child to explore, the child will develop an internal model of himself/herself as being competent and worthy of care. Consequently, the child will have a greater chance of developing healthy relationships

throughout life. Furthermore, secure attachment gives the child a base of support and a source of internal working models that act as a buffer against stressful life events and the development of psychopathology (Bowlby, 1977).

If, on the other hand, the caregiver is unresponsive, rejecting, controlling, or threatening, the child can become anxious and consider himself/herself as incompetent and unworthy of care. (Bowlby, 1977). Bowlby labels this as anxious attachment.

Anxious attachment can also result from the primary caregiver wanting the child to act as an attachment figure for him/her. In both cases, the child is susceptible to developing neurotic symptoms, depression, and phobias (Bowlby, 1977). If the child has an unresponsive mother, if the child's cries or smiles are not met, then the child is likely to feel that he/she cannot make any changes in his/her environment and thus develop a form of learned helplessness (Kestenbaum, 1984).

Another form of attachment behavior, later named avoidant attachment, occurs when the individual becomes compulsively self-reliant. This can also develop from experiences similar to those described for anxious attachment, but, in this case, the child acts by inhibiting feeling and attachment behavior (Bowlby, 1977). Bowlby proposes that these individuals will often demonstrate somatic and depressive symptoms under stress. On the opposite end are individuals who show compulsive caregiving, but never ask for it in return. In all of these cases, the child is likely to feel underlying resentment and anger towards the parents for not receiving adequate care.

Bowlby states that these types of insecure attachment will carry over into marital relationships, relationships with children, and with significant others such as employers and therapists, since "each of us is apt to do unto others as we have been done by"

(Bowlby, 1997, p. 208). Or, in other words, how we are treated in our childhood will affect how we treat significant others in our life. Thus, the child's future interpersonal interactions can be understood in the success or failure of his/her attachment to the primary caregiver (Kestenbaum, 1984). In addition, the internal working model of self and others that is created in the child's attachment to his/her primary caregiver will affect his/her internal working models in the future. Negative internal working models of self and others could potentially create the maladaptive schemas proposed by Beck (1987) that leave an individual vulnerable to depression.

#### Ainsworth and childhood attachment

Ainsworth, Blehar, Waters, and Wall (1978) used Bowlby's theory as a basis for operationalizing specific types of attachment behavior. The participants in their study, 1-year old infants that came from white, middle class families, underwent the strange situation task. The strange situation has eight episodes in which the infant is observed with the mother, as a stranger approaches, as the mother leaves, as the mother returns, as the stranger leaves, alone, and finally as the stranger and then the mother return (Ainsworth et al., 1978). Using this task, Ainsworth and colleagues (1978) were able to identify three types of attachment, secure, anxious-ambivalent, and avoidant, based on the infant's behaviors and Bowlby's theory. The securely attached infant demonstrates distress when the mother leaves during the strange situation task and seeks closeness when she returns. The mother is also used as a base from which the infant can explore the environment (Ainsworth et al., 1978). In addition, the securely attached infant functions better in certain aspects of social and cognitive development. For example, the securely attached infant is more willing to cooperate with the mother, is more outgoing with



strangers, and is able to explore his/her environment (Ainsworth et al., 1978). The avoidant infant, on the other hand, avoids the mother in situations that activate attachment behavior, such as when the mother returns in the strange situation task. Instead, the infant ignores the mother and continues to explore the environment, although in a distracted manner. The mother is also seen as rejecting and uncomfortable with or repulsed by close contact with the infant. The avoidant infant has deficits in exploratory behavior, cooperation, and increased aggressiveness (Ainsworth et al., 1978). The anxiously attached infant demonstrates chronic anxiety in relation to the mother. These infants are apparently not convinced that the mother is accessible to their needs, and these mothers are actually less responsive to their infants (Ainsworth et al., 1978). The infant act angrily towards the mother for not realizing his/her needs and the infant might cling to keep the mother close. These infants are the slowest to develop cognitively because of their low frustration tolerance and clingy behavior towards the mother (Ainsworth et al., 1978). The three types of attachment observed by Ainsworth and colleagues (1978) provide empirical evidence for the types of attachment proposed by Bowlby in his theory. In addition, Ainsworth and colleagues' (1978) methods provide a way in which to identify attachment as early as infancy.

Recent research has added a new category to insecure attachment called disorganized/ disoriented attachment (Green & Goldwyn, 2002). In Ainsworth and colleagues' study (1978), there was a group of infants who did not fit into any of the defined categories and showed contradictory and often bizarre responses that did not seem to be goal-directed. These infants have subsequently been placed into the disorganized attachment category, which during the strange situation task could include

the absence of attachment, simultaneously contradictory behaviors, freezing, abnormal movements, and fearfulness of the parent (Green & Goldwyn, 2002). Disorganized attachment has been linked to loss or trauma related to the parent (Green & Goldwyn, 2002). Because Beck's theory is strongly connected to the idea of loss in childhood, disorganized attachment seems to be a fruitful area of research in the etiology of depression in addition to the other types of insecure attachment. However, due to a lack of measures that include this category, disorganized attachment is not specifically tested in this study.

### Attachment in adulthood

While Bowlby (1958, 1977) and Ainsworth and colleagues' (1978) work has primarily examined attachment in the context of the child with his/her primary caregiver, Bowlby's theory hypothesizes that the attachment process continues throughout an individual's life. Hazan and Shaver (1987) utilized Bowlby's and Ainsworth's conceptualization of attachment to explore love relationships in adults and found that the rates of secure, anxious-ambivalent and avoidant attachment styles in adults in relation to their romantic partners were approximately the same as the rates found in children with their primary caregivers. In addition, the three attachment styles predicted different experiences in the romantic relationship. For example, securely attached individuals had trusting and longer-lasting relationships in which they considered their partner a friend and someone whose faults they accepted. Individuals who were anxiously attached, on the other hand, "experienced love as involving obsession, desire for reciprocation and union, emotional highs and lows, and extreme sexual attraction and jealousy" (Hazan & Shaver, 1987, p. 515). And, avoidant relationships were characterized by a fear of

intimacy, jealousy, and highs and lows. The different types of attachment also predicted the individual's working model of relationship; that is, whether or not love exists, how hard it is to find, and if it lasts (Hazan & Shaver, 1987).

Bartholomew and Horowitz (1991) extended Hazan and Shaver's (1987) study by incorporating Bowlby's work on internal models. Their conceptualization of adult attachment was based on two dimensions, the internal working model of self and the internal working model of others, which are dichotomized as either negative or positive. In this conceptualization, an individual can either be fearful (negative self, negative other), preoccupied (negative self, positive other), dismissing (positive self, negative other) or secure (positive self, positive other). The negative/positive model of self relates to the individual's feelings of self-worth and competence while the negative/positive model of others relates to how supportive and available others are presumed to be (Bartholomew & Horowitz, 1991). For example, the preoccupied group would think that they are unworthy, but they would have a positive view of others and thus, would look to others for self-validation (Bartholomew and Horowitz, 1991). The preoccupied category is conceptually congruent with Bowlby's concept of ambivalent attachment. The fearful group, on the other hand, would distrust others in addition to having a negative self-concept. To guard against expected rejection, the members of the fearful group would avoid others. Therefore, the fearful group is conceptually congruent with avoidant attachment and also with the more recent category of disorganized attachment (Bartholomew and Horowitz, 1991). And, finally, the dismissing group would feel worthy, but would distrust others and would avoid others as well. Membership in this group is also linked to avoidant attachment. The two dimensions, model of self and

model of others, used by Bartholomew and Horowitz (1991) to explain attachment have also been conceptualized as anxiety and avoidance scales respectively (Brennan, Clark and Shaver, 1998). The different conceptualizations of childhood and adult attachment are outlined in Table One.

Furthermore, the results from Bartholomew and Horowitz's study (1991) on adult attachment indicate that both dimensions, model of self and model of others, are important in conceptualizing an adult's close relationships. In addition, each adult attachment style appears to have different outcomes (Bartholomew & Horowitz, 1991). For example, in their study, the fearful participants had problems with intimacy, the dismissing participants had problems with warmth towards others, and the preoccupied participants had a problem with being too domineering in their relationships (Bartholomew & Horowitz, 1991). However, participants demonstrated a mixture of attachment dispositions across time and within and across relationships, indicating the plasticity of adult attachment (Bartholomew & Horowitz, 1991).

#### Parental attachment and depression

Bowlby as well as several psychologists have hypothesized that insecure or pathological attachment with the primary caregiver leads to affective disorders in vulnerable individuals (Bowlby, 1958, 1977; Kestenbaum, 1984; Sund & Wichstrom, 2002). When a child is insecurely attached, he/she will develop negative internal working models of self and/or others that can lead the child to attribute failures as personal failures, which consequently creates a vulnerability to depression (Bowlby, 1982). The association between insecure parental attachment and depression has been demonstrated in numerous studies (Armsden, McCauley, Greenberg, Burke & Mitchell, 1990; Kenny,

Moilanen, Lomax, & Brabeck, 1993; Papini & Roggman, 1992; Sund & Wichstrom, 2002). For example, Sund and Wichstrom's study (2002) indicated that insecure attachment at T1 moderately predicted depression at T2, after controlling for initial stressful life events and depressive symptoms. Armsden and colleagues (1990) also found insecure attachment to be significantly associated with current depression. However, the group whose depression was in remission was split into high and low levels of secure attachment. While higher levels of attachment security could reflect an improvement in depression, it is also possible that the depressed-remitted group experienced less severe depression to begin with, or that the relationship with parents improved as the depression remitted (Armsden et al., 1990). Although there has been some concern that attachment is an artifact of current mood and is merely a reflection or consequence of depressive symptoms, recent research has suggested otherwise. For example, Haaga and colleagues (2002) found that insecure attachment was significantly greater for previously depressed adults than non-depressed adults. In addition, Haaga and colleagues (2002) performed a mood induction task and found that the two groups, mood induction and control, did not differ significantly in their styles of attachment measure afterwards. These results suggest that attachment is not an artifact of current mood.

Other studies have also demonstrated a connection between insecure parental attachment and depressive symptoms, while adding new constructs into their model (Kenny et al., 1993; Papini & Roggman, 1992). For instance, Kenny and colleagues (1993) found that the individual's view of self, which was conceptualized as the individual's perceived competence and worth as a person, mediated the relationship between insecure attachment and depression. As proposed by Bowlby, these results

suggest that the individual's internal working model of self appears to develop from his/her attachment to the primary caregiver (Kenny et al., 1993). Similarly, Papini and Roggman (1992) found that an adolescent's perceived parental attachment as secure is significantly associated with greater feelings of self-competence and self-worth as well as with lower levels of depression and anxiety. The relationship between secure attachment, higher levels of self-worth, and lower levels of depression was most salient during periods of stress or transition (from elementary to middle-school), consistent with diathesis-stress theories (Papini & Roggman, 1992). Having a secure attachment and higher levels of self-worth seemed to act as buffers in periods of transition in that those participants had significantly lower levels of depression and anxiety (Papini & Roggman, 1992).

#### Adult attachment and depression

The relationship between adult attachment and depression has also received empirical support (Carnelly, Pietromonaco, & Jaffe, 1994; Murphy, & Bates, 1997; Whiffen, Kallos-Lilly, & MacDonald, 2001). Carnelly and colleagues (1994) conducted two studies in which they first examined mildly depressed college students in stable relationships and then examined married women diagnosed with major depression. In both cases, insecure attachment was linked with greater depressive symptomatology. More specifically, fearful and preoccupied attachment styles were associated with depressive symptoms in college women, whereas only fearful attachment was associated with earlier depression in the married women (Carnelly et al., 1994). Both fearful and preoccupied attachment styles include a negative view of the self, which suggests that

one's view of self may play a more prominent role in depression than one's view of others.

In addition, Carnelly and colleagues (1994) found that the influence of parental attachment on adult attachment lessened as the individual aged, which is consistent with Hazan and Shaver's (1987) study. Therefore, adult attachment incorporates not only early experiences with the parent, but also new experiences with romantic partners, which appear to take more precedence as the relationship continues. In other words, the development and maintenance of internal working models is an ongoing process. Consistent with Carnelly and colleagues (1994), Murphy and Bates (1997) also found that depressed individuals were more likely to report fearful or preoccupied attachment styles than non-depressed individuals.

Recent research has also suggested that the partner's attachment style seems to have an impact on the individual's depression (Whiffen et al., 2001). For instance, Whiffen and colleagues (2001) found that clinically depressed women were more likely to be insecurely attached to their husbands than non-depressed women (Whiffen et al., 2001). In addition, having a husband with self-rated secure attachment predicted symptom reduction and remission after 6 months in depressed wives, while husbands with a dismissing attachment style were associated with the maintenance of their wives' depressive symptoms (Whiffman et al., 2001). These results indicate that a husband who is insecurely attached maintains his wife's perception of him as rejecting and herself as unlovable, which in turn contributes to the maintenance of her depression. On the other hand, a husband who is securely attached apparently demonstrates to his wife that her internal working models of self and others are faulty and consequently helps to alleviate

her depression (Whiffman et al., 2001). Because of the correlational nature of the study, however, it is unclear whether the husband's insecure attachment played a causal role in the chronic depression of his wife or vice versa. Another possibility is that a third, unknown variable caused both of their depressive symptomatology. Nevertheless, this study demonstrates the importance of assessing the significant partner's attachment style in addition to the depressed individual's style.

#### Integrating cognitive and interpersonal theories of depression

As this paper has indicated thus far, dysfunctional attitudes (as hypothesized by cognitive vulnerability theory), excessive reassurance seeking, and insecure attachment have been independently implicated in the etiology of depression. Recent research has attempted to integrate dysfunctional attitudes and insecure attachment in depression's etiology by hypothesizing that insecure attachment leads to the development of dysfunctional attitudes, which in turn lead to depression. Thus, research has suggested that dysfunctional attitudes act as a mediator in the relationship between insecure attachment and depression (Randolph & Dykman, 1998; Reinecke & Rogers, 2001; Roberts et al., 1996; Whisman & McGarvey, 1995). For example, Roberts and colleagues (1996) found in three undergraduate samples that the relationship between insecure adult attachment and depressive symptoms was mediated almost entirely by dysfunctional attitudes. Individuals demonstrating high anxiety about attachment and difficulty becoming close to others tended to report more dysfunctional attitudes and were more susceptible to depressive symptoms (Roberts et al., 1996). Reinecke and Rogers (2001) found similar results in a clinically depressed sample. In addition, both Whisman and McGarvey (1995) and Randolph and Dykman (1998) found evidence for the partial



mediation of the relationship between parental attachment and depressive symptoms by dysfunctional attitudes.

The present study not only examined the role of dysfunctional attitudes and attachment style, but also the role of excessive reassurance seeking in the development of depressive symptoms. To help delineate whether cognitive (dysfunctional attitudes) or interpersonal (excessive reassurance seeking or insecure attachment) vulnerability to depression comes before or are a result of depression, this study incorporated a diathesis-stress, prospective design. At T1, dysfunctional attitudes, excessive reassurance seeking, and attachment were assessed to determine vulnerability as well as initial depression levels. At T2, after approximately six weeks, all variables were assessed again in addition to measuring recent negative life events that occurred in the interim. In addition, this study examined self and other perceptions of attachment as well as the romantic partner's attachment style in the etiology of depression. There were seven main hypotheses in this study.

#### *Hypothesis #1*

The general premise of hypothesis one is that both parental and adult, romantic attachment styles are correlated with and predictive of depressive symptoms at T1 and T2. Since attachment styles can vary across the lifespan in response to different experiences, both types of attachment are assessed to determine which has a more significant impact on depression (Armsden et al., 1990; Carnelly et al., 1994; Reinecke & Rogers, 2001). However, parental attachment and adult, romantic attachment are expected to be significantly correlated with each other.

Hypothesis one is tested by three models. The first model is that parental attachment that includes a low level of care and/or high level of overprotection will be significantly correlated with and predictive of depressive symptoms at T1 and T2. Second, adult, romantic attachment that includes a negative view of self and/or a negative view of others is proposed to be significantly correlated with and predictive of depressive symptoms at T1 and T2 (Brennan et al., 1998). And third, adult, romantic attachment will have more predictive ability for depressive symptoms at T1 and T2 than parental attachment when these are viewed simultaneously.

### *Hypothesis #2*

While self-reports of attachment are both time and cost effective, an individual's answers could be distorted in order to look better (social desirability bias) or to look worse (cry for help; Bowlby, 1982). For example, an individual with a negative self-concept who looks towards others for validation (high anxiety, low avoidance) might attempt to "look good" to receive this validation. In addition, questions exist as to whether self-reports of attachment accurately capture the concept of attachment or something else, such as social cognition (Reinecke & Rogers, 2001). To explore these issues, hypothesis two examines differences between self and other (romantic partner) perceptions of an individual's romantic attachment style. In particular, hypothesis two examines whether the partner's perception of the individual's attachment style predicts the individual's depressive symptoms at T1 and T2. Higher other (romantic partner) ratings on the anxious and/or avoidant scale of the adult attachment measure are proposed to correlate with and predict greater symptoms of depression for the individual.

*Hypothesis #3*

Hypothesis three explores whether or not the adult attachment style of the romantic partner is related to the individual's depressive symptoms. Consistent with Whiffen and colleagues' study (2001), hypothesis three proposes that the romantic partner's score on the adult attachment measure correlates with and significantly predicts the individual's depressive symptoms at T1 and T2.

*Hypothesis #4*

The previous hypotheses are designed to assess if there is a relationship between attachment style and levels of depression. Once this relationship is understood thoroughly, the next step is to see if there is a relationship between attachment style, dysfunctional attitudes and depressive symptoms. More specifically, hypothesis four tests the model that dysfunctional attitudes act as a mediator between attachment and depressive symptoms. Which measure of attachment utilized in this analysis is determined by the results of the previous hypotheses. For example, if anxious adult attachment is the only attachment measure predictive of depressive symptoms, then it will be the only measure used in this hypothesis.

There are two components to hypothesis four. First, dysfunctional attitudes are proposed to be highly correlated with and predictive of depressive symptoms at T1 and T2, which would be consistent with previous research (Abramson et al., 1999; Joiner et al., 1999). Second, dysfunctional attitudes are hypothesized to act as a mediator between attachment and depression, which would support both the theory that dysfunctional attitudes are at least partially the result of attachment and previous research (Randolph &

Dykman, 1998; Reinecke & Rogers, 2001; Roberts et al., 1996; Whisman & McGarvey, 1995).

#### *Hypothesis #5*

Similarly, hypothesis five tests the model that excessive reassurance seeking acts as a mediator between attachment style and depression. The criteria used in hypothesis four for determining which attachment measures to incorporate are also utilized for hypothesis five. Hypothesis five includes two components. First, reassurance seeking is proposed to be correlated with and predictive of depressive symptoms at T1 and T2, which is consistent with previous research (Joiner et al., 1992; Joiner & Metalsky, 1995; Joiner et al., 1999). And, second, reassurance seeking is predicted to act as a mediator between attachment and depression, which would support the theory that reassurance seeking is at least partially the result of attachment.

#### *Hypothesis 6*

Hypothesis six examines the connection between attachment, dysfunctional attitudes, and reassurance seeking in predicting depressive symptoms by testing these variables within a comprehensive model. Testing this hypothesis is dependent upon significant results from hypothesis four and five.

#### *Hypothesis 7*

Since the cognitive vulnerability model for depression is a diathesis-stress model, a high level of negative life events may strengthen the relationship between cognitive vulnerability, excessive reassurance seeking, attachment and depressive symptoms. Because this is a supplemental hypothesis, negative life events will be tested only if the full model in hypothesis six is significant. It is proposed that a higher level of negative

life events will interact with the other predictor variables within the model to predict a higher level of depressive symptoms at T2.

## Chapter Two

### Method

#### Participants

Participants included undergraduate students recruited from Psychology 100 at the University of Montana and their romantic partners. “Romantic partner” was defined as a person with whom the participant has had a relationship for at least one month and would consider a “boyfriend” or “girlfriend.” Both heterosexual and homosexual couples were included. There were a total of 253 participants; 123 romantic couples and 7 individuals whose partner did not complete the study.

#### Measures

##### *Demographic Questionnaire*

The Demographic Questionnaire consists of items regarding the participant’s age, race/ethnicity, gender, years of education completed, marital status, previous or current mood and/or anxiety diagnosis, and the status of the primary caregiver (biological, step, adopted, foster). In addition, the participants are asked how long they have dated their romantic partners, how serious they consider the relationship to be (based on a Likert scale rating), and if and how long they have had a sexual relationship with their current partner.

##### *Parental Bonding Instrument*

The Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) is a measure of parental attachment that assesses retrospective memories of the participant’s primary caregiver in terms of two dimensions: care (affection versus rejection) and overprotection (overcontrolling versus fostering autonomy). The PBI includes 25 items

and uses a 4-point Likert scale, ranging from 0 (“very like”) to 3 (“very unlike”). For test-retest reliability, Parker and colleagues (1979) found a correlation coefficient of .851 for the care dimension and a correlation coefficient of .688 for the overprotection dimension. In addition, ratings from interviews were used for a test of concurrent validity and correlations ranged from .478 to .778 (Parker et al., 1979). Other studies have found coefficient alphas ranging from .85 to .91 for care and .87 to .89 for overprotection (Randolph & Dykman, 1998; Whisman & Kwon, 1992).

#### *Experiences in Close Relationships Questionnaire*

The Experiences in Close Relationships Questionnaire (ECRQ; Brennan et al., 1998) is a measure of adult romantic attachment that assesses two dimensions: avoidance (AVOID) and anxiety (ANX). This questionnaire was developed in response to the problem of having a vast number of adult attachment constructs available, but no “gold standard.” Brennan and colleagues (1998) performed a factor analysis of 323 statements derived from 60 attachment measures previously created (including Hazan and Shaver’s (1987) and Bartholomew and Horowitz’s (1991) measures) to form the ECRQ. The ECRQ is a 36-item self-report questionnaire with items rated on a 7 point Likert scale, ranging from “Disagree Strongly” to “Agree Strongly.” For internal consistency, Brennan and colleagues (1998) have demonstrated coefficient alphas of .94 for the Avoidance scale and .91 for the Anxiety scale. The two scales are almost uncorrelated ( $r = .11$ ). In addition, using hierarchical cluster analysis, Brennan and colleagues (1998) have found four groups that are similar to Bartholomew and Horowitz’s (1991) descriptions of attachment styles (i.e., secure, fearful, preoccupied, dismissing). However, research has demonstrated that the two dimensions of anxiety and avoidance can adequately explain

the concept of attachment (Bartholomew & Horowitz, 1991; Brennan et al., 1998).

Therefore, this study used the two dimensional approach to analyze results.

#### *Beck Depression Inventory – II*

Levels of depression were assessed using the Beck Depression Inventory –II (BDI-II; Beck, Steer & Brown, 1996). This is a 21-item self-report questionnaire that measures affective and cognitive experiences of depression. Each item is rated on a 0-3 scale with summary scores ranging from 0 to 63. Beck and colleagues (1996) found, for internal consistency, coefficient alphas of .93 among college students and .92 among depressed outpatients. Beck, Steer, Ball, & Ranieri (1996) also found an internal consistency of .91 among psychiatric outpatients. In addition, content, construct, convergent and factorial validity of the BDI-II have been supported in a large sample of college students (Beck et al., 1996; Dozois, Dobson, & Ahnberg, 1998).

#### *Depressive Interpersonal Relationships Inventory, Reassurance-Seeking Sub-Scale*

The Depressive Interpersonal Relationships Inventory – Reassurance-Seeking Sub-Scale (DIRI-RS; Joiner et al., 1992) is a four-item subscale of the DIRI, which measures the tendency of individuals to excessively seek reassurance from others. Each item is rated on a 1 to 7 scale and is averaged across items, with higher scores indicating higher levels of reassurance seeking. Joiner and colleagues (1992; 1999) found high coefficient alphas for this measure, ranging from .81 to .88. Joiner and Metalsky (1992) reported the DIRI-RS to be a valid measure in studies using a large sample of college students. And, Davila (2001) found evidence of moderate discriminant validity.



*Dysfunctional Attitudes Scale*

The Dysfunctional Attitudes Scale- Form A (DAS; Weissman & Beck, 1978 as cited in Reinecke & Rogers, 2001) is a 40 item scale that measures maladaptive and rigid beliefs about self-worth that are hypothesized to create a vulnerability to depression (Beck, 1987). Each item is rated on a 1 to 7 scale Likert Scale, with total scores ranging from 40 to 280 and a higher score indicating more dysfunctional attitudes. Several studies have reported high internal consistency scores ranging from coefficient alphas of .80 to .92 (Dobson & Breiter, 1983; Randolph & Dykman, 1998; Reinecke & Rogers, 2001). Dobson and Breiter (1983) also found moderate concurrent validity of the DAS, correlating it with the Automatic Thoughts Questionnaire (ATQ) and the Interpretation Inventory (IntL). And, Nelson, Stern and Cicchetti (1992) found high discriminant validity as well.

*Negative Life Events Questionnaire*

The Negative Life Events Questionnaire (NLEQ; Metalsky and Joiner, 1992) is a condensed version of the Negative Life Events Questionnaire developed by Saxe and Abramson (1987; as cited in Metalsky & Joiner, 1992). The NLEQ, which was specifically developed for college students, is a 66 item self-report questionnaire designed to assess negative life stressors that cover a wide range of categories, including school, work, parents, and romantic partners. Items are rated from 0 to 4 (0 = “never present,” 4 = “always present”) on how frequently stressors occurred in the past six weeks. Scores range from 0 to 264, and higher scores reflect the presence of a greater number of stressors. Saxe and Abramson (1987; as cited in Metalsky & Joiner, 1992) in their original scale found a test-retest reliability of .82. Metalsky and Joiner (1992) found

that the NLEQ interacted with cognitive diatheses to predict depressive symptoms, which indicates that the NLEQ is capable of assessing events relevant to the onset of depressive symptoms.

### Procedures

#### *Procedures for Psychology 100 participants:*

Psychology 100 participants attended two sessions approximately six weeks apart. Staff that were trained and supervised by the Primary Investigator (PI) proctored all sessions. The staff passed out informed consent forms, identification code sheets, number 2 pencils, and custom designed opscan answer sheets prepared with NCS Design Expert. The staff also provided each participant with an identification code. The staff explained the consent form and answered all questions regarding it. After the consent form was signed and passed in, the staff had the participants fill out the identification code sheet. Then, the Psychology 100 participants received a questionnaire packet that included the PBI, two ECRQ's (one for self-report and the other for partner-report), the BDI-II, the DIRI-RS, the DAS and a demographic questionnaire. The Psychology 100 participants were asked to put their identification code on the scantron and then to fill out the questionnaires. Once the Psychology 100 participant turned in his/her questionnaire packet, the staff signed a form, which allowed him/her to receive experimental credits. Then, the Psychology 100 participant chose from one of three days approximately six weeks later to return for the second session. The participant was provided with a form including the date, time, and location of the next session, as well as a phone number where the researcher could be contacted. In addition, the Psychology 100 participants

were provided with a copy of the informed consent. This session took approximately an hour.

After the first session, project staff immediately reviewed the answer sheets for responses indicating suicidal ideation on the BDI-II (item #9 with a response of 2 or 3). As stated in the informed consent, upon finding suicidal ideation, project staff contacted the PI, who contacted the student participant directly and assessed suicidal risk. No participant endorsed a 2 or higher on this question; thus, no contacts were made. Subsequent to these procedures, all informed consent forms, demographic questionnaires, and identification sheets were placed in locked file cabinets that were separate from each other and separate from the rest of the data. Only the PI had access to these sheets. Data were kept in locked file cabinets, and at no time during data analysis was the identifying information contained on the informed consent forms or identifier sheets associated with the data provided by the participants.

The Psychology 100 participants returned to complete their participation on the day they selected approximately six weeks later. Project staff proctored the second session and provided information related to confidentiality, participant rights, and instructions on how to complete the project measures. Participants received a questionnaire packet, which included a place to fill in their identification code, a PBI, two ECRQ's (one for self-report and one for partner-report), the BDI-II, DAS, DIRI-RS, and a NLEQ, in addition to a number 2 pencil and an opscan form. The project staff provided the participants with their identification code from last session. Once the measures were completed, the Psychology 100 participants received the rest of their experimental credits for participating. The second session took approximately an hour and a half. Participants

were given a copy of the debriefing form, which explained the purpose, hypotheses, and potential applications of the study. The debriefing form also included the PI's contact information in case of any questions or concerns as well as contact information for mental health resources in case any distress was experienced. Procedures described above regarding suicidal ideation were repeated in addition to procedures related to the storage of informed consent forms and analysis of data.

*Procedures for the romantic partners:*

The romantic partners came to the first session, but they were assessed in a separate room from the Psychology 100 participants. Staff that were trained and supervised by the PI proctored the session. The staff passed out informed consent forms, identification code sheets, number 2 pencils and custom designed opscan answer sheets prepared on NCS Design Expert. The staff explained the consent form and answered all questions regarding it. After the consent form was signed and passed in, the staff had the participants fill out the identification code sheet. The staff provided the participants with an identification code. The romantic partners also received a questionnaire packet that only included two ECRQ's (one for self-report and one for partner-report) and a demographic questionnaire. Once the romantic partner turned in his/her questionnaire packet, he/ she received a copy of the informed consent and a debriefing form. The session for the romantic partner took approximately 30 minutes. The romantic partner did not receive compensation for participation. Procedures described above related to the storage of informed consent forms and analysis of data were repeated.

## Chapter 3

### Results

Means and standard deviations for each measure at each time period can be seen in Table 2. There were 123 romantic couples. 7 individuals whose partners did not complete the study also participated. The total number of participants was 253. 47.8% of the participants were male and 51.8% were female. Ages of the participants ranged from 18 to 56 years, with a mean age of 21.2 years. 87.7% of the sample were Caucasian, 2.8% were Native American, 2.0% were Hispanic, 1.6% were Asian, and 4.7% endorsed Other. The majority of this sample reported that they had not been diagnosed with a mood or anxiety disorder (91.3%), and the primary caregiver for the majority of this sample had been a biological parent (96.8%).

Since all participants were required to be in a current relationship for the study, descriptive statistics regarding marital and relationship status were computed. 86.2% of the participants reported that they were single but dating, 10.3% reported that they were married and 2.4% reported that they had been previously divorced. Months dated for the current relationship ranged from 1 to 300 with a mean of 25.04 months. The mean rating for relationship seriousness was 5.74 on a Likert scale of 1 to 7, with 1 being “not at all serious” and 7 being “very serious.” In addition, 85.7% of the participants endorsed a sexually active relationship with their current partner. Only the introductory psychology students were asked to return for the second half of the study. Of the participants who returned, 83.5% indicated that they were still in the same relationship.

Since gender differences have been reported for depression and attachment style in previous research (Beck et al., 1996; Bartholomew & Horowitz, 1991; Collins & Read,

1990), independent samples *t* test were also run for all predictor and criterion variables with gender as the grouping variable. Significant gender differences were found for the partner report of the anxiety scale of the attachment measure (partner rating, ANX) at T1 and for the Dysfunctional Attitudes Scale at T1 and T2 (DAS). More specifically, at T1, males rated their partners significantly higher on the anxiety scale of the Experiences in Close Relationships Questionnaire than females ( $t=3.28, df=248, p<.01$ ). In addition, males scored significantly higher on the Dysfunctional Attitudes Scale (DAS) than females at both T1 ( $t=2.45, df=142, p<.05$ ) and T2 ( $t=2.47, df=118, p<.05$ ). Findings related to significant group differences between males and females are presented in Table 3.

Analyses were also conducted to determine if participants' ratings significantly varied from T1 to T2. Significant differences were found for the self-report of the Anxiety Scale of the attachment measure (ANX;  $t=2.83, df=119, p<.01$ ) and for the reassurance seeking measure (DIRI;  $t=2.42, df=118, p<.05$ ). T1 means were significantly higher in both cases than T2 means. In addition, analyses were conducted to determine if the participants who were expected to return for T2 and did not return differed significantly on their depression (BDI-II) or dysfunctional attitudes scores (DAS) than those who were expected to and did return for T2. Results from independent *t* test analyses indicated that participants who did not complete the study did not differ significantly on their depression scores (BDI-II) from individuals who did complete the study ( $t=.52, df=140, p>.05$ ). Participants who did not complete the study also did not significantly differ on their ratings on the Dysfunctional Attitudes Scale than participants

who had completed the study, although statistical significance was barely missed ( $t=1.98$ ,  $df=140$ ,  $p=.05$ ).

Zero-order correlations between measures can be seen in Table 4. Significant correlations occurred between T1 and T2 for all variables of interest.

### *Hypothesis 1*

Hypothesis one stated that parental attachment (PBI) and adult attachment (ECRQ) are significant predictors of depressive symptoms (BDI-II) both cross-sectionally and longitudinally. To determine if the measure of parental attachment (PBI) and the measure of adult attachment (ECRQ) were related, correlational analyses were conducted. While the care dimension of the parental attachment measure (PBICARE) was not significantly correlated with the avoidance scale of the adult romantic attachment measure (AVOID), it was significantly correlated with the anxiety scale (ANX). The overprotection dimension of the parental attachment (PBIOVER), on the other hand, was significantly correlated with both the avoidance scale (AVOID) and the anxiety scale (ANX) of the adult romantic attachment measure (ECRQ) (see Table 4).

Correlational analyses were also conducted to determine if parental attachment (PBI) and adult attachment (ECRQ) were related to depressive symptoms at T1 and T2. Results can be seen in Table 4. Significant relationships were found between the care dimension (PBICARE) and the overprotection dimension (PBIOVER) of the parental attachment measure and depressive symptoms (BDI-II) at T1. However, the overprotection dimension (PBIOVER) was not related to depressive symptoms (BDI-II) at T2. The anxiety scale (ANX) of the adult, romantic attachment measure was significantly correlated with depressive symptoms (BDI-II) at T1 and T2, while the

avoidance scale (AVOID) was not significantly correlated with depressive symptoms at either T1 or T2 (see Table 4).

Hypothesis one also included three stepwise regression models. Stepwise regression was chosen due to the exploratory nature of the hypothesis. In other words, the purpose of this hypothesis was to identify important variables in the development of depression and to inform subsequent analyses. While the rejection of a particular variable by stepwise does not necessarily mean that the variable is not involved at all in predicting depression, it does suggest that the variable has less predictive ability than what is included in the equation. The first model was that T1 parental attachment (PBI) is predictive of both T1 and T2 depressive symptoms (BDI-II). To test this model, a stepwise, multiple regression analysis was run with the care dimension (PBICARE) and the overprotection dimension (PBIOVER) of the parental attachment measure as the predictor variables and T1 depression (BDI-II) as the criterion variable. The overprotection dimension (PBIOVER) did not add enough predictive ability to be included in the analysis ( $t=1.598$ ;  $pr=.134$ ;  $p=.112$ ). The care dimension (PBICARE), on the other hand, was included in the analysis and was a significant predictor of depressive symptoms (BDI-II) at T1 ( $t=-2.591$ ,  $r=-.214$ ;  $p<.05$ ). The care dimension (PBICARE) accounted for 4.6% of the variance (See Table 5).

To test this model longitudinally, a stepwise, multiple regression was run with T1 depressive symptoms (BDI-II) entered first to control for initial levels of depression and parental attachment entered second (PBICARE and PBIOVER) as the predictor variables with T2 depressive symptoms (BDI-II) as the criterion variable. The majority of the variance was accounted for by T1 depressive symptoms ( $t=10.26$ ,  $pr=.69$ ;  $p<.01$ ). Neither



dimension of parental attachment, care (PBICARE;  $t=-1.599$ ;  $pr=-.147$ ;  $p=.113$ ) nor overprotection (PBIOVER;  $t=.091$ ;  $pr=.008$ ,  $p=.928$ , ) entered the equation (See Table 6).

The second model tested the assumption that T1 adult romantic attachment (ECRQ) is a significant predictor of both T1 and T2 depressive symptoms (BDI-II). To test this model, a stepwise multiple regression analysis was run with depressive symptoms (BDI-II) at T1 as the criterion variable and the anxiety (ANX) and avoidance (AVOID) scales of the adult romantic attachment measure (ECRQ) as the predictor variables. The avoidance scale (AVOID) of the attachment measure (ECRQ), however, did not have enough predictive ability to be included in the final equation ( $t=-.395$ ,  $pr=-.034$ ,  $p=.693$ ). The anxiety scale (ANX), on the other hand, was included in the equation and was a significant predictor of depressive symptoms (BDI-II) at T1 ( $t=5.342$ ,  $pr=.413$ ,  $p<.01$ ). The anxiety scale accounted for 17% of the variance (See Table 7).

To test this model longitudinally, a stepwise multiple regression analysis was run with T1 depressive symptoms (BDI-II) entered first to control for initial levels of depression and romantic attachment entered second (AVOID and ANX) with T2 depressive symptoms (BDI-II) entered as the criterion variable. The majority of the variance was accounted for by T1 depressive symptoms ( $t=10.26$ ,  $pr=.69$ ;  $p<.01$ ). Neither the avoidance scale (AVOID;  $t=-.731$ ;  $pr=-.068$ ;  $p=.466$ ) nor the anxiety scale (ANX;  $t=.59$ ;  $pr=.055$ ,  $p=.556$  ) was included in the model (See Table 8).

The third and final model for hypothesis one tested the assumption that T1 adult romantic attachment (ECRQ) has more predictive ability for T1 and T2 depression (BDI-II) than T1 parental attachment when tested simultaneously. Since neither the overprotection dimension (PBIOVER) of the parental attachment measure nor the

avoidance scale (AVOID) of the adult romantic attachment measure (ECRQ) had enough predictive ability to be included in the previous cross-sectional and longitudinal models, they were not included in the current analysis. Therefore, a stepwise multiple regression analysis was run in which the care dimension (PBICARE) of the parental attachment measure and the anxiety scale (ANX) of the adult romantic attachment measure were entered as the predictor variables and depressive symptoms (BDI-II) at T1 were used as the criterion variable. The care dimension (PBICARE) of the parental attachment measure was not included in the equation ( $t=-1.411$ ,  $pr=-.119$ ,  $p=.160$ ). However, the anxiety scale (ANX) of the adult romantic attachment measure was included in the equation and was a significant predictor of depressive symptoms (BDI-II) at T1 ( $t=5.342$ ,  $pr=.413$ ,  $p<.01$ ). The anxiety scale (ANX) accounted for 17% of the variance (See Table 9). Longitudinal regression analyses were not run for this model, since neither hypothesized predictor variable was predictive individually when T1 depression scores were included in the equation.

### *Hypothesis 2*

The intention of hypothesis two was to examine differences between self and other (romantic partner) perceptions of an individual's romantic attachment style (ECRQ, self-report and ECRQ, partner-report) and to determine if the partner's perception (ECRQ, partner-report) is significantly related to the individual's depressive symptoms (BDI-II). Correlational analyses indicated that the self and other perceptions of an individual's romantic attachment style were significantly correlated. The self-report of the avoidance scale (AVOID) was significantly correlated with the partner-report of the avoidance scale (AVOID) ( $r=.375$ ,  $p<.01$ ). In addition, the self-report of the anxiety scale

(ANX) was significantly correlated with the partner-report of the anxiety scale (ANX) ( $r=.393, p<.01$ ). However, neither the partner-report of the avoidance scale (AVOID) ( $r=-.083, p=.338$ ) nor the partner-report of the anxiety scale (ANX) ( $r=.101, p=.247$ ) was correlated with depressive symptoms (BDI-II) at T1. The same held true for the correlation between the partner-report of the avoidance scale (AVOID) and depressive symptoms (BDI-II) at T2 ( $r=-.107, p=.259$ ) and for the correlation between the partner report of the anxiety scale (ANX) and depressive symptoms (BDI-II) at T2 ( $r=.055, p=.562$ ). Therefore, regression analyses were not conducted for the partner-report of the adult, attachment measure predicting the individual's depressive symptoms (BDI-II), since correlational analyses involving the primary variables of interest were not significantly related to depression.

### *Hypothesis 3*

Hypothesis three proposed that the adult, romantic attachment style of the individual's romantic partner (ECRQ) significantly impacts the individual's depressive symptoms (BDI-II) at T1 and T2. The anxiety scale (ANX) of the adult, romantic attachment measure (ECRQ) was expected to have the highest correlations with the individual's depressive symptoms (BDI-II) followed by the avoidance scale (AVOID). However, correlational analyses indicated that neither the partner's anxiety scale (ANX) ( $r=.120, p=.168$ ) nor the partner's avoidance scale (AVOID) ( $r=-.110, p=.209$ ) was significantly correlated with the individual's depressive symptoms (BDI-II) at T1. In addition, neither the partner's anxiety scale (ANX) ( $r=.047, p=.624$ ) nor the partner's avoidance scale (AVOID) ( $r=-.149, p=.116$ ) was significantly correlated with the

individual's depressive symptoms (BDI-II) at T2. Since significant correlations were not found for the variables of interest, regression analyses were not performed.

#### *Hypothesis #4*

Hypothesis four proposed that dysfunctional attitudes (DAS) act as a mediator between attachment style (PBI/ECRQ) and depressive symptoms (BDI-II). Which attachment styles utilized in this hypothesis was dependent upon which measures were significant predictors of depressive symptoms (BDI-II) in the previous analyses. Since the care dimension of the parental attachment measure (PBICARE) and the anxiety scale of the adult, romantic attachment measure (ANX) were both significant predictors of depressive symptoms (BDI-II) at T1, these scales were chosen for the current analyses. In addition, since these scales were not significant predictors of depressive symptoms (BDI-II) at T2, longitudinal analyses were not run for T2 depressive symptoms, although results from the correlational analyses are presented.

First, correlational analyses were conducted testing the relationship between dysfunctional attitudes (DAS), the parental attachment measure (PBI), the adult, romantic attachment measure (ECRQ), and depressive symptoms (BDI-II; Table 4). Correlations between the attachment measures and depressive symptoms have been reported previously. As expected, dysfunctional attitudes (DAS) at T1 were significantly correlated with depressive symptoms (BDI-II) at T1 and at T2. In addition, both of the attachment measures (PBI and ECRQ) were significantly correlated with dysfunctional attitudes (DAS) at T1 (see Table 4).

Second, multiple regression analyses were performed to test the model that attachment style and depressive symptoms are mediated by dysfunctional attitudes. The

methods suggested by Baron and Kenny (1986) for testing mediation was utilized (See Figure One). Baron and Kenny (1986) indicate that to test mediation, three regression equations need to be estimated: 1) the independent variable predicting the mediator variable, 2) the independent variable predicting the dependent variable, and 3) the independent variable and the mediator variable predicting the dependent variable simultaneously. Significant predictions should occur for all three equations, and in addition, the effect of the independent variable on the dependent variable needs to be less in the third equation than in the second equation for evidence of mediation (Baron & Kenny, 1986). Accordingly, in the first phase of the analysis, the care dimension of the parental attachment measure (PBICARE) and the anxiety scale of the adult, romantic attachment measure (ANX), both from T1, were entered as the predictor variables and dysfunctional attitudes (DAS) at T1 was used as the criterion. The care dimension of the parental attachment measure (PBICARE) did not have enough predictive ability to be included in the model ( $t=-1.803$ ,  $pr=-.151$ ,  $p=.074$ ). Therefore, this measure was not used in subsequent analyses. The anxiety scale of the adult, romantic attachment measure (ANX), on the other hand was predictive of dysfunctional attitudes (DAS) at T1 ( $t=6.985$ ,  $pr=.507$ ,  $p<.01$ ). In the second phase of analysis, the anxiety scale of the adult, romantic attachment measure (ANX) was entered as the predictor variable and depressive symptoms (BDI-II) at T1 were entered as the criterion. The anxiety scale (ANX) was predictive of depressive symptoms (BDI-II) at T1 ( $t=5.342$ ,  $pr=.413$ ,  $p<.01$ ). And in the third phase of the analysis, the anxiety scale of the adult romantic attachment measure (ANX) followed by dysfunctional attitudes (DAS) were entered as the predictor variables and depressive symptoms (BDI-II) at T1 as the criterion. When the hypothesized

mediator variable, dysfunctional attitudes (DAS), was controlled, the anxiety scale of the adult, romantic attachment measure (ANX) was still a significant predictor of depressive symptoms (BDI-II) at T1, although this relationship was reduced ( $t=3.125$   $pr=.257$ ,  $p<.01$ ). This provides evidence for partial mediation in the relationship between anxious adult attachment and depressive symptoms by dysfunctional attitudes (Baron & Kenny, 1986; See Table 10 and Figure Two).

#### *Hypothesis #5*

Hypothesis five proposed that excessive reassurance seeking (DIRI-RS) acts as a mediator between attachment style (PBI/ECRQ) and depressive symptoms (BDI-II). Analyses followed the same pattern as those used for hypothesis four.

Correlational analyses were conducted to assess the relationship between excessive reassurance seeking (DIRI-RS), the parental attachment measure (PBI), the adult, romantic attachment measure (ECRQ), and depressive symptoms (BDI-II). Correlations testing the relationship between the attachment measures (PBI and ECRQ) and depressive symptoms have been discussed previously (Table 4). In addition, as expected, reassurance seeking (DIRI-RS) was significantly correlated with depressive symptoms (BDI-II) at T1 and T2. However, the anxiety scale (ANX) of the adult, romantic attachment measure (ECRQ) was the only measure of attachment significantly correlated with excessive reassurance seeking (DIRI-RS) at T1 (Table 4).

Second, multiple regression analyses were performed to test the model that attachment style and depressive symptoms are mediated by reassurance seeking using the methods suggested by Baron and Kenny (1986), which were explained in the previous hypothesis. This model included three steps. In the first phase of analysis, the anxiety

scale of the adult, romantic attachment measure (ANX) was entered as the predictor variable and reassurance seeking (DIRI-RS) was entered as the criterion variable. All variables were from T1 data. The anxiety scale (ANX) was a significant predictor of reassurance seeking (DIRI-RS) at T1 ( $t=6.005$ ,  $pr=.451$ ,  $p<.01$ ).

In the second phase of analysis, the anxiety scale (ANX) was entered as the predictor variable and level of depressive symptoms (BDI-II) at T1 were used as the criterion variable. The anxiety scale (ANX) was a significant predictor of depressive symptoms (BDI-II) at T1 ( $t=5.342$ ,  $pr=.413$ ,  $p<.01$ ). And, third, the anxiety scale (ANX) was entered into a hierarchical regression equation first, followed by reassurance seeking (DIRI-RS) as a predictor and depressive symptoms (BDI-II) at T1 as the criterion. When the proposed mediator variable, reassurance seeking (DIRI-RS), was controlled, the anxiety scale of the adult, romantic attachment measure (ANX) was still a significant predictor of depressive symptoms (BDI-II) at T1, although this relationship was reduced ( $t=3.679$ ,  $pr=.300$ ,  $p<.01$ ). This provides evidence for the partial mediation of the relationship between anxious adult attachment and depressive symptoms by excessive reassurance seeking (Baron & Kenny, 1986; See Table 11 and Figure Three).

### *Hypothesis 6*

Hypothesis six tested a comprehensive model building on the findings from hypothesis four and five, which examines the interactions between dysfunctional attitudes (DAS), reassurance seeking (DIRI) and attachment (ECRQ) in predicting depressive symptoms (BDI-II) at T1 and T2. The analyses for hypothesis six were dependent upon results from previous hypotheses. For example, since hypothesis four and five found evidence for dysfunctional attitudes (DAS) and excessive reassurance seeking (DIRI)

acting as partial mediators for the relationship between attachment (ECRQ) and depression (BDI-II) at T1, both dysfunctional attitudes (DAS) and reassurance seeking (DIRI) were included in the comprehensive model. In addition, the anxiety scale (ANX) of the adult, romantic attachment measure (ECRQ, self-report) was included. Due to the failure of parental attachment (PBI) and avoidant adult attachment (AVOID, ECRQ) to provide additional predictive information to the previous analyses, they were not included in the comprehensive model. Furthermore, the comprehensive model was not tested longitudinally, since previous hypotheses found that depressive symptoms (BDI-II) at T1 accounted for the majority of the variance in predicting depressive symptoms at T2. Thus, the comprehensive model tested utilized the anxiety scale (ANX) of the adult, romantic attachment measure (ECRQ), dysfunctional attitudes (DAS), reassurance seeking (DIRI) and depressive symptoms (BDI-II) all at T1.

To test the comprehensive model, both main effects and product interactions were analyzed to determine if a combination of predictor variables (product interactions) increased the predictive ability of the model beyond the main effects. First, the anxiety scale (ANX) of the adult, romantic attachment measure (ECRQ), dysfunctional attitudes (DAS) and reassurance seeking (DIRI) were entered in step one as the predictor variables. Then the two-way product interactions between these variables were entered. Finally, the product interaction between all three variables was entered in step three with depressive symptoms (BDI-II) at T1 as the criterion variable.

Results demonstrated a main effect for the anxiety scale (ANX;  $t=2.322$ ;  $pr=.195$ ,  $p<.05$ ), for the reassurance seeking scale (DIRI;  $t=2.012$ ,  $pr=.170$ ,  $p<.05$ ) and for the dysfunctional attitudes scale (DAS;  $t=2.692$ ,  $pr=.225$ ,  $p<.01$ ) in step one of the regression



analysis. In addition, these three predictor variables accounted for 24.4% of the variance in predicting depressive symptoms (BDI-II) at T1. Step two also contributed significantly to the model ( $F\Delta=2.976, p<.05$ ) and accounted for 4.7% additional variance in predicting depressive symptoms (BDI-II) at T1. However, only the interaction between the reassurance seeking scale and the dysfunctional attitudes scale (DIRI x DAS) was significant ( $t=2.430, pr=.206, p<.05$ ). The main effects for the anxiety scale (ANX;  $t=8.74, pr=.076, p=.383$ ), for the reassurance seeking scale (DIRI;  $t=-1.748, pr=-.150, p=.083$ ) and for the dysfunctional attitudes scale (DAS;  $t=-.809, pr=-.070, p=.420$ ) were no longer significant. Step three, which added the interaction between all three variables (ANX x DAS x DIRI), did not add significantly to the model ( $F\Delta=.390, p=.534$ ). Therefore, anxious, adult attachment (ANX) did not add to the model when both dysfunctional attitude (DAS) and excessive reassurance seeking (DIRI) were present. Only in the presence of either dysfunctional attitudes (DAS) or excessive reassurance seeking alone (DIRI) did anxious adult attachment (ANX) emerge as a significant predictor of depressive symptoms (BDI-II) at T1 (See Table 12).

#### *Hypothesis 7*

Since the previous model in hypothesis six was not fully supported, analyses were not conducted for hypothesis seven. Therefore, the effects of negative life events (NLEQ) were not tested within the comprehensive model

## Chapter Four

### Discussion

The current study sought to examine the relationship between dysfunctional attitudes, excessive reassurance seeking, and attachment in the etiology of depression by integrating Beck's cognitive vulnerability theory, Bowlby's attachment theory, and Coyne and Joiner's theories on reassurance seeking. Undergraduate psychology students completed measures of parental attachment, romantic attachment about self and partner, dysfunctional attitudes, reassurance seeking and depression. Their romantic partners completed a measure of romantic attachment about self and partner as well. Approximately six weeks later, undergraduate psychology participants were administered the measures a second time and a measure of negative life events.

With respect to the present study's sample, significant gender differences were found for the partner report of anxious, adult attachment at T1 and for the self-report of the Dysfunctional Attitudes Scale at T1 and T2. In other words, at T1, males rated their partners significantly higher on anxious attachment than females, which may reflect a stereotype in which women are seen as more anxious in their relationships than men. Males also scored significantly higher than females on the Dysfunctional Attitudes Scale at T1 and T2. Previous research has either not reported or not shown consistent gender differences on the Dysfunctional Attitudes Scale (Hedlund & Rude, 1995; Nelson et al., 1992; Oliver & Baumgart, 1985). Nevertheless, in the present study, males did not differ significantly from females on their depression scores, which suggest that the gender difference on the Dysfunctional Attitudes Scale did not have a significant effect on the results of this study. T1 and T2 differences were found as well. Anxious attachment

ratings and excessive reassurance seeking ratings were higher at T1 than at T2, which could reflect the participants becoming more comfortable in their current relationships or regression to the mean. Finally, analyses indicated that individuals who did not complete the study did not have significantly higher depression scores or significantly higher scores on the Dysfunctional Attitudes Scale than individuals who did complete the study.

Hypothesis one, which proposed that both parental and adult, romantic attachment are correlated with and predictive of depressive symptoms at T1 and T2, was only partially supported. The correlations and main effects for the care dimension of the parental attachment measure and for the anxiety scale of the adult, romantic attachment measure at T1 provided support for this hypothesis. However, neither of these scales was a significant predictor of depressive symptoms at T2. In addition, correlations and main effects for the overprotection dimension of the parental attachment measure and the avoidance scale of the adult, romantic attachment measure were not significant with the exception of a small correlation between T1 depressive symptoms and the overprotection dimension. However, due to some of the limitations of stepwise analysis, further analyses should be conducted to determine if these variables truly have no influence at all on depressive symptoms.

Several points can be taken from these results. First, the cross-sectional results suggest that when the caretaker is perceived as less caring, the individual is more likely to have a higher level of depressive symptoms. This is consistent with Bowlby's theory (1977). Bowlby (1977) proposed that individuals who had non-responsive and rejecting parents were likely to view themselves as unworthy of care (negative model of self) and thus, be susceptible to depression and anxiety. Previous research has also found an

association between parental care as assessed by the Parental Bonding Instrument and depressive symptoms (Difilippo & Overholser, 2002; Harris & Curtin, 2002; Ingram & Ritter, 2000; Randolph & Dykman, 1998; Shah & Waller, 2000; Whisman & Kwon, 1992).

The results from the cross-sectional analyses also suggest that parental overprotection is not a significant predictor of current levels of depression. Previous research has demonstrated conflicting evidence regarding the role of parental overprotection in depressive symptoms. While some studies have found that both parental care and parental overprotection predict depressive symptoms (Shah & Waller, 2000; Whisman & Kwon, 1992), other studies have found that parental care alone predicts depressive symptoms (Difilippo & Overholser, 2002; Ingram & Ritter, 2000).

Nevertheless, Whisman and Kwon's study (1992) found only a small proportion of variance explained by parental overprotection in predicting depressive symptoms. In addition, while Shah and Waller (2000) found that both parental care and paternal overprotection were related to depressive symptoms in a group of depressed outpatients, parental care alone was related to depressive symptoms in a non-depressed group. Since the present study's participants were from an undergraduate population and on average were not clinically depressed, the lack of an association between overprotection and depressive symptoms is consistent with Shah and Waller's (2000) study as well as the majority of previous research. Thus, this study supports the hypothesis that parental care is more useful to assess as a vulnerability factor for depression than parental overprotection, especially when assessing a relatively non-depressed population.

Another important finding from this study's cross-sectional analyses was that the individual's level of anxious attachment, as measured by the adult, romantic attachment measure, was a predictor of current depressive symptoms, while his/her level of avoidant attachment was not. Given that the care dimension of the parental attachment measure and the anxious scale of the adult attachment measure were correlated for this study, this finding was not surprising. However, these results conflict with Difilippo and Overholser's (2002) research. These researchers utilized the same measure of adult attachment, but found that avoidant attachment was related to depressive symptoms while anxious attachment was not (Difilippo & Overholser, 2002). One possible explanation for this discrepancy is that the participants in their study were adult psychiatric inpatients and were primarily women, while the present study was based on an undergraduate sample and had almost equal numbers of men and women. In addition, the avoidant attachment scores in the present study were lower on average than the avoidant attachment scores in Difillipo and Overholser's (2002) study. On the other hand, other researchers who used undergraduate and community samples have supported the connection between a negative model of self (anxious attachment) and depressive symptoms (Carnelly et al., 1994; Murphy & Bates, 1997). Thus, further research is needed to determine if the influence of adult, romantic attachment and gender differ in inpatient versus community populations. Perhaps, when the individuals are in an inpatient setting and are, as a consequence, dependent upon others for their wellbeing, their perception of how available and supportive others are is more important to their depressive symptoms than their view of self. In addition, having an avoidant attachment style may impact their

relationships negatively in general, which could lead to more stress, less social support and greater vulnerability to depression.

Cross-sectional analyses also indicated that perceived anxious attachment accounted for more of the variance in predicting depressive symptoms than perceived low parental care, which supported hypothesis one. Bowlby (1982) left room in his theory for the possibility of attachment to change over time especially, when the individual is confronted with several rejecting environments. Furthermore, Weinfield, Sroufe, and Egeland (2000) found no significant continuity between infant and adult attachment in a high-risk sample. Therefore, if attachment styles can change over time due to changing circumstances and relationships, the more current attachment style, adult attachment, would be expected to impact the individual more than their parental attachment. The results from this study support this expectation.

Interestingly, the previous results for both parental care and anxious attachment were not found for T2 depressive symptoms, when initial levels of depression were controlled. If these results had been found, greater support would have been provided for the hypothesis that attachment is vulnerability factor for depression. Without longitudinal support, the directionality of the variables is unable to be determined. One possible explanation for the lack of longitudinal findings is that the six-week time period between sessions was not sufficient. Even though research testing cognitive vulnerability factors for depression typically uses a 6-week interval design, research that has longitudinal findings for the link between attachment and depression usually had longer follow-up periods (Hammen et al., 1995; Whiffen et al., 2001). For example, Hammen and colleagues (1995) used 6-month and 1-year follow-up periods in assessing the

relationship between attachment and depressive symptoms, while Whiffen and colleagues (2001) used a 6-month interval. In addition, Roberts and colleagues (1996) who utilized a 6 to 8 week time interval between sessions found that attachment was not a direct contributor to depressive symptoms at T2 after controlling for initial levels of depression. Although the lack of longitudinal findings might also suggest that attachment is an artifact of current mood, Haaga and colleagues (2002), as noted, performed a mood induction task and found that the two groups, mood induction and control, did not differ significantly in their styles of attachment. Therefore, further research comparing time periods between sessions for the connection between insecure attachment and depression is needed.

Overall, the results for hypothesis one indicate that among the subtypes of parental and adult attachment studied, anxious adult attachment is the most parsimonious predictor of current depressive symptoms. Hypothesis two examined the influence of other perceptions of adult attachment to determine if it added predictive ability for the individual's depressive symptoms. Results indicated that the self and other (romantic partner) perceptions of an individual's romantic attachment style were related. However, the other's perception of the individual's attachment style did not significantly correlate with the individual's depressive symptoms. This conflicts with previous research (Besser & Priel, 2003). Besser and Priel (2003) found that spouse reported model of self and others moderated the effects of self-reported model of self and others on depressive symptoms. In other words, positive perceptions by the spouse acted as a buffer against the individual's perceptions of self and others on depressive symptoms (Besser & Priel, 2003). While the present study did not specifically test a buffering model, another

possible explanation for the discrepancy between this study's findings and Besser and Priel's (2003) findings is a difference in the population sampled. While the majority of the present sample was single and the average time dating was approximately 25 months, all of the participants in Besser and Priel's (2003) study were in their first marriage and had been married on average for 15 years. Therefore, the duration and seriousness of the relationship may impact the influence of the other's perceptions on the individual's depressive symptoms.

Griffin and Bartholomew (1994) also compared self and other perceptions of attachment style and their impact on self-esteem. Griffin and Bartholomew (1994) found that for men, other rated attachment style did not significantly predict self-esteem, while significance was found for women. Nevertheless, when the self and other rated attachment styles were tested simultaneously for women, the partner's perception did not significantly impact the woman's self-esteem (Griffin & Bartholomew, 1994). Therefore, Griffin and Bartholomew's (1994) findings appear to support the present study's conclusions in which other reported attachment style does not significantly impact the individual's current depressive symptoms.

Overall, the present study's findings suggest that the partner's perception of the individual's internal working model of self and others has no significant impact on the individual's depressive symptoms. Furthermore, regardless of which report is more "objectively" accurate, the individual's self-rated attachment style seems to be more important to assess as a vulnerability factor for depression. Depression has often been viewed as an internalizing disorder. In addition, internal factors such as a negative cognitive style have been identified as vulnerability factors for depression (eg.,



Abramson et al., 1999; Hedlund & Rude, 1995; Ingram & Ritter, 2000; Joiner et al., 1999). Perhaps the individual's self-rated attachment style is more reflective of his/her inner thoughts than his/her partner's rating and as a result, plays a more significant role in his/her depressive symptoms. At the same time, more research is needed to determine if the length of the relationship is an important factor on how the partner's perception of the individual's attachment style influences the individual's depressive symptoms.

Results for hypothesis two indicated that other perceptions of attachment did not significantly affect the individual's depressive symptoms. Hypothesis three, which proposed that the romantic partner's attachment style significantly impacts the individual's depressive symptoms, was also not supported. This finding was inconsistent with previous research (Whiffen et al., 2001). Whiffen and colleagues (2001) demonstrated that the husbands' dismissing attachment style was associated with the maintenance of their wives' depressive symptoms, while the husbands' attachment security was related to symptom reduction. A potential reason for these conflicting findings was again a difference in population sampled. The participants in Whiffen and colleagues' (2001) study were couples that had been married for 12 years on average, while the majority of the present sample was single and had been dating for approximately 25 months.

Therefore, while this study suggests that the partner's attachment style does not significantly influence the individual's depressive symptoms, relationship longevity and seriousness may have played a role in this lack of findings and should be delineated further in future studies. Perhaps, when the relationship is well established, the partner's attachment styles and subsequent behaviors have a greater influence on the individual's

depressive symptoms. The present study did not have a sufficient sample size of married couples to conduct this analysis.

Thus far, results have demonstrated that among the different types of attachment styles studied, self-reported anxious, adult romantic attachment is the most parsimonious predictor of concurrent depressive symptoms. Longitudinal hypotheses were not supported. As a result of the incremental nature of the study's hypotheses, hypothesis four, which proposed that dysfunctional attitudes mediate the relationship between attachment and depressive symptoms, only examined the relationship between anxious adult attachment, dysfunctional attitudes and depressive symptoms at T1. Cross-sectional results demonstrated the partial mediation of the relationship between anxious, adult attachment and depressive symptoms by dysfunctional attitudes. Reinecke and Rogers (2001) and Roberts and colleagues (1996) found similar results utilizing different measures of adult attachment in clinical and non-clinical populations respectively.

These results suggest that anxious adult attachment has a significant relationship with both dysfunctional attitudes and depressive symptoms. Furthermore, the effect of anxious adult attachment on depressive symptoms is partially accounted for by its relationship to dysfunctional attitudes. In other words, an individual with an anxious adult attachment style may be more vulnerable to developing depressogenic cognitions, which in turn leave the individual vulnerable to depression. In this conceptualization, depressogenic cognitions are proximal factors in depressive symptoms, while attachment style is a distal factor. These conclusions would support the addition of an interpersonal component (i.e., insecure attachment) to the vulnerability models of depression. However, since the relationship between attachment and depressive symptoms was not

completely accounted for by dysfunctional attitudes, and longitudinal hypotheses were not supported, other factors may mediate this relationship, such as excessive reassurance seeking. In addition, anxious adult attachment may make a unique contribution to depressive symptoms. The following hypotheses were designed to assess this.

Hypothesis five assessed excessive reassurance seeking as a mediator of anxious, adult attachment and depressive symptoms at T1. Cross-sectional results found evidence for the partial mediation of anxious, adult attachment and depressive symptoms by excessive reassurance seeking. Results from Davilla's (2001) study also indicated a significant relationship between anxious attachment and excessive reassurance seeking and found the two variables to be distinct, interpersonal constructs. Furthermore, Shaver, Schachner, and Mikulincer (2005), in a study published after the completion of the present study, found excessive reassurance seeking to be significantly correlated with anxious attachment as assessed by the ECRQ in young, unmarried couples. However, Shaver and colleagues (2005) also found that when both anxious attachment and excessive reassurance seeking were tested simultaneously, excessive reassurance was no longer a significant predictor of depressive symptoms. Shaver and colleagues (2005) conclude from their findings that excessive reassurance seeking is a component of anxious attachment rather than a distinct, interpersonal construct. This conflicts with the present study's findings, in which both variables remained significant predictors of depressive symptoms when tested simultaneously. One potential explanation for this discrepancy is that Shaver and colleagues (2005) asked their participants to concentrate on their current relationship when filling out the measure on excessive reassurance seeking whereas the current study did not. In addition, the mean score for excessive

reassurance seeking in Shaver and colleagues' (2005) study was slightly higher than the mean score for the current study.

Therefore, the present study's findings suggest that excessive reassurance seeking is related to both anxious, adult attachment and depressive symptoms. In addition, the effect of anxious adult attachment on depressive symptoms is partially accounted for by its relationship to excessive reassurance seeking. An individual with an anxious adult attachment style may be more vulnerable to excessively seeking reassurance from others, which in turn leaves the individual vulnerable to depression.

The next step in the analysis, after demonstrating that both dysfunctional attitudes and excessive reassurance seeking act separately as partial mediators of the relationship between anxious, adult attachment and depression, was to test them simultaneously within a comprehensive model. Cross-sectional results indicated that when these variables were assessed simultaneously, the two-way product interaction between dysfunctional attitudes and excessive reassurance seeking emerged as the significant predictor of depressive symptoms. This suggests that insecure attachment does not add predictive ability when both dysfunctional attitudes and excessive reassurance seeking are present. However, in the presence of either dysfunctional attitudes or excessive reassurance seeking alone, anxious adult attachment appears to act as an additional vulnerability factor for depression.

Two points can be taken from these results. First, dysfunctional attitudes and excessive reassurance seeking appear to be proximal vulnerability factors to depression that, when simultaneously present, increase an individual's vulnerability to depression. While previous research has independently identified both dysfunctional attitudes and

excessive reassurance seeking as vulnerability factors to depression (e.g., Abramson et al., 1999; Joiner et al., 1992, Joiner et al., 1999; Joiner & Metalsky, 1995), the present study demonstrates that the combination of the two increases an individual's risk more so than either alone. The second point that can be taken from these results and from theory is that anxious adult attachment seems to be a more distal vulnerability factor for depression that may lead to the development of dysfunctional attitudes and excessive reassurance seeking. Therefore, having an internal working model of the self as negative based on interpersonal interactions may be associated with the development of dysfunctional attitudes and the tendency to seek reassurance from others, which in turn, can lead to depressive symptoms.

Several limitations with respect to design, measurement and generalizability existed in this study. For example, since this was not a true experimental design, conclusions about the causal relationship between insecure attachment, dysfunctional attitudes, excessive reassurance seeking and vulnerability to depression cannot be established. Furthermore, the 6-week time period between sessions may not have been adequate to examine insecure attachment as a vulnerability factor for depression. Although cognitive vulnerability research has typically used a 6-week time period, previous longitudinal research assessing attachment has used longer time periods. There has also been some controversy as to exactly what self-report measures of adult attachment really assess, attachment or social cognition (Reinecke & Rogers, 2001). In addition, the college student sample utilized may not generalize to the general population or to a clinical sample.

Nevertheless, the results from this study have contributed to the field of psychology in several ways. First, this study has provided further support for the connection between insecure attachment and dysfunctional attitudes in the development of depressive symptoms. Having an anxious attachment style appears to be related to negative thoughts about the self, world and future that leaves an individual vulnerable to depressive symptoms. While Roberts and colleagues (1996)'s study found full mediation for the relationship between insecure attachment and depressive symptoms by dysfunctional attitudes, the present study supports other research in which dysfunctional attitudes has acted as a partial mediator (Reinecke & Rogers 2001; Whisman & McGarvey, 1995).

Second, this study demonstrated that excessive reassurance acts as a partial mediator in the relationship between insecure attachment and depressive symptoms, which builds upon the research by Davilla (2001). These results suggest that including an interpersonal component to cognitive therapy may be an important factor for treating depressive symptoms. In addition, the combination of excessive reassurance seeking and dysfunctional attitudes increased an individual's vulnerability to depression more so than either vulnerability factor alone.

This study did not provide support for the influence of other perceptions and partner attachment styles in the development and maintenance of the individual's depressive symptoms. These results were unexpected. Humans are naturally social creatures and are constantly interacting with others and with the environment. While depression has often been conceptualized as an internalizing disorder, others may still influence an individual's ways of thinking and consequently their depressive symptoms.

The lack of findings could be due to the population sampled and should be delineated further.

The results from this study have pointed to future directions in this area of research. For example, relationship longevity and perceived seriousness may play a role in the influence of other perceptions and partner's attachment styles on the individual's depressive symptoms. Therefore relationships of differing time periods could be compared to elucidate this connection further. Spouses could also be compared with life-long friends.

Second, results may vary based on whether the sample is clinically depressed versus non-depressed, but at high-risk. Comparing these populations may elucidate differences and similarities. In addition, longer follow-up sessions and a multi-method approach such as self-report measures and an attachment interview could address methodological problems in the current study.

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## Tables

Table 1

*Different Conceptualizations/Nomenclatures for Attachment Styles***Ainsworth et al., 1978 (infant attachment) and Hazan & Shaver, 1987 (adult attachment)**

1) Secure

2) Insecure

*Subtypes:*

a) Anxious-Ambivalent

b) Avoidant

**Bartholomew & Horowitz, 1991 and Brennan et al., 1998 (adult attachment)**

1) Secure

-positive model of self (low anxiety)

-positive model of others (low avoidance)

2) Insecure

*Subtypes:*

a) Preoccupied

-negative model of self (high anxiety)

-positive model of others (low avoidance)

-conceptually similar to anxious-ambivalent attachment

b) Dismissing

-positive model of self (low anxiety)

-negative model of others (high avoidance)

-conceptually similar to avoidant attachment

c) Fearful

-negative model of self (high anxiety)

-negative model of others (high avoidance)

-conceptually similar to avoidant attachment



Table 2  
*Means and Standard Deviations for Study Measures, Excluding Demographic Variables*

Variable	Mean	Standard Deviation	N
1. AVOID1	2.35	.95	250
2. AVOID2	2.26	.98	120
3. ANX1	3.30	1.15	250
4. ANX2	3.20	1.19	120
5. AVOIDP1	2.56	1.10	251
6. AVOIDP2	2.46	1.22	120
7. ANXP1	3.63	1.25	251
8. ANXP2	3.36	1.23	120
9. DIRITOT1	2.68	1.31	144
10. DIRITOT2	2.53	1.42	120
11. PBICARE1	29.23	7.70	145
12. PBICARE2	29.45	7.57	120
13. PBIOVER1	11.66	7.36	145
14. PBIOVER2	10.92	7.03	120
15. DASTOT1	109.08	24.07	144
16. DASTOT2	107.49	26.50	120
17. BDITOT1	8.32	7.18	142
18. BDITOT2	7.51	7.43	120
19. NLEQ2	38.37	25.71	120

All variable names followed by 1 and 2 indicate scores from T1 and T2 respectively; AVOID= Avoidance scale from the Experiences in Close Relationships Questionnaire (ECRQ), Self-report; ANX= Anxiety scale from ECRQ, Self-report; AVOIDP= Avoidance scale from the ECRQ, Partner-report; ANXP= Anxiety scale from ECRQ, Partner-report; DIRITOT= Depressive Interpersonal Relationships Inventory- Reassurance Seeking Sub-Scale; PBICARE= Care dimension of the Parental Bonding Instrument; PBIOVER= Overprotection dimension of the Parental Bonding Instrument; DASTOT= Dysfunctional Attitudes Scale; BDITOT= Beck Depression Inventory- II; NLEQ= Negative Life Events Questionnaire. N=250 includes both participants and significant others. N=145 is participants only and N=120 is T2 returning participants.

Table 3  
*Significant Group Differences for Males and Females*

Variable	Group Mean for Males	Group Mean for Females	<i>t</i>	<i>df</i>
ANXP (T1)	3.89	3.38	3.28**	248
DAS (T1)	116.36	105.88	2.45*	142
DAS (T2)	116.79	103.81	2.47*	118

Note: ANXP= Anxiety Scale from the Experiences in Close Relationship Questionnaire (Partner-Report); DAS= Dysfunctional Attitudes Scale.

\* $p < .05$ . \*\* $p < .01$ .

Table 4

*Zero-Order Correlations Among Study Variables Excluding Demographic Variables*

Variables	Variables				
	1	2	3	4	5
1. AVOID1					
2. AVOID2	.693**				
3. ANX1	.347**	.337**			
4. ANX2	.207*	.236**	.761**		
5. AVOIDP1	.592**	.498**	.526**	.306**	
6. AVOIDP2	.419**	.563**	.524**	.629**	.564**
7. ANXP1	.383**	.243**	.338**	.408**	.186**
8. ANXP2	.418**	.461**	.456**	.425**	.324**
9. DIRITOT1	.029	.139	.451**	.575**	.181*
10. DIRITOT2	.049	.206*	.442**	.621**	.161
11. PBICARE1	-.143	-.152	-.273**	-.256**	-.132
12. PBICARE2	-.213*	-.255**	-.277**	-.352**	-.109
13. PBIOVER1	.176*	.025	.238**	.290**	.183*
14. PBIOVER2	.206*	.058	.389**	.436**	.243**
15. DASTOT1	.393**	.314**	.507**	.491**	.306**
16. DASTOT2	.345**	.359**	.490**	.579**	.307**
17. BDITOT1	.132	.147	.413**	.423**	.066
18. BDITOT2	.028	.210*	.305**	.491**	-.017
19. NLEQ2	.296**	.406**	.450**	.550**	.297**

Table 4 continued

*Zero-Order Correlations Among Study Variables Excluding Demographic Variables*

Variables	Variables				
	6	7	8	9	10
1. AVOID1					
2. AVOID2					
3. ANX1					
4. ANX2					
5. AVOIDP1					
6. AVOIDP2					
7. ANXP1	.229*				
8. ANXP2	.189*	.570**			
9. DIRITOT1	.326**	.204*	.350**		
10. DIRITOT2	.378**	.162	.295**	.741**	
11. PBICARE1	-.209*	-.214*	-.212*	-.114	-.162
12. PBICARE2	-.343*	-.243**	-.244**	-.166	-.203*
13. PBIOVER1	.143	.169*	.079	.136	.155
14. PBIOVER2	.257**	.161	.177	.199*	.232*
15. DASTOT1	.368**	.377**	.315**	.383**	.453**
16. DASTOT2	.459**	.314**	.414**	.384**	.464**
17. BDITOT1	.170	.228**	.232*	.354**	.420**
18. BDITOT2	.234*	.175	.301**	.383**	.480**
19. NLEQ2	.481**	.313**	.417**	.425**	.487**

Table 4 continued

*Zero-Order Correlations Among Study Variables Excluding Demographic Variables*

Variables	Variables				
	11	12	13	14	15
1. AVOID1					
2. AVOID2					
3. ANX1					
4. ANX2					
5. AVOIDP1					
6. AVOIDP2					
7. ANXP1					
8. ANXP2					
9. DIRITOT1					
10. DIRITOT2					
11. PBICARE1					
12. PBICARE2	.884**				
13. PBIOVER1	-.433**	-.379**			
14. PBIOVER2	-.442**	-.470**	.834**		
15. DASTOT1	-.266**	-.313**	.212*	.246**	
16. DASTOT2	-.267**	-.398**	.143	.264**	.805**
17. BDITOT1	-.214*	-.170	.211*	.216*	.413**
18. BDITOT2	-.241**	-.325**	.169	.220*	.334**
19. NLEQ2	-.328**	-.393**	.261**	.343**	.460**

Table 4 continued

*Zero-Order Correlations Among Study Variables Excluding Demographic Variables*

Variables	Variables			
	16	17	18	19
1. AVOID1				
2. AVOID2				
3. ANX1				
4. ANX2				
5. AVOIDP1				
6. AVOIDP2				
7. ANXP1				
8. ANXP2				
9. DIRITOT1				
10. DIRITOT2				
11. PBICARE1				
12. PBICARE2				
13. PBIOVER1				
14. PBIOVER2				
15. DASTOT1				
16. DASTOT2				
17. BDITOT1	.299**			
18. BDITOT2	.391**	.690**		
19. NLEQ2	.534**	.513**	.591**	

All variable names followed by 1 and 2 indicate scores from T1 and T2 respectively; AVOID= Avoidance scale from the Experiences in Close Relationships Questionnaire (ECRQ), Self-report; ANX= Anxiety scale from ECRQ, Self-report; AVOIDP= Avoidance scale from the ECRQ, Partner-report; ANXP= Anxiety scale from ECRQ, Partner-report; DIRITOT= Depressive Interpersonal Relationships Inventory- Reassurance Seeking Sub-scale; PBICARE= Care dimension of the Parental Bonding Instrument; PBIOVER= Overprotection dimension of the Parental Bonding Instrument; DASTOT= Dysfunctional Attitudes Scale; BDITOT= Beck Depression Inventory- II; NLEQ= Negative Life Events Questionnaire.

Table 5

*Summary of Multiple Regression Analyses for Parental Attachment (PBI) Predicting Depressive Symptoms (BDI-II) at Time 1*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	<i>Partial R</i>
Stepwise					
Step 1					
PBICARE	6.713*	.046	.046	-.214	-.214*
<i>Excluded Variable</i>					
PBIOVER				.145	.134

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; PBICARE= care dimension of the parental attachment measure (PBI); PBIOVER= overprotection dimension of the parental attachment measure (PBI)

\*p<.05

Table 6

*Summary of Multiple Regression Analyses for Parental Attachment (PBI) Predicting Depressive Symptoms (BDI-II) at Time 2 While Controlling for Time 1 Symptoms*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	$PR$
Stepwise					
Step 1					
T1 BDI-II	105.264**	.476	.476	.690	.690**
Step 2					
Excluded Variables					
PBICARE				-.109	-.147
PBIOVER				.006	.008

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; PBICARE= care dimension of the parental attachment measure (PBI); PBIOVER= overprotection dimension of the parental attachment measure (PBI)

\* $p < .05$ ; \*\* $p < .01$



Table 7

*Summary of Multiple Regression Analyses for Adult Attachment (ECRQ) Predicting Depressive Symptoms (BDI-II) at Time 1*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	$PR$
Stepwise					
Step 1					
ANX	28.541**	.170	.170	.413	.413**
<i>Excluded Variables</i>					
AVOID				-.033	-.034

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; ANX= anxiety scale of the adult attachment measure (ECRQ); AVOID= avoidance scale of the adult attachment measure (ECRQ)  
\* $p < .05$ ; \*\* $p < .01$

Table 8

*Summary of Multiple Regression Analyses for Adult Attachment (ECRQ) Predicting Depressive Symptoms (BDI-II) at Time 2 While Controlling for Depressive Symptoms at Time 1*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	$PR$
Stepwise					
Step 1					
T1 BDI-II	105.264**	.476	.476	.690	.690**
Step 2					
Excluded Variables					
ANX				.043	.055
AVOID				-.050	-.068

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; ANX= anxiety scale of the adult attachment measure (ECRQ); AVOID= avoidance scale of the adult attachment measure (ECRQ)  
\* $p < .05$ ; \*\* $p < .01$

Table 9

*Summary of Multiple Regression Analyses for the Anxiety Scale of the Adult Attachment Measure (ANX) and the Care Dimension of the Parental Attachment Measure (PBICARE) Predicting Depressive Symptoms (BDI-II) at Time 1*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	$PR$
Stepwise					
Step 1					
ANX	28.541**	.170	.170	.413	.413**
<i>Excluded Variables</i>					
PBICARE				-.113	-.119

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; ANX= anxiety scale of the adult attachment measure (ECRQ); PBICARE= care dimension of the parental attachment measure (PBI)

\* $p < .05$ ; \*\* $p < .01$

Table 10

*Summary of Multiple Regression Results Testing Dysfunctional Attitudes as a Mediator for Adult Attachment and Depressive Symptoms at Time 1*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	$PR$
Stepwise					
Regression #1 (DAS as Criterion)					
ANX	48.790**	.257	.257	.507	.507**
Regression #2 (T1 BDI-II as Criterion)					
ANX	28.541**	.170	.170	.413	.413**
Regression #3 (T1 BDI-II as Criterion)					
Step 1					
ANX	28.541**	.170	.170	.413	.413**
Step 2					
ANX	9.957**	.226	.056	.272	.257**
DAS				.275	.259**

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; ANX= anxiety scale of the adult attachment measure (ECRQ); DAS= Dysfunctional Attitudes Scale

\* $p < .05$ ; \*\* $p < .01$

Table 11

*Summary of Multiple Regression Results Testing Reassurance Seeking as a Mediator for Adult Attachment and Depressive Symptoms at Time 1*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	$PR$
Stepwise					
Regression #1 (DIRI as Criterion)					
ANX	36.055**	.204	.204	.516	.451**
Regression #2 (T1 BDI-II as Criterion)					
ANX	28.541**	.170	.170	.413	.413**
Regression #3 (T1 BDI-II as Criterion)					
Step 1					
ANX	27.305**	.165	.165	.406	.406**
Step 2					
ANX	6.642*	.204	.039	.312	.300**
DIRI				.218	.215*

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; ANX= anxiety scale of the adult attachment measure (ECRQ); DIRI= Depressive Interpersonal Relationships Inventory-Reassurance Seeking Subscale

\* $p < .05$ ; \*\* $p < .01$

Table 12  
*Summary of Comprehensive Model for Predicting Depressive Symptoms at T1*

Predictor Variables	$F\Delta$	$R^2$	$R^2\Delta$	$\beta$	$PR$
Enter					
Step 1	14.636**	.244	.244		
ANX				.211	.195*
DAS				.238	.225**
DIRI				.170	.170*
Step 2	2.976*	.291	.047		
ANX				.386	.076
DAS				-.237	-.070
DIRI				-.811	-.150
DIRIxDAS				1.445	.206*
DIRIxDAS				-.211	-.041
DASxANX				-.121	-.015
Step 3	.390	.294	.002		
ANX				.008	.001
DAS				-.516	-.084
DIRI				-1.571	-.104
DIRIxDAS				2.433	.124
DIRIxDAS				.814	.042
DASxANX				.435	.034
DIRIxDASxANX				-1.288	-.054

Note: BDI-II=Beck Depression Inventory, 2<sup>nd</sup> edition; ANX= anxiety scale of the adult attachment measure (ECRQ); DIRI= Depressive Interpersonal Relationships Inventory-Reassurance Seeking Subscale; DAS= Dysfunctional Attitudes Scale

\* $p < .05$ ; \*\* $p < .01$

Figures

*Figure 1*  
*Mediation Model (Baron & Kenny, 1986)*

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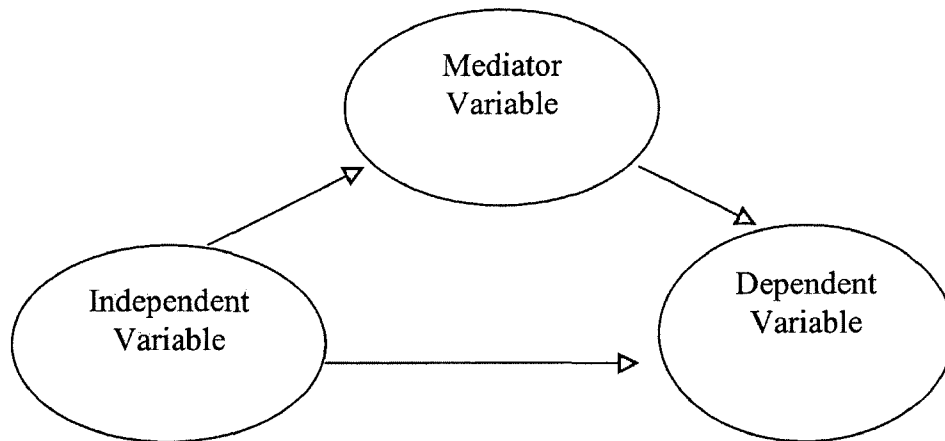
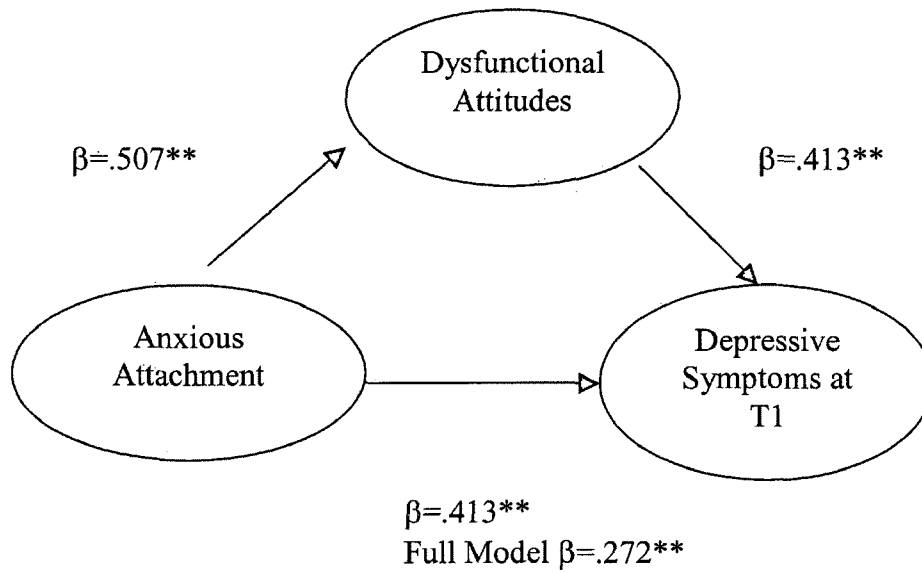


Figure 2

*Dysfunctional Attitudes as a Mediator of Anxious, Adult Attachment and Depressive Symptoms at Time 1*

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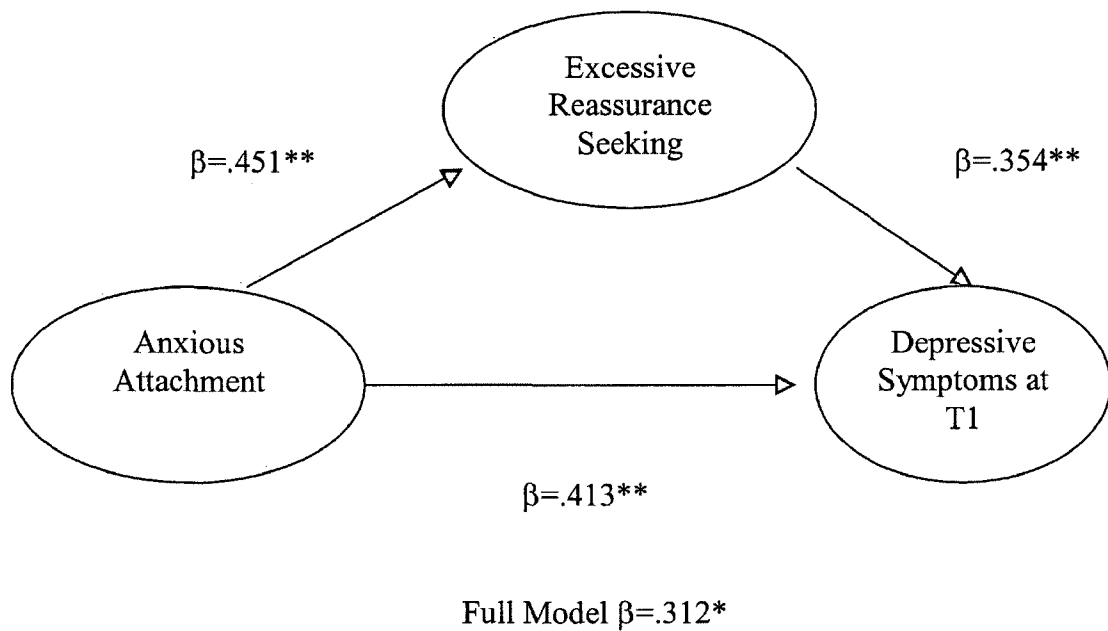


\*\*= $p < .01$



Figure 3  
*Excessive Reassurance Seeking as a Mediator of Anxious, Adult Attachment and Depressive Symptoms at T1*

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\*= $p < .05$ , \*\*= $p < .01$