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**Understanding the Relation Between Attachment and Depression
in Adolescence**

Stephanie Kim Margolese

A Thesis

in

The Department

of

Psychology

**Presented in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy of Arts at
Concordia University
Montreal, Quebec, Canada**

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ABSTRACT

Understanding the Relation Between Attachment and Depression in Adolescence

Stephanie Kim Margolese, Ph.D.
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Previous research has established a link between insecure attachment and depression in adolescence. However, little is known about the mechanisms that may mediate this relation or the contexts in which this association occurs. One objective of this study was to examine whether adolescents who were more anxious or avoidant in their attachment orientation were more sensitive to interpersonal versus achievement-related stress, made negative attributions and used a ruminative coping strategy in response to stress, and as such, reported more depressive symptoms. Given that the nature of close relationships changes during adolescence, the second objective was to investigate (1) the relative importance of working models of specific attachment figures (i.e., mother, father, best friend, and romantic partner) in the prediction of depression; and (2) the existence of target-specific pathways to depression following relational stress. It was expected that the paths to depression would differ depending on the type of stress and attachment figure under consideration.

A total of 134 adolescents ($n = 88$ girls; M age = 16.95 years; $SD = .74$) completed attachment questionnaires, a depression inventory, and a computer task consisting of hypothetical interpersonal and achievement-related vignettes and questions.

Tests of the first objective revealed that adolescents' appraisals of the stressfulness of interpersonal and achievement-related situations varied as a function of

attachment orientation. Adolescents high on anxiety interpreted all stresses in terms of interpersonal rejection. Adolescents high on avoidance interpreted achievement problems as a reflection of shortcomings of the self, but perceived interpersonal stresses similarly to their anxious counterparts.

Insecure attachment relationships with romantic partner and mother, for girls, were uniquely predictive of depression. Adolescents' tendency to make negative attributions in response to stresses fully explained the relation between attachment to these persons and depression. Adolescents were found to ruminate when confronted with stresses involving romantic partner, which was also associated with depression.

Results support cognitive models of depression and underscore the role of negative attributions in depression. Furthermore, the pathways to depression were found to be complex and to depend on the types of stress, who is involved in the stress, and the quality of the attachment relationship.

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Understanding the Relation Between Attachment and Depression in Adolescence

Depression stands out among the psychological problems of adolescence, both for its impact on adjustment and its long-term effects on adult psychological functioning (Petersen et al., 1993). In general, depressive symptoms increase substantially during adolescence, with between 15% to 60% of adolescents reporting depressed mood and a subgroup of these adolescents manifesting a depressive syndrome (Compas, Orosan, & Grant, 1993). Specifically, Radloff (1991) found that depressed mood increased dramatically between the ages of 13 and 15 years, peaked at approximately 17 to 18 years, and then subsequently declined to adult levels. High school adolescents who have experienced an episode of depression have been found to have a significant risk of relapse (18.4%) one-year later (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993). Moreover, adolescents reporting high levels of internalizing symptoms were found to be at increased risk for the subsequent first onset of a mood disorder (Rueter, Scaramella, Wallace, & Conger, 1999). By age 14 to 15 years, a gender difference emerges in which girls are found to experience more depressive disorders and mood than are boys (Allgood-Merten, Lewinsohn, & Hops, 1990; Petersen et al., 1993). This gender difference that begins in early adolescence persists throughout adolescence (Lewinsohn et al., 1993) and adulthood (Petersen et al., 1993).

Considering the significant proportion of adolescents experiencing depressed mood and/or depression, it is important to examine individual differences in the vulnerability to depression. Attachment theory provides a useful framework for examining this issue. Positive early attachment relationships are believed to be crucial for

children's healthy social-emotional development and to continue to influence adjustment throughout adolescence (Kobak & Sceery, 1988) and adulthood (e.g., Main, Kaplan, & Cassidy, 1985). Not surprisingly, children who have poor quality relationships with their caregivers are less competent socially and have greater difficulties regulating their emotions (Cassidy, 1994; Main et al., 1985). These children enter adolescence with psychological and social vulnerabilities and hence, are at greater risk for experiencing adjustment difficulties during this period of transition.

This research study focused on increasing the understanding of the relation between the quality of attachment relationships and psychological adjustment, notably depression, in adolescence and the mechanisms that may be mediating the association between attachment and depression. A primary objective was to examine whether individuals with a generalized insecure attachment orientation are more sensitive to interpersonal versus achievement-related stress, negatively appraise stress, use ineffective or maladaptive coping strategies and as a result, experience more depressive symptoms. Given that social networks expand during adolescence and the nature of close relationships changes, a second objective was to assess individual differences in reactions to relationship-specific stressors (i.e., those involving four attachment figures - mother, father, best friend, and romantic partner), and to determine how the processing of these stressors relates to depression.

Attachment Theory and Research: Individual Differences in Working Models

According to attachment theory (Bowlby, 1969, 1973, 1980), humans have an innate need for maintaining relatedness with others for the purposes of protection and survival (Safran, 1990a). Within the first year of life, infants develop attachment

behaviors organized into a system designed to regulate contact with a discriminated person or persons referred to as the attachment figure(s) (Bretherton, 1985). The attachment system is prone to be activated in response to physical or psychological threat, such as during illness, fatigue, or distress. At this time the child may display behaviors, such as crying and calling, that signal the attachment figure to provide protection and soothing and hence, restore the child's sense of security (Bretherton, 1985). Once comforted, the child can use the attachment figure as a secure base from which he/she can explore the environment (Bretherton, 1985). Thus, attachments are comprised of several different components: (1) proximity seeking/separation protest (i.e., the tendency to approach and maintain proximity to an attachment figure and resist separation), (2) safe haven (i.e., turning to the attachment figure for comfort, support, and reassurance), and (3) secure base (i.e., using the attachment figure as a base from which to engage in non-attachment behaviour) (Ainsworth et al., 1978; Bowlby, 1988; Hazan & Zeifman, 1994). The attachment system is thought to operate throughout the lifespan, although the way attachment behaviors are expressed change with development (e.g., approach and contact in infancy versus verbal communication in childhood and adolescence) and new attachments may supplement early ones (Bowlby, 1977).

Bowlby (1969, 1973, 1980) proposed that while all infants become attached to their caregivers, the quality of their attachment relationships will depend on the quality of care that the infant has experienced (Sroufe, 1988). Based on these early infant-caregiver interactions, children will construct initial expectations concerning self, others, and the self-in-relation-to-others that Bowlby (1973) referred to as internal working models. These working models or mental representations center around the regulation and

fulfillment of attachment needs (i.e., the maintenance of proximity and felt security) and are believed to be largely determined by the attachment figure's emotional availability and responsiveness to the child's needs (Bretherton, 1985; Collins & Read, 1994). Given that not all caregivers will respond to their infant's needs in a consistent and loving manner, individual differences in attachment organization and working models are expected. Indeed, Ainsworth and colleagues (Ainsworth, Blehar, Waters, & Wall, 1978) observed infants' nonverbal behavior toward their parent in a series of structured separation and reunion episodes and found that the infant-caregiver relationships could be characterized into one of three different categories: secure, insecure-avoidant, and insecure-ambivalent. Although the manifestation of the attachment behaviors and emotional patterns change with development, comparable attachment styles (referred to as secure, dismissing, and preoccupied) have been identified in adolescence (Kobak & Sceery, 1988) and in adulthood (Collins & Read, 1990; Hazan & Shaver, 1987; Main et al., 1985).

When the primary caregiver responds with sensitivity and consistency to children's signals for proximity, children are likely to develop a working model of others as reliable, warm and trustworthy (Bowlby, 1973). Given that the mental representations evolve from dyadic experience, children's models of self are closely intertwined and likely to be complementary to their models of others (Bowlby, 1973; Bretherton, 1985; Collins & Read, 1994). Hence, children with responsive and loving caregivers are also likely to develop a model of the self as lovable (or worthy of love), competent, and capable of eliciting care. Such children will develop a secure attachment style (Ainsworth et al., 1978). It is also through the attachment relationship that children learn

to regulate their emotions (Cassidy, 1994). Secure children are able to express a range of emotions, flexibly and openly, as these emotions are experienced as useful in alerting the caregiver during times of distress. The caregivers' sensitive response will, in turn, strengthen children's sense of efficacy in modulating different emotional states (Cassidy, 1994). This open affective communication between parents and children is likely to have a positive influence on personality development.

In contrast, if caregivers are cold and rejecting, children may develop an insecure, avoidant attachment style (Ainsworth et al., 1978). Bowlby (1980) proposed that such children adopt a protective defensive strategy of avoidance and detachment in response to having had consistently unmet attachment needs. When exposed to stressful situations, these children suppress their feelings of distress and avoid contact with their caregiver. This avoidance reaction functions to maintain the attachment relationship as the expression of anger associated with rejected attachment behaviors may further alienate the caregiver (Cassidy & Kobak, 1988; Cassidy, 1994; Main, 1981). Thus, emotion expression is minimized in order to lessen the importance of the caregiver as a source of comfort and the apparent need for the attachment relationship in general (Cassidy, 1994). Not surprisingly, following consistent parental rejection, avoidant children are likely to develop a working model of the self as unlovable and incompetent and a working model of others as unreliable and distant. Because of the distrust of others, avoidant children may develop what is known as "compulsive self-reliance" (Bowlby, 1973) or the belief that in order to function in the world they must do so on their own. Thus, an avoidant attachment style is defined by insecurity in others' intentions and a preference for emotional distance. It should be noted that about 20% of babies in American samples fall

into this group (Ainsworth et al., 1978).

When the attachment figure is inconsistent, at times responsive and at other times rejecting, children develop an insecure, anxious-ambivalent attachment style (Ainsworth et al., 1978). In response to perceived psychological or physical threat, these children experience conflict between the desire to approach the attachment figure to be consoled and feelings of anger and resentment toward the caregiver who is not consistently available for support and comfort (Bowlby, 1973). Given that the attachment figure is occasionally responsive, such children may attribute the unreliability of the caregiver to a fault in their own ability to elicit care and their own incompetence. In an attempt to gain the parent's attention and response, anxious-ambivalent children become hypervigilant to signals of distress and maximize their negative emotionality (Cassidy, 1994). These children exaggerate their fearfulness (Ainsworth et al., 1978), heighten the importance of the attachment relationship, and exhibit extreme dependence on the attachment figure (Cassidy, 1994). Considering that they blame themselves for the perceived rejection by others, ambivalent children are likely to develop a working model of the self as unworthy or incompetent and a positive working model of important others.

Bartholomew (1990; Bartholomew & Horowitz, 1991) expanded Bowlby's conceptualization of attachment and viewed attachment patterns as deriving from two dimensions based on an internal model of the self as positive or negative (where the self is seen as worthy of love and support or not) and a model of other as positive or negative (where others are seen as trustworthy and available versus unreliable and rejecting). This conceptualization yielded four possible attachment patterns: (a) secure (positive self, positive other), (b) preoccupied (negative self, positive other), which is similar to the

anxious-ambivalent style, (c) fearful-avoidant (negative self, negative other), and (d) dismissing-avoidant (positive self, negative other). In contrast to the three category model, a history of rejecting or psychologically unavailable attachment figures is believed to result in the formation of one of two types of insecure, avoidant attachment. Fearful-avoidance develops when rejected persons conclude that others are unreliable and uncaring and that they themselves are unlovable and incompetent. These individuals desire social contact and intimacy, but experience a pervasive fear of rejection and perceive themselves as being undeserving of the support of others. Similar to fearful persons, dismissing-avoidant individuals develop a negative working model of others: however, they are able to maintain a positive self-image and a model of self as competent in the face of rejection by distancing themselves and defensively denying any attachment needs. Thus, although both dismissing and fearful persons tend to avoid close relationships, they differ in the importance placed upon others' acceptance, whereby fearful persons are more susceptible to loneliness and depression resulting from interpersonal sources (Bartholomew, 1990).

Bartholomew's (1990; Bartholomew & Horowitz, 1991) model provides a useful framework for examining adolescent and adult attachment orientations. Research has also demonstrated the utility of these four attachment categories in organizing and understanding individual differences in self-concept and in interpersonal functioning (Bartholomew & Horowitz, 1991). Moreover, Bartholomew's 4-category typology has been shown both to correspond systematically and to share the same two underlying dimensions with a 3-category self-report typology (Brennan, Shaver, & Tobey, 1991). Indeed, the two dimensions -- Anxiety (i.e., anxiety about abandonment) that parallels a

more negative model of self, and Avoidance (i.e., discomfort with closeness and dependency) that is closely associated with a more negative model of others – have been found to comprise the empirical and conceptual structure underlying attachment orientations (Brennan, Clark, & Shaver, 1998). Research studies to date, however, have focused primarily on the three main attachment categories rather than on the attachment dimensions. As such, the discussion that follows later deals with attachment styles and specifically, the avoidant type corresponds, for the most part, to both dismissing and fearful persons.

In early childhood, the working models appear to be moderately stable (Main, Kaplan, & Cassidy, 1985), yet they are also open to change if the quality of caregiving changes (Thompson, Lamb, & Estes, 1982; Vaughn, Egeland, Sroufe, & Waters, 1979). With a consistent pattern of caregiving throughout childhood and adolescence, the working models are expected to become solidified and tend to operate automatically and unconsciously (Bowlby, 1979; Collins & Read, 1994). These working models are thought to be carried forward into new relationships. Individuals are expected to assimilate new persons with whom they form bonds into already existing models, despite evidence that the model may be inappropriate (Bowlby, 1979). Thus, the internal working models are believed to shape social experience and influence the interpretations of interpersonal interactions throughout the life span (Bowlby, 1973; Bretherton, 1985).

In sum, working models organize cognitions, affect, and behavior in later relationships as well as guide emotion regulation and shape self-image (Bowlby, 1973; Bretherton, 1985). In addition, mental representations of attachment are likely to become increasingly complex as relationships develop within the family context and outside of

the family (e.g., peers) and as additional opportunities exist to learn about close relationships and the self (Collins & Read, 1994). As such, adult working models may be somewhat modified during the course of ongoing interpersonal transactions with parents, peers, and romantic partners (Hazan & Shaver, 1987); and individuals may, in turn, have different attachment styles in different relationships (Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996; Main & Weston, 1981). Nonetheless, the moderate continuity in attachment styles suggests that maladaptive early parent-child interactions may serve as a template for negative interpersonal patterns and expectancies in later relationships.

Working Models Across Attachment Figures in Adolescence: Links to Adjustment

As social networks expand and increasingly more time is spent with friends and romantic partners, adolescents likely develop several relationships with persons to whom they can turn to fulfill their attachment needs. Indeed, young adults have been found to have approximately five attachment figures, including both secure and insecure attachments with parents, siblings, friends, and romantic partners (Trinke & Bartholomew, 1997). Attachment figures, however, are not treated equivalently and may be differentially targeted for various attachment behaviors. Given that in adolescence compared with childhood, friendships are characterized by greater intimacy, self-disclosure, and mutual responsiveness (Berndt, 1982), some components of attachment, such as proximity seeking and safe haven behaviors, are evident in these relationships. For example, Hazan and Zeifman (1994) found that from early- to mid-adolescence, friends are preferred over parents for their company, and as sources of comfort and emotional support, but parents continue to serve as bases of security. Similarly, other investigators have found that adolescents increasingly use their friends for support and

physical proximity (Furman & Burmester, 1992; Paterson, Field, & Pryor, 1994). These findings are consistent with Sullivan's (1953) theory that adolescents form intimate chumships with peers and same-sex friends in order to satisfy their increasing desire for "consensual validation" and their need for collaborative relationships. Hence, during adolescence and adulthood, attachments become more reciprocal in nature.

The multiple attachments are presumed to be hierarchically arranged with the primary attachment figure at the top. Over the course of development, changes in the structure and content of the hierarchy occur with people added or dropped (Hazan & Zeifman, 1994). Parental figures tend to be permanent members of the hierarchy, although their position changes with the child's development. Bowlby believed that, with the formation of a pair bond in adulthood, the partner assumes the role of primary attachment figure. Likewise, Sullivan (1953) contended that the fulfillment of sexual needs become integrated with intimacy needs through romantic relationships in late adolescence. Thus, romantic partners are not only expected to become key figures in the functioning of the attachment system but also in the caregiving, affiliative, and sexual behavioral systems (Furman & Wehner, 1994). Hazan and Zeifman (1994) found that by ages 15 to 17, peer relationships, particularly romantic ones of two or more years duration, begin to fulfill all attachment functions. Indeed, young adults who had romantic partners ranked them highest in their attachment hierarchy followed by mothers, fathers, siblings, and best friends (Trinke & Bartholomew, 1997). Still, many young adults continue to use their parents as a secure base, while using best friends and romantic partners for proximity-seeking and some safe haven functions (Fraley & Davis, 1997; Trinke & Bartholomew, 1997). Interestingly, Fraley and Davis (1997) found that secure

attachment was positively, whereas dismissing-avoidance was negatively associated with the tendency to establish attachment bonds with best friends and romantic partners.

Although the nature of attachment relationships to parents are hypothesized to shift in adolescence (Ainsworth, 1989), both mothers and fathers continue to serve as important attachment figures (Paterson et al., 1994). Parent-child relationships are maintained and adolescents continue to feel close to their parents (Youniss & Smollar, 1985), even though there is greater conflict between parents and their children during this developmental period (Steinberg, 1981). Mothers, in particular, may occupy a unique role in adolescents' attachment hierarchies. For example, adolescents and young adults report feeling closer to and relying more on their mothers than on their fathers (e.g., Paterson et al., 1994; Furman & Buhrmester, 1992). Mothers have also been found to outrank fathers for safe haven and secure base behaviors and were ranked with romantic partners most highly for degree of emotional connection (Trinke & Bartholomew, 1997). Indeed, attachment security to mother and to father have been found to be only moderately correlated in adolescence (Markiewicz, Doyle, & Brendgen, 2001). It may be that the functions of the two attachment relationships differ, as adolescents have been found to perceive their mothers as more accepting of them, and their fathers as more encouraging of their independence (McCormick & Kennedy, 1994). Further, whereas adolescent boys have reported being equally dependent on their mothers and fathers, adolescent girls reported being less dependent on their fathers than their mothers and perceived their fathers as less available than did younger girls (Lieberman, Doyle, & Markiewicz, 1999). Thus, young adults may rely on their fathers only to the extent that they feel secure in these relationships (Trinke & Bartholomew, 1997). Paterson et al.

(1994) demonstrated that although adolescent-father attachment relationships became more limited in communication and emotional quality during adolescence, fathers were still rated as important figures in the adolescents' lives.

Given the changes that take place in attachment relationships during adolescence, researchers have begun to question the relative importance of these different attachment relationships (i.e., mother, father, best friend, and romantic partner) in adolescent adjustment and well-being. Although secure attachment to both parents is associated with higher self-esteem (McCormick & Kennedy, 1994), adolescents' attachments to their mothers and fathers may contribute differentially to adjustment. Kerns and Stevens (1996) found that adolescents with secure attachments to mother or father reported less loneliness and felt more connected to others during social interactions. Importantly, these investigators found that for males only, secure attachment to father was associated with healthier personality development. Mother-child attachment was not associated with ratings of the adolescents' personality (Kerns & Stevens, 1996). Similarly, Rice, Cunningham, and Young (1997) found that, for late adolescent males, attachment to father was a more important predictor of social competence than was attachment to mother. In contrast, attachment to mother and to father significantly predicted social competence for late adolescent females. These findings suggest that it may be important to examine the relation between attachment and adolescent outcome separately for each parent and for boys versus girls.

Evidence supports a correspondence between secure attachment to parents and to peers in adolescence (Armsden & Greenberg, 1987; Nada Raja, McGee, & Stanton, 1992). The relative importance of these relationships to adolescent adjustment, however,

is somewhat less clear. Researchers have found that the quality of parent and peer attachments in adolescence are both significantly related to psychological well-being and predictive of depression and anxiety scores (Armsden & Greenberg, 1987). Moreover, some investigators have determined that perceived level of attachment to parents is more strongly associated to adolescent well-being than attachment to peers (Armsden & Greenberg, 1987; Greenberg, Siegel, & Leitch, 1983; Nada Raja et al., 1992). For example, Nada Raja and colleagues (1992) found that adolescents who reported low attachment to parents had greater problems of conduct, inattention, depression, and experienced more negative life events and these relations did not appear to be compensated by a high attachment to peers. However, the reverse pattern was found in a recent study, as adolescents high on peer but low on parent attachment reported better adjustment, in terms of depression, aggression, and sympathy, than adolescents who were high on parent but low on peer attachment (Laible, Carlo, & Rafaelli, 2000). Some researchers have revealed evidence to suggest that attachments to parents and to peers contribute differently to different aspects of adjustment (Paterson, Pryor, & Field, 1995). Paterson et al. (1995) showed that adolescents' quality of affect toward their mothers and fathers (i.e., their trust in both parents' availability and accessibility) had a significant effect on their overall self-esteem, coping abilities, and social competence, whereas the quality of affect toward friends was significantly associated with only social competence.

In sum, adolescents appear to have multiple attachment relationships and the various attachment figures may fulfill different functions. Moreover, particular attachments may exert greater influence on adolescent adjustment. The studies to date, however, have not examined the relative importance of attachment relationships with

mother, father, best friend, and romantic partner for well-being in adolescence.

Therefore, one purpose of this research project was to further clarify the contribution of different attachment figures to the development of depression in adolescence.

Correlates of Working Models of Attachment: Emotional Adjustment

The quality of attachment relationships has been linked to emotion regulation skills of adolescents and adults. Compared to secure persons, individuals who are insecurely attached have been found to have greater difficulties modulating their emotions. For example, older adolescents who are securely attached are rated by peers as less anxious, less hostile, and more ego-resilient (i.e., able to modulate negative feelings constructively in problem-solving contexts), whereas both dismissing and preoccupied adolescents are rated as low on ego-resilience and high on hostility and anxiety, respectively (Kobak & Sceery, 1988). Moreover, in mother-teen problem-solving interactions, unlike secure adolescents who showed more engagement in discussions of disagreements, dismissing adolescents displayed dysfunctional anger (Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993). In addition, compared to securely attached individuals, in the cognitive processing of unpleasant emotional memories, dismissing persons reported moderate to high levels of anxiety, high defensiveness, and showed low accessibility to negative memories, while preoccupied persons also reported high levels of anxiety, but were unable to repress negative affects, had easy access to negative memories, and had difficulty regulating inner distress (Mikulincer & Orbach, 1995).

Consistent with attachment style differences in emotion regulation skills, research evidence supports the theoretical contention that individuals with different attachment orientations have working models of self and of others that range from more positive to

more negative. Securely attached persons have generally positive models. For example, secure persons have been found to describe themselves in positive terms (Collins & Read, 1990; Mikulincer, 1995); they have a higher self-worth and perceive themselves as more confident in social situations (Armsden & Greenberg, 1987; Collins & Read, 1990). Although secure individuals have a predominantly positive view of themselves, they are able to acknowledge their negative self-attributes and thus have a coherent, differentiated, and well-organized self-structure (Mikulincer, 1995). Congruent with positive models of others, secure persons tend to view people as trustworthy and dependable (Collins & Read, 1990), and believe that others are generally well-intentioned and good-hearted (Hazan & Shaver, 1987). They appear to view others as an effective means for affect regulation and they, therefore, turn to others for emotional and instrumental support in dealing with life stresses (Florian, Mikulincer, & Bucholtz, 1995).

Dismissing persons, like secure individuals, appear to have a positive model of self but their models of others are negative. Consistent with the former, dismissing persons report no difference from secure adolescents on self-report measures of perceived social competence and distress (Kobak & Sceery, 1988). Although dismissing persons have been found to have a positive self-view, they show low accessibility to negative self-aspects, suggesting that their self-structure may lack integration and inner coherence (Mikulincer, 1995). Dismissing persons' negative models of others are evidenced by their view of others as not dependable or trustworthy and their doubts about the honesty and integrity of social agents such as parents (Collins & Read, 1990). Moreover, dismissing adolescents report more distant interpersonal relationships, loneliness, and low social support from family (Kobak & Sceery, 1988). To maintain their detachment from

others, dismissing persons are unlikely to make intimate self-disclosures nor will they respond to others' disclosures (Mikulincer & Nachshon, 1991).

Preoccupied individuals have been found to have a negative working model of self. Indeed, preoccupied adolescents rate themselves as having lower perceived competence and higher levels of personal distress (Kobak & Sceery, 1988). They have a lower sense of self-worth, lower social self-confidence and are lower in instrumentality than secure persons (Collins & Read, 1990). Preoccupied adults have more self-doubts, feel misunderstood (Hazan & Shaver, 1987), and also report the highest scores on state and trait loneliness (Hazan & Shaver, 1990). Not surprisingly, preoccupied persons have been found to have a self-structure that is simple, pervaded by negative self-attributes and affects, and that is less well-integrated than secure individuals (Mikulincer, 1995). Preoccupied persons, however, are comparable to their secure counterparts in their generally positive working models of others. For example, like secure individuals, preoccupied individuals tend to self-disclose personal information (Mikulincer & Nachshon, 1991). Further, preoccupied persons have been found to view their family as supportive (Kobak & Sceery, 1988), but their high level of anxiety may result in dependent relationships that are unsuccessful in alleviating anxiety.

These differences in emotion regulation skills and working models of individuals with secure, dismissing, or preoccupied attachment orientations appear to underscore potential differences in the vulnerability to adjustment problems. Those with insecure attachment styles seem to be at greatest risk.

Social-Cognitive Perspective of the Relation between Working Models and Depression

Based on joint relationship histories, working models of self and of the attachment

figure(s) serve to interpret, and predict both the self and the others' attachment-related behaviors, thoughts, and feelings (Bretherton & Munholland, 1999). Thus, a critical part of the content of working models involves interpersonal expectations or scripts for typical interaction patterns between the self and the attachment figure (Bretherton, 1985). In their examination of interpersonal cognition in close relationships, several researchers have advanced concepts closely related to scripts. For example, while Safran (1990a, 1990b) advanced the notion of interpersonal schema (i.e., a generalized representation of self-other relationships), Baldwin (1992) referred to a similar construct as a relational schema, defined as the cognitive representation of typical patterns of interpersonal relatedness. Relational schemas are hypothesized to include generalized views of self and others as well as a script for an expected pattern of interaction, based on memory of past interpersonal experiences (Baldwin, 1992, 1995). As people have multiple close relationships which differ in nature, specific self-schemas (or views of self) are thought to be associated with representations of specific other people; these cognitive structures are linked by interpersonal scripts, formulated as "if-then" contingencies, based on typical interaction experiences occurring in that relationship (Baldwin, 1999).

It is believed that individual differences in attachment orientation likely reflect differences in chronically accessible relational schemas (Baldwin, 1995, 1999). In support of his theory, Baldwin et al. (1996) found that, although most people reported having relationships corresponding to both secure and insecure attachment patterns, they also (1) reported having a higher proportion of relationships, and (2) were able to generate more exemplars of relationships that matched their general attachment style. Thus, even though individuals may have multiple working models available to them

based on experiences in different relationships, certain patterns of relating seem to be highly accessible and as a result, people develop tendencies to view attachment experiences in stylistic ways (Baldwin et al., 1996). Some attachment researchers have similarly proposed the emergence of a generalized attachment stance in adolescence which develops from the multiple models held of different attachment relationships in childhood (Allen & Land, 1999). Indeed, global and relationship-specific attachment ratings appear to be related but not equivalent (Ross & Spinner, 1999). Relationship-specific insecure attachment style ratings have been found to reflect both general attachment tendencies and the context associated with particular attachment relationships (Ross & Spinner, 1999). In general, the endorsement of an insecure global attachment style, when secure mental models are available in memory, suggests that negative relational experiences may be particularly central and influential in individuals' views of self, others, and self-in-relation-to-others.

It is postulated that when maladaptive relational schemas are operating, individuals are at increased risk for depression. That is, the negative working models of self and others that are associated with insecure attachment relationships might be a precursor to the pattern of expectations and cognitions seen in depression (Cummings & Cicchetti, 1990). Insecure attachment relationships produce very low internalized feelings of felt security (i.e., ability to be free of insecurity and distress in the absence of the attachment figure). When faced with stress, insecurely-attached persons are likely to have few resources for coping and may be easily susceptible to diminished self-esteem and depressed mood (Cummings & Cicchetti, 1990). Further, these negative models may be reinforced by the appraisal of negative interpersonal events in terms of personal

unworthiness and incompetence which may, in turn, contribute to the development of depressive cognitions and symptomatology (Hammen, 1992). Indeed, Hammen et al. (1995) revealed that female high school graduates' dysfunctional attachment cognitions contributed to both the onset and symptom severity in the face of elevated levels of interpersonal stressors. Thus, in depression, the particular strategies that are used in interpersonal relations may be shaped by relational schemas that were adaptive in the past but are no longer appropriate (Safran, 1990a).

Similarities between Theories of Attachment and Depression

Bowlby (1973, 1980) and investigators from several other theoretical perspectives (e.g., Arieti & Bemporad, 1980; Blatt, 1974) have concluded that disturbed parent-child interactions contribute to impaired internalized mental representations which may, in turn, create a vulnerability to depression (Blatt & Homann, 1992). While Bowlby (1973, 1977, 1980) identified anxiously-attached and compulsively self-reliant individuals as at risk for depression, various psychoanalytic (e.g., Blatt, 1974), interpersonal (Arieti & Bemporad, 1980), and cognitive (Beck, 1983) theorists have similarly distinguished between two subtypes of depression based on different personality configurations. Briefly, Blatt and his colleagues differentiated between anaclitic (or dependent) depression and introjective (or self-critical) depression (Blatt, 1974; Blatt, D'Afflitti, & Quinlan, 1976; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; Blatt, Wein, Chevron, & Quinlan, 1979). Anaclitic depression is characterized by feelings of weakness, loneliness, helplessness, and being unloved as well as by intense fears of being abandoned, and by wishes to be cared for, protected, and loved. In contrast, introjective depression is characterized by feelings of worthlessness, guilt, and inferiority in addition to chronic fears of disapproval.

criticism, and of losing the acceptance of significant others (Blatt, 1974; Blatt et al., 1976; Blatt et al., 1982).

Similar to Blatt's (1974) dependent and self-critical types of depression, Arieti and Bemporad (1980) distinguished between two depressive patterns, "dominant other" and "dominant goal." Individuals with a dominant other mode of functioning invest their energy in securing continued nurturance, support, and love from an esteemed other (e.g., parent), and they are prone to develop depression when their sense of self is threatened by the irrevocable loss of a significant other. Individuals with the dominant goal form of personality organization focus their efforts on the achievement of some lofty goal in order to secure self-esteem. Such persons develop depression following the failure to attain the desired objective (Arieti & Bemporad, 1980). Finally, in his revised cognitive model of depression, Beck (1983; Beck, Epstein, & Harrison, 1983) suggested sociotropy and autonomy as two major personality dimensions associated with different patterns of depressive etiology, symptomatology, and treatment response. Beck (1983) proposed that the sociotropic or socially dependent individual is invested in "positive interchanges with other people" expressed in both "passive-receptive wishes" (acceptance, intimacy, understanding, support, guidance) and "narcissistic wishes" (admiration, prestige, status). In comparison, the autonomous individual places importance on "preserving and increasing his independence, mobility, and personal rights; freedom of choice, action and expression; protection of his domain, and attaining meaningful goals" (Beck, 1983, p. 272). Depression is most likely to occur following perceived loss or rejection in social relationships for sociotropic individuals, and following perceived achievement failure for autonomous individuals.

Within each of these theoretical perspectives, one prototypic theme of depression reflects dependency or an excessive reliance on significant others and a difficulty with separation, whereas the other theme concerns an excessive investment in personal achievement and the avoidance of interpersonal involvement. The dependency dimension is also consistent with the learned helplessness (e.g., Abramson, Seligman, & Teasdale, 1978) and hopelessness models (Abramson, Metalsky, & Alloy, 1989) that emphasize helplessness, the feeling of being unable to control one's life, and a pessimistic attributional style (i.e., the tendency to attribute important negative events to stable, global, internal causes) as central to the etiology of depression. Moreover, there are notable conceptual similarities between Blatt's (1974) and Beck's (1983) depressive personality styles and attachment patterns. Specifically, the constructs of dependency and sociotropy share characteristics consistent with anxious (or preoccupied) attachment, whereas self-criticism and autonomy bear resemblance to avoidant attachment. As expected, dependency and sociotropy were found to be associated with an anxious attachment style (Zuroff & Fitzpatrick, 1995). As well, self-criticism and autonomy were associated with a fearful avoidant attachment style, although autonomy was more strongly related to avoidance (Zuroff & Fitzpatrick, 1995).

Seen as diathesis-stress models, the different conceptual frameworks of Bowlby (1980), and in particular Beck (1983) and Blatt (1974), indicate two pathways to the development of depression based on the matching of negative events (i.e., interpersonal or achievement-type stress) to personality configurations (i.e., dependency/sociotropy and self-criticism/autonomy, respectively). Indeed, research evidence supports the finding that individuals high in sociotropy/dependency who are confronted with negative

interpersonal life events, such as social rejection, become depressed (Allen, de L. Horne, & Trinder, 1996; Hammen, Ellicott, Gitlin, & Jamison, 1989; Hammen, Marks, Mayol, & deMayo, 1985; Mongrain & Zuroff, 1994; Robins & Block, 1988; see Blatt & Zuroff, 1992 and Nietzel & Harris, 1990 for reviews). By comparison, the results have been equivocal about the vulnerability of autonomous/self-critical individuals to depression following achievement failure (Blatt & Zuroff, 1992; Nietzel & Harris, 1990). Some researchers have found the predicted interaction (e.g., Hammen et al., 1985; Hammen et al., 1989) whereas others have not (e.g., Allen et al., 1996; Robins & Block, 1988). It may be that individuals with these two depressive personality configurations have lower self-complexity, in which the self is represented in terms of few independent aspects (e.g., roles), resulting in an increased risk of depression following particular environmental stressors (Linville, 1985; Mongrain & Zuroff, 1995). Consistent with this notion, Mongrain and Zuroff (1995) conducted a study comparing the motivational correlates of dependency and self-criticism and found that dependent individuals endorsed many interpersonal strivings and few achievement-related strivings, whereas self-critical individuals showed the opposite pattern.

Similarly, Hazan and Shaver (1990) have provided some evidence congruent with the hypothesis that attachment needs may be more closely intertwined with the interpersonal realm for preoccupied persons and with the work realm for avoidant persons. In their evaluation of the relation between attachment styles and work orientation, preoccupied adults reported that love relationship concerns often interfered with work performance and that they felt greater job insecurity and frequently feared being rejected for poor performance. Thus, in their desire to fulfill unmet attachment

needs. the main motivation at work for preoccupied adults may be to gain the respect, approval, and acceptance of others that is suggestive of a more interpersonal orientation (Hazan & Shaver, 1990). Unlike preoccupied individuals, avoidant persons emphasize the importance of work over love and appear to use work activity to avoid social interaction. They reported being satisfied with their job security, but gave themselves lower ratings on job performance and tended to feel nervous when not working. Avoidant individuals preferred working alone and worked at the expense of relationships and health, suggesting that they may displace their attachment needs onto their work (Hazan & Shaver, 1990).

In comparing attachment theory with theories of depression, several important parallels have been identified: (1) there are apparent similarities between the forms of insecure attachment, anxious-ambivalence and avoidance, and the two sub-types of dependent/sociotropic and self-critical/autonomous depression, respectively; (2) there may be a matching between attachment or personality organization and type of negative event that increases vulnerability to depression. By incorporating the theories of depression with a social-cognitive perspective, it can be argued that relational schemas representing highly dependent or evaluative interaction patterns may be operative in depression. Such interpersonal schemas may involve a negative self-schema (i.e., rigid, negative beliefs about the self) and positive or negative other-schemas, depending on the severity of the symptoms and/or the established preoccupied or fearful avoidant attachment style.

Research Evidence Indicating Relation between Attachment and Depression

Empirical evidence does support a link between working models of attachment

and depression. Results from many investigations of depressed individuals suggest that the quality of their parent-child attachment is impaired. Depressed persons have been found to hold a negative view of their relationship with their parents, with both mothers and fathers perceived as lacking in nurturance, support, and affection (Blatt, Wein, Chevron, & Quinlan, 1979). Depressed adolescents also report feeling less wanted by their parents (Burbach, Kashani, & Rosenberg, 1989), and lower parental care in childhood was found to be associated with higher current depressive symptoms among young adults (Whisman & Kwon, 1992). Furthermore, clinically depressed adolescents report significantly less secure parent attachment than either nondepressed psychiatric controls or nonpsychiatric controls, and less secure peer attachment than nonpsychiatric controls (Armsden, McCauley, Greenberg, Burke, & Mitchell, 1990).

Negative representations of parental rearing practices may, however, not be uniquely reported by depressed individuals, but rather may serve as a general vulnerability factor in the etiology of psychopathology. Indeed, Gerlsma, Das, and Emmelkamp (1993) found that, in comparison to healthy controls, both depressed individuals (with either unipolar depression or dysthymic disorder) and a matched sample of nondepressed patients recalled less parental emotional warmth, more parental rejection, and more maternal overprotection. Importantly, these researchers determined that the patients' negative memories of parental behavior were highly stable across clinically significant changes in depressed mood and thus, were not likely due to mood state dependent recall (Gerlsma et al., 1993).

In general, adolescents and adults with disorders in psychological functioning show a strong over-representation of insecure attachment organizations (see van

Ijzendoorn & Bakermans-Kranenburg, 1996, for a meta-analytic review). Indeed, Rosenstein and Horowitz (1996) reported an extremely high prevalence rate of insecure classifications (98%) in an inpatient psychiatric sample of 60 adolescents. Allen, Hauser, and Borman-Spurrell (1996) examined attachment status in a group of young adults who had been previously hospitalized for nonpsychotic disorders at age 14 and found that insecurity was strongly associated with past hospitalization. Moreover, researchers have found an association between preoccupied attachment and psychopathology. For instance, research with a high-risk sample of poverty-stricken women revealed an association between preoccupied attachment and increased psychiatric symptoms indicative of self-perceived distress and relationship problems (Pianta, Egeland, & Adam, 1996). Adam, Sheldon-Keller, and West (1996) showed that clinically referred adolescents with histories of suicidal behaviors were characterized by high rates of preoccupied attachment in conjunction with unresolved-disorganized attachment, whereas their nonsuicidal peers were more likely to have a dismissing style.

Research evidence has been accumulating to suggest a more specific association between preoccupied, and to some extent, fearful attachment styles and depression. For example, Carnelley, Pietromonaco, and Jaffe (1994) found that mildly depressed college women evidenced greater preoccupation and fearful avoidance of attachment with their romantic partners, whereas recovering clinically depressed women evidenced greater fearful avoidance. Similarly, in a study of college students, Murphy and Bates (1997) found that high scores on fearful and, to a lesser degree, preoccupied attachment scales were associated with greater levels of depression. Also, preoccupied coping strategies in middle childhood are predictive of peer reports of internalizing behavior problems for

boys (Finnegan, Hodges, & Perry, 1996). Additionally, several studies have replicated this relation between preoccupied attachment and depression in adolescence. In a study of psychiatrically hospitalized adolescents, Rosenstein and Horowitz (1996) found that adolescents with a preoccupied attachment style were more likely to have an affective disorder than a conduct disorder. Likewise, preoccupied attachment in moderately at-risk adolescents was found to be associated with higher levels of internalizing behaviors (Allen, Moore, Kuperminc, & Bell, 1998). Finally, in a study by Kobak, Sudler, and Gamble (1991), insecure and preoccupied attachment strategies were associated with increased reports of depressive symptoms in adolescence.

The two key findings summarized above of depressed individuals' negative parental representations and the relation between preoccupied and fearful attachment patterns and depression highlight negative interpersonal and self schemas as vulnerability factors for depression. In thinking about attachment relationships, people who are preoccupied, and possibly fearful, may focus on their own shortcomings as well as excessively process attachment information (Cole-Detke & Kobak, 1996), and thus may fail to develop a more active form of coping, resulting in increased depressed mood.

Interpersonal Versus Achievement-Type Stress, Attributions, Attachment and Depression

Despite the preliminary evidence supporting the link between insecure attachment styles and psychological distress, the mechanisms underlying this association remain largely unexplored (Roberts, Gotlib, & Kassel, 1996). The first mechanism that is proposed to mediate the relation between insecure attachment and depression is that of negative cognitive appraisals of environmental stressors. Attachment processes and the associated working models are likely to be attended to during stressful events that activate

this system. Moreover, stress is associated with depression. Results from several studies have established that stressful events of both major and minor magnitude are predictive of subsequent internalizing problems in adolescence (e.g., Compas, Howell, Phares, Williams, & Giunta, 1989; Garrison, Jackson, Marsteller, McKeown, & Addy, 1990), although it is less clear whether this relation involves the attachment system. This research study examined whether stress interacts with attachment processes to lead to cognitive appraisals that increase the likelihood of depression.

Different stressors are expected to trigger the attachment system for individuals with preoccupied, dismissing, or fearful attachment styles; in turn, these stressors are expected to be appraised and interpreted differently depending on the individuals' working models of attachment. In the previous discussion of dependent and self-critical types of depression, similarities were drawn between these two subtypes of depression and the anxious-ambivalent and avoidant forms of insecure attachment, respectively: moreover, the possibility of an increased risk of depression due to a matching between attachment organization and interpersonal versus achievement-type stress was raised. Building on that argument, it is expected that preoccupied and fearful individuals find interpersonal problems to be more stressful and meaningful to them, because they not only fear rejection, but are also thought to be dependent on others to maintain their self-worth (Collins, 1996). As such, preoccupied and fearful persons may provide more negative explanations for interpersonal events and may be more inclined to interpret such stressors as jeopardizing the relationship. For example, they may appraise a relationship stress as being due to stable (i.e., unchanging) and global (i.e., all-encompassing) negative factors about themselves and/or the other person involved, rather than attributing the

problem to situation-specific, unstable causes. As a result, their interpretations are expected to increase levels of emotional distress. Indeed, some evidence suggests that late adolescent girls with insecure attachment styles reported more negative affect and higher levels of depression during interpersonal conflicts than did secure adolescents (Torquati & Vazsonyi, 1999). Given that preoccupied persons' motivation towards their work is interpersonal in nature, that is to gain the respect and acceptance of others (Hazan & Shaver, 1990), such persons may also experience work problems as interpersonally stressful and may form similarly negative cognitive interpretations for this type of stress.

In contrast, dismissing persons de-emphasize the importance of relationships and as such, they are unlikely to report being stressed by or experiencing heightened emotional distress following negative interpersonal events (Collins, 1996). Instead, dismissing persons are believed to displace their attachment needs onto impersonal aspects of life, such as work (Bartholomew, 1990; Hazan & Shaver, 1990). Thus, dismissing persons may be more threatened by performance- or achievement-related stressors that challenge their self-worth or sense of self-competence (e.g., failure of a test). In these circumstances, dismissing persons may interpret the stress as being due to stable, global negative factors about themselves. Consistent with this idea of a compensatory effect occurring in the domain in which one is most sensitive (Stake, 1985), Bringle and Bagby (1992) found that adults with dismissing romantic attachment styles demonstrated lower social, but not performance, self-esteem whereas preoccupied adults reported lower performance, but not social, self-esteem.

Previous research has indicated that a negative attributional style temporally precedes increases in depressive symptoms in adolescence. For example, results of a

longitudinal study indicated that a negative attributional style predicted depressive symptoms in later childhood and early adolescence (Nolen-Hoeksema, Girgus, & Seligman, 1992). Likewise, Robinson, Garber and Hilsman (1995) found that young adolescents who reported higher levels of internal, stable, and global attributions for negative events in the sixth grade reported more depressive symptoms after the transition to the seventh grade. Further, in a meta-analytic review, attributions for negative events to internal, stable, and global causes were found to have a reliable and significant association with depression (Sweeney, Anderson, & Bailey, 1986). Also, individuals who make self-blaming, pessimistic attributions for events and who have negative expectations for their control over events are more likely to show depressed affect (see Abramson et al., 1989; Sweeney et al., 1986). Thus, negative attributions seem to contribute to the development of depressive symptoms.

It is noteworthy that although girls are about twice as likely to be depressed as boys by mid-adolescence, the tendency to make pessimistic causal attributions for negative events does not seem to explain this gender difference. Some studies have found that females make more self-defeating attributions and exhibit more helplessness deficits than males, whereas others have shown no gender difference (see Nolen-Hoeksema & Girgus, 1994). Further, a pessimistic attributional style is correlated with higher levels of depressive symptoms in both males and females in childhood and adulthood (Nolen-Hoeksema, Girgus, & Seligman, 1991; Petersen & Seligman, 1984). It is less apparent, however, whether situational factors (e.g., type of stress) may affect when gender differences in attributional style occur and whether a negative attributional style mediates the association between preoccupied and fearful attachment patterns and depression.

Insecure Attachment, Ruminative Coping, and Depression

The second mechanism linking attachment to depression involves ineffective coping strategies used in response to the cognitive appraisal of stressors. Two broad categories of coping have been identified: problem-focused coping refers to coping efforts intended to act on the stressor; emotion-focused coping refers to coping efforts intended to regulate emotional states associated with or resulting from the stressor (Compas, 1987). Research suggests that reliance on emotion-focused coping is associated with higher symptoms of depression, whereas problem-focused coping is related to fewer depressive symptoms (Compas, Malcarne, & Fondacaro, 1988; Glyshaw, Cohen, & Towbes, 1989).

Rumination, a sub-type of emotion-focused coping, has been found to be associated with depression. In her response styles theory of depression, Nolen-Hoeksema (1991, 1998) posited that individuals who ruminate in response to depression, by focusing on their symptoms and the possible causes, meanings, and consequences of their symptoms, will show longer periods of depression than individuals who distract themselves from their symptoms. In support of her theory, results from longitudinal studies of naturally occurring depressed moods have indicated that people who respond to these moods with ruminative responses have prolonged periods of depressed mood, even after controlling for initial severity of mood (e.g., Nolen-Hoeksema, Parker, & Larson, 1994; Nolen-Hoeksema & Morrow, 1991). For example, in a prospective study following a major earthquake in San Francisco, Nolen-Hoeksema and Morrow (1991) determined that university students who had a more ruminative style of coping with their moods prior to the earthquake were more depressed and had more stress symptoms at follow-ups (10

days and 7 weeks), even after pre-earthquake levels of distress were taken into account.

A ruminative style of coping does not seem to be simply a product of a depressed state. For instance, a ruminative coping style has been found to predict later depressive symptoms even after controlling for initial levels of depressed mood (Butler & Nolen-Hoeksema, 1994) or depression (Schwartz and Koenig, 1996). Moreover, in a prospective study, Just and Alloy (1997) found that nondepressed individuals, who reported that they ruminate in response to their depressive symptoms, were more likely to experience a depressive episode over an 18-month period than were those who distract themselves from their symptoms. In addition, participants showed moderate stability of response style over one year (Just & Alloy, 1997). Further, Roberts, Gilboa, and Gotlib (1998) suggest that rumination acts as a trait vulnerability to dysphoria as they found that currently and previously depressed individuals exhibited significantly higher levels of rumination than never depressed individuals. Components of rumination that are independent of depressive symptoms (i.e., introspection/self-isolation and self-blame) are also associated with vulnerability to episodes of dysphoria (Roberts et al., 1998).

Ruminative coping may maintain depressed mood by enhancing pessimistic, maladaptive thinking. For instance, depressed people induced to ruminate in a laboratory experiment were more likely to endorse pessimistic expectancies for the future than depressed participants who engaged in a distracting activity (Pyszczynski, Holt, & Greenberg, 1987). Notably, rumination has been found to predict depressive symptoms beyond the effects accounted for by a negative attributional style (Schwartz & Koenig, 1996). With increased accessibility of negative cognitions, rumination may be interfering with the individual's ability to generate good solutions to her or his problems. Indeed,

Lyubomirsky, Tucker, Caldwell, and Berg (1999) found that dysphoric individuals who ruminate rated their own problems as severe, unsolvable, and reported a decreased likelihood of implementing their solutions. Dysphoric ruminators also tended to be negative, self-critical, and blamed themselves for problems. In another study, dysphoric ruminating students offered the most pessimistic explanations for interpersonal problems and hypothetical negative events and also suggested less effective solutions to interpersonal problems (Lyubomirsky & Nolen-Hoeksema, 1995).

Research has suggested that females are more likely to engage in ruminative coping than are males (Nolen-Hoeksema & Girgus, 1994; Nolen-Hoeksema et al., 1994; Nolen-Hoeksema, Larson, & Grayson, 1999). In a study involving adolescents, girls were more likely than boys to use emotion-focused coping strategies in dealing with academic stressors, which in turn was associated with greater depressive symptoms (Compas et al., 1988). And, unlike their male counterparts, late adolescent females with depressive symptoms were observed as having an internalizing pattern of characteristics including being ruminative (Gjerde, Block, & Block, 1988). Further, Nolen-Hoeksema et al. (1999) found that rumination, along with chronic strain and low mastery, mediated the gender difference in depressive symptoms between women and men. These findings suggest for adolescent girls especially, a ruminative coping strategy may play a significant role in the pathway to depression.

Importantly, attachment style has been found to be related to coping strategies and affect regulation. Secure people tend to seek social support in times of need and rely on constructive coping strategies to regulate affect, whereas insecure persons rely on less adaptive ways of coping and are less able to regulate affect (Mikulincer, 1995; Mikulincer

& Orbach, 1995). In a study of the association between attachment style and individuals' reactions to the severe trauma of the Iraqi missile attack on Israel during the Gulf War, Mikulincer, Florian and Weller (1993) found that relative to secure persons, preoccupied individuals reported more emotional distress (i.e., higher levels of anxiety, depression, hostility and somatization), whereas dismissing individuals reported higher levels of somatization, hostility, and trauma-related avoidance. Moreover, compared to secure persons who used support-seeking strategies more frequently, preoccupied persons used more emotion-focused strategies in coping with this trauma while dismissing adults relied more on distancing strategies (Mikulincer et al., 1993). It was less apparent, however, whether similar results would be found for minor stressful events such as daily stressors. This research study investigated whether ruminative coping, one type of emotion-focused coping, mediated the association between fearful and preoccupied attachment patterns and depression and whether this pattern differed across gender.

Objectives of the Current Research: Goals and Hypotheses

This research project, which examined the relation between global dimensions of attachment, specific models within four close relationships, and risk for depression, encompassed two primary objectives, each with several specific goals and associated hypotheses. As described earlier, attachment dimensions and working models were the focus in this study. To briefly review, the self-model is associated with the degree of anxiety and dependency on other's approval in relationships (Bartholomew & Shaver, 1998). That is, the anxiety dimension of attachment is inversely related to the positivity of the self-model. The model of other is an index of the degree to which others are expected to be available and supportive. It is also associated with the tendency to seek out or avoid

close relationships (Bartholomew & Shaver, 1998). Thus, the avoidance dimension of attachment is inversely related to the positivity of the other-model. In this study, the anxiety dimension and model of self and the avoidance dimension and model of other were used as corresponding terminology.

The first objective of this study was to better understand the relation between dimensions of attachment and risk for depression by examining the cognitive processes and coping strategies that may mediate this relation in response to two types of stress. Specifically, negative stable-global attributions about self and other and ruminative coping strategies were the hypothesized mediators. And, the relation between the attachment dimensions and depression was expected to be context-specific and thus, to differ when comparing interpersonal types of stress to achievement types of stress. That is, individual differences in general attachment orientation, as measured by the underlying dimensions of anxiety and avoidance, were expected to be associated with different processing patterns for stressful interpersonal versus achievement-related problems. The first set of hypotheses concerned these issues.

As an initial step to testing these questions, evidence of an association between generalized attachment orientation and depression was replicated. Consistent with the literature, the first hypothesis (Hypothesis I) was that adolescents who are high on the anxiety dimension of attachment (i.e., corresponding to preoccupied and fearful attachment styles), and to a lesser extent, high on the avoidance dimension of attachment (i.e., congruent with dismissing and fearful attachment styles) would be more likely to report depressive symptoms. Thus, individuals who are generally insecure in their attachment orientation were hypothesized to be at greatest risk for depression.

Once this relation was established, individual differences in processing patterns for interpersonal and achievement-related stressors were examined. Consistent with preoccupied and fearful attachment styles, individuals who are high on the anxiety dimension of attachment are characterized by strong dependency needs, high fear of abandonment, and a negative view of self. As such, these adolescents were expected to interpret interpersonal stress as evidence of rejection and personal unworthiness. Similarly, they may interpret achievement-related stress as potentially damaging their interpersonal relationships, perhaps by leading to the disapproval of important others. Therefore, when confronted by either interpersonal or achievement-related problems, those high on the anxiety dimension were expected to experience these situations as highly stressful and to make negative stable-global attributions about themselves. And, because of their poor ability at regulating emotions, these adolescents were likely to focus on the causes and consequences of their feelings associated with the stressors without trying to resolve the problems. That is, they were expected to rely on a ruminative coping strategy. To summarize this set of hypotheses (Hypotheses II), adolescents high on the anxiety dimension of attachment were expected to (a) report interpersonal and achievement-type stressors as salient and highly stressful (Hypothesis II(a)), (b) attribute the stressful events as due to uncontrollable as well as stable and global negative causes about themselves (i.e., blame problems on their own worthlessness, incompetence, unlovability, etc.; Hypothesis II(b)), (c) use more emotion-focused, ruminative coping strategies (Hypothesis II(c)), and (d) as a result, report experiencing depressive symptoms (Hypothesis II(d)).

Consistent with a dismissing attachment style, adolescents high on the avoidance

dimension of attachment view others as untrustworthy and undependable and tend to defensively distance themselves from close relationships as a means of maintaining their independence. When faced with interpersonal problems, these adolescents were predicted to minimize the significance of the situations and assign blame to others, but not to themselves. That is, they are likely to attribute interpersonal stressors to negative, stable, and global causes about others. With their self-worth vested in performance and work, adolescents high on avoidance were expected to react differently to achievement-related problems. These adolescents were hypothesized to feel stressed and threatened by the achievement stressors and to make negative, stable, and global attributions about themselves and their own incompetence. In these achievement-related situations, they were expected to be vulnerable to experiencing depressive symptoms. Given that adolescents high on avoidance attempt to regulate emotions by suppressing them, they were likely to use distancing and escape-avoidance coping strategies, rather than an emotion-focused, ruminative coping strategy. To summarize this set of hypotheses (Hypotheses III), adolescents high on the avoidance dimension of attachment were expected to (a) report achievement stressors, but not interpersonal stressors, as salient and stressful (Hypothesis III (a)), (b) appraise achievement stressors as due to stable, global negative causes about the self, while interpreting interpersonal stressors as being caused by stable, global negative factors about others (i.e., blame others as being untrustworthy, insensitive, etc.: Hypothesis III (b)), (c) use avoidance and distancing, but not ruminative, coping strategies (Hypothesis III (c)), and (d) report depressive symptoms, particularly in response to achievement stressors (Hypothesis III (d)).

The second main objective of this study was to evaluate the associations between

working models within specific attachment relationships and risk for depression. There were two goals to this part of the study. The first goal was to address a gap in the literature concerning the relative importance of working models of attachment with mother, father, best friend, and romantic partner in the prediction of adolescent depression. The second goal was to investigate whether negative cognitive attributions and a ruminative coping strategy mediate the relation between models of attachment with specific figures and depression when confronted with relationship-specific stress (i.e., stressors involving mother, father, best friend, and romantic partner). These goals and their associated hypotheses are discussed separately.

As mentioned above, the first goal was to determine the relative importance of different attachment figures in the prediction of depression. It is during adolescence that new figures are represented in the attachment hierarchy. The different figures within the hierarchy may be differentially associated with adjustment. Moreover, the association may depend on where the attachment figure is within the hierarchy and the attachment functions that figure fulfills. During adolescence, the romantic partner becomes a key figure in the functioning of the attachment system. Recall, research has shown that romantic relationships fulfill all attachment functions by ages 15 to 17 (Hazan & Zeifman, 1994) and that these figures are rated highest by young adults in the attachment hierarchy, followed by mothers, fathers, siblings, and best friends (Trinke & Bartholomew, 1997). And, while best friends also fulfill proximity-seeking and some safe haven functions, they seem to occupy a lower position in the attachment hierarchy. Therefore, it is hypothesized that working models of attachment with romantic partner will be relatively important in the prediction of depression in adolescence. As indicated

earlier, mothers, more so than fathers, continue to serve important attachment functions during adolescence. For example, they outrank fathers for safe haven and secure base behaviors (Trinke & Bartholomew, 1997). Thus, working models of attachment with mother were also hypothesized to be important in the prediction of adolescent depression. In sum, out of the four attachment relationships, romantic partner and mother were expected to be the two relationships most closely and uniquely associated with depression. Specifically, adolescents who have more negative working models of self and/or of other in relation to their romantic partner and/or their mother were expected to be at greatest risk for depression (Goal I - Hypothesis 1).

The second goal was to investigate whether the negative appraisals and ruminative coping mediate the link between relationship-specific attachment models and depression when confronted with stressors within the different relationships (i.e., mother, father, best friend, and romantic partner). Following from the argument above, and given that peers are central in their everyday experiences, adolescents were expected to report interpersonal problems with their romantic partner and/or best friend as highly stressful (Goal II - Hypothesis 1). Similar to adolescents who are high on the anxiety dimension of attachment, adolescents who have negative models of self in relation to their romantic partner and/or their best friend were expected to (a) make more negative, stable, and global attributions about themselves (i.e., see themselves as unworthy and unlovable; Hypothesis 2a), (b) use ruminative coping strategies (i.e., focus on and attempt to analyze their feelings; Hypothesis 2b), and (c) as such, report more depressive symptoms (Hypothesis 2c). Like those high on the avoidance attachment dimension, adolescents who have more negative models of other with best friend and/or romantic partner were

expected to (a) make more stable, global negative attributions about other in these situations (i.e., view the other as untrustworthy and unavailable; Hypothesis 3a), and (b) as a result, report greater depression (Hypothesis 3b).

Consistent with the literature reviewed earlier, parents (particularly mothers) also fulfill important attachment needs, such as safe haven and secure base functions. Adolescents have had considerably more experience in their relationships with their mothers and fathers than with their peers and hence, they are likely to have well-developed expectations of themselves, their mothers and fathers as well as the relational patterns with each parent. Given that they have a stronger sense of how problems in these relationships will unfold, it was expected that adolescents who have negative working models of self and/or of other in relation to mother and/or father would be less likely to use ruminative coping strategies when stressed in these relationships. Rather, adolescents who have negative models of self in relation to mother and/or to father were hypothesized to (a) make more negative, stable, and global attributions about self (Hypothesis 3a), and (b) report increased depressive symptoms (Hypothesis 3b). Adolescents who have more negative models of other in relation to mother and/or to father were expected to (a) endorse more negative stable-global attributions about other (Hypothesis 4a), and (b) report more depressive symptoms (Hypothesis 4b). Overall, this study was a first investigation into differences that may emerge in the way adolescents process stress within four different attachment relationships. Finally, although there were no specific hypotheses related to gender, gender differences in the pathways to depression were also investigated as girls are considerably more likely to report experiencing depression in adolescence.

Method

Participants

A total of 134 adolescents ($n = 88$ girls; $n = 46$ boys) aged 16 to 19 years old ($M = 16.95$ years; $SD = .74$) participated in this study. These students were a subsample of 662 adolescents who participated in a larger study conducted in 1997-1998 at two Montreal-area high schools. In the current study, approximately 71.6% of the participants were attending grade 11 in one of the two high schools and 26.7% were attending their first year of CEGEP (equivalent to grade 12). Two participants were in grade 10 at one of the high schools. Almost all of the participants lived at home with their mother ($n = 128$) or step-mother ($n = 1$) and/or with their father ($n = 109$) or step-father ($n = 7$). The majority of the students' parents (79.8%) were married, while 22 mothers and 18 fathers were divorced or single. One of the participant's mother was widowed a few months prior to testing.

Nearly all participants (96.3%) reported having experience dating. Almost half ($n = 65$) were currently involved in a romantic relationship and another 30.6% ($n = 41$) recently had a romantic partner. The length of the current romantic relationships varied from a couple of months to several years ($M = 8.74$ months, $Mdn = 5$ months, $SD = 10.86$); however, 74.5% of the current relationships were of less than 12 months duration and 22.4% were between 1 and 2 years in length. For those who recently had a romantic relationship, the length of that previous relationship also ranged from a couple of months to a few years ($M = 9.38$ months, $Mdn = 2$ months, $SD = 12.37$); however, 71.9% of those relationships were shorter than one year in duration and 23.1% of them lasted between 1 to 2 years.

The majority of the sample (83.6%) reported that they had a current same-sex best friend or previously had one or more best friends (16.4%). Current same-sex best friendships ranged in length from a few months to over seven years ($M = 47.79$ months, $Mdn = 54$ months, $SD = 25.89$) although 91.8% of these relationships were longer than one year. In fact, most of the best friendships were long-term steady relationships as 45.5% of the friendships were from 3 to 6 years and 21.8% were over 7 years in duration.

For the majority of the students ($n = 109$), English was their first language and almost all of the participants ($n = 129$) spoke English at home. Approximately 90% of participants reported living in Canada all of their lives. Participants varied in ethnicity and reported having one ($n = 103$), two ($n = 21$), or three ($n = 10$) ethnic origins. Of those participants who identified one ethnicity, 40.8% reported English Canadian, 28.2% reported European, 8.7% reported Asian, 5.8% reported French Canadian, 1.9% reported Latin American, 1.0% reported African, 1.0% reported American, and 12.6% reported other origins. Of the 23.1% of the sample who identified having two or three ethnic backgrounds, many were of mixed English Canadian and European origins ($n = 9$) or English Canadian, European, and French Canadian ($n = 6$), or English Canadian and some other ethnic origin ($n = 5$). A few participants reported mixed French Canadian and European ($n = 3$), European and Asian ($n = 2$), or some other combination of ethnic origins ($n = 6$).

As reported by the participants, mean socioeconomic status (SES) was 43.18 ($SD = 12.17$) for mothers (e.g., interior designers, elementary and secondary school teachers, production clerks, and collectors) and 47.76 ($SD = 15.91$) for fathers (e.g., construction electricians, mechanical repairers, and sales occupations) based on the 1981

socioeconomic index for occupations in Canada (Blishen, Carroll, & Moore, 1987).

These levels are similar to the average SES in the general Canadian population (Blishen et al., 1987).

Measures

Questionnaires

Beck Depression Inventory (BDI). The BDI (Beck, Rush, Shaw, & Emery, 1979) is a 21-item self-report depression inventory designed for adolescents and adults. This scale quantifies a range of depressive symptoms including mood, pessimism, self-dislike, social withdrawal and work difficulty. Each item consists of four statements representing severity levels of a symptom of depression and is scored from 0 to 3 with higher scores indicating increasing severity. Item scores are summed to yield a total score with a cut-off score of 9 to indicate the normal or asymptomatic range. The internal consistency of the BDI is satisfactory with mean coefficient alphas of .86 in psychiatric samples and .81 in nonpsychiatric samples (Beck & Steer, 1987). The construct, content, and concurrent validity of this measure has also been well-established (see Beck & Steer, 1987). The item assessing suicidal ideation was omitted from the current study on the recommendation of the ethics review committee, which expressed concerns about follow-up procedures. As well, this item was not considered to be essential in this nonclinical sample. The internal consistency using the 20-item version of the BDI in the current sample was satisfactory ($\alpha = .89$). See Appendix A for a sample BDI questionnaire.

Experiences in Close Relationships (ECR). The Experiences in Close Relationships Questionnaire is a 36-item self-report measure of adult romantic attachment

(Brennan, Clark, & Shaver, 1998). The measure consists of two 18-item, higher-order attachment dimensions: avoidance and anxiety. The avoidance scale assesses level of discomfort with closeness; the anxiety scale measures anxiety and preoccupation with closeness, jealousy, and fear of rejection (Brennan et al., 1998). Scores on the ECR dimensions can be combined to derive four attachment clusters. Low scores on both avoidance and anxiety scales indicate secure attachment, whereas high scores on both dimensions indicate a fearful attachment pattern. Preoccupied attachment is suggested by a low score on the avoidance dimension and a high score on the anxiety dimension, while dismissing attachment is characterized by a high score on the avoidance and a low score on the anxiety scale. The internal consistencies of both scales are very high with alphas of .94 and .91 for the avoidance and anxiety scales, respectively (Brennan et al., 1998). Similarly high alphas for both the anxiety ($\alpha = .92$) and avoidance ($\alpha = .88$) scales were found for the current sample. The ECR has been found to have satisfactory concurrent validity with many other self-report measures of attachment (Brennan et al., 1998). The ECR was adapted in the current study to measure attachment to close others in general rather than to romantic partners. See Appendix A for the questionnaire items.

The Relationship Questionnaire (RQ). This self-report measure of attachment was developed by Bartholomew and Horowitz (1991) and consists of four paragraphs, each describing one of four attachment styles: secure, dismissing, preoccupied, and fearful. Participants were asked to rate on a 7-point Likert scale (1 = not at all to 7 = very much) the extent to which each paragraph described the quality of their relationship with a particular individual. Participants were then asked to select the one paragraph that most

closely described their relationship. Subjects completed this questionnaire four times, once for each of the four targets of interest -- mother, father, best friend, and current or most recent romantic partner. These four questionnaires were presented in a counterbalanced order. This measure has been found to correlate significantly with attachment styles determined by interview (Bartholomew & Horowitz, 1991) and has been found to correspond to Hazan and Shaver's (1990) 3-category typology (Brennan, Shaver, & Tobey, 1991), which is also a commonly used self-report measure of attachment. Adult attachment patterns have been found to be moderately stable over time, with test-retest correlations on the RQ over an 8-month period averaging .51 (Scharfe & Bartholomew, 1994). Correlations between the secure, dismissing, preoccupied, and fearful attachment style ratings for each target figure are shown in Appendix B. See Appendix A for the four versions of the questionnaire.

Continuous ratings of the attachment patterns were combined to yield positive to negative dimensions of self and other for each of the four relationships. As in Griffin and Bartholomew (1994), the model of self dimension was obtained by summing the ratings of the attachment patterns with positive models of self (secure and dismissing) and subtracting the ratings of the two patterns with negative self-models (preoccupied and fearful). Model of other dimension was obtained by summing the ratings of the attachment patterns with positive models of other (secure and preoccupied) and subtracting the ratings of the patterns with negative other models (dismissing and fearful).

Computer Task

Vignettes of stressful situations. Participants were presented with a series of ten hypothetical, stressful situations (see Appendix C). Eight of the vignettes consisted of

interpersonal scenarios with their mother, father, best friend, and romantic partner (i.e., two hypothetical situations per target figure), and the other two vignettes were of achievement-type scenarios involving school and work. Half of the interpersonal stories depicted situations in which each of the four target persons was unavailable for the individual and the other four described situations in which the other person was rejecting or disapproving of the individual. A practice scenario was administered first in order to orient participants to the task. For example, one interpersonal vignette read as follows:

Imagine that you have a very important decision to make. This decision will have a big effect on your future and you are very anxious about it. You are very concerned about making the best choice by tomorrow's deadline. You go to your mom for her advice and to discuss what you should do. You really want her help. She tells you that she doesn't have time to talk with you. She says she is too busy.

Stress intensity level. Following the presentation of each hypothetical situation, participants were asked to indicate "how stressful would you find this event?" on a 7-point Likert scale (1 = not at all; 7 = extremely).

Cognitive appraisals. Next, participants were asked about what they would think if this situation had actually happened. A series of statements followed and participants indicated whether they agreed or disagreed with each statement. Participants answered 13 to 14 statements (i.e., 13 for one vignette and 14 for the second vignette per target to minimize redundancy and length of task) about their thoughts about the other person in the situation. Ten to eleven statements described negative, stable, and global characteristics or ideas about the other individual (e.g., "My mom is unreliable"; "My mom is cold; "My mom doesn't know how to make me feel better") and three statements concerned unstable, situation-specific thoughts about the other (e.g., "My mom was

distracted with other things”). Items also reflected the attachment themes of availability, dependability/ trustworthiness, warmth, caring/ supportiveness, and level of competence of other. Next, participants answered whether they agreed or disagreed with 15 to 16 statements (i.e., 15 for one vignette and 16 for the second vignette per target) about their thoughts about themselves in that situation. For ten of the statements, negative, stable and global traits or ideas about the self were described (e.g., “I am basically unlovable”; “I am not worthy of my mom’s love and attention”; “I can’t keep my mom interested in me”), two of which concerned hopelessness about the future (e.g., “I will never get the support I need from my mom”). Three other statements described unstable, situation-specific thoughts about the self (e.g., “I approached my mom at a particularly bad time”) and two to three additional items concerned the participant’s feelings of control over the situation (e.g., “I can do something about this problem”). Similar to the statements about the target figure, the items about the self also reflected attachment themes of whether one feels lovable, dependable, valuable, able to trust, and competent.

Coping strategies. Participants were then asked to think about what they would do in the situation if it had actually occurred. They answered 14 coping items on a 4-point Likert scale (0 = not at all; 3 = very much) that described six different strategies: rumination (e.g., “go away by myself and think about why I feel this way”), escape-avoidance (e.g., “wish that the situation with my mom would go away or somehow be over with”), confrontive coping (e.g., express anger to my mom, who caused the problem”), distancing (e.g., “go on as if nothing happened”), support-seeking (e.g., “talk to a friend or relative I respect for advice”) and problem-solving (e.g., “make a plan of action and follow it”). With the exception of the rumination scale (4 items), which was

adapted from Nolen-Hoeksema and Morrow (1991), the coping items were selected from the Ways of Coping Scale (Folkman & Lazarus, 1988) on the basis of loading highly on the factors of their sub-scales and fitting best with the vignettes. The minimal factor loading of an item on a sub-scale was .50. The focus of this study was on the rumination scale items.

Emotions. Although not relevant to this study, participants were asked to think about how they would feel after the situation, if it had actually happened to them. Adolescents indicated “yes” if they agreed or “no” if they disagreed with a series of 16 emotions, measuring hostility, depression, anxiety, and indifference.

The computer administered, in a randomized order, one scenario with each target and one achievement-type vignette in the first half of the task prior to a short break and then the remaining five vignettes were shown in a randomized order. All responses were also administered in a random fashion. The program was developed using Micro Experimental Laboratory (MEL) Professional. On average, participants required about 45 minutes to complete the computer task.

Procedure

Approximately 300 students of the original 1997-1998 sample were sent a letter requesting their consent to participate in this study (see Appendix D). Participants who did not return the form were contacted by phone. Participants attending CEGEP or one of the high schools were phoned a second time to schedule the testing session at their school or at Concordia University at a day and time convenient for the student. Participants attending the other high school were tested at their school during class time in two sessions, on two different days.

Participants were first asked to complete the Relationship Questionnaires, and other measures not directly used in this study (e.g., Multiple Affect Adjective Checklist-Revised). Following these questionnaires, students were asked to sit in front of one of three pentium-level laptop computers with color screens. The examiner briefly explained what to expect on this task, the computer keys the participants were required to press, and how to correctly position their fingers. The instructions were also explained on the computer screen. They read as follows:

You are about to be presented with a series of very short stories of potentially stressful situations with your mother, your father, your best friend, and your boy/girlfriend as well as at school and work.

Imagine that each situation is happening to you. Please take a few moments to picture yourself in that situation. Please also picture the other person and the interaction that you are having with them. In each situation, imagine what you would see and hear, what you would think and do, and how you would feel.

Use your knowledge and personal experiences of relationships and daily stressors to help you in answering the questions that follow each situation.

Remember there are no right or wrong answers. Answer the way you would react if you were in that situation. Work as quickly as possible.

After they had completed the computer task, participants were given a snack and a short break. Following the break, the rest of the questionnaires were administered, including the Beck Depression Inventory, Experiences in Close Relationships Questionnaire, as well as several other measures not relevant to this study. Participants were then debriefed, and were informed about psychological services available at their school or CEGEP should they wish to discuss any difficulties they might have been having. They were paid an honorarium of ten dollars each for participating in the study.

In total, participants required approximately 2 hours to complete the study. For

those high school students who took part in the study across two different days, they completed the first few questionnaires and the computer task on one day and the remaining questionnaires on the second day.

Results

This section is divided into several parts. First, data screening and preliminary analyses are discussed. Next, the analyses related to the primary objective of the study assessing the relation between dimensions of attachment and depression for interpersonal and achievement-related stressors are presented. Negative attributions and ruminative coping are tested as potential mediators in the relation between the attachment dimensions and depression. Following that, analyses testing the hypotheses related to the second objective of the study are conducted. Specifically, the relative importance of working models of attachment to different figures in the prediction of depression is examined. And, the links between working models to mother, father, best friend, and romantic partner and depression in response to relationship-specific stressors are explored.

Data Screening and Preliminary Analyses

As the first step to examining the results, the data were screened for univariate and multivariate outliers as well as for skewed distributions. Univariate outliers were found for the negative stable-global attributions about self for mother, father, best friend, and romantic partner as well as for stressfulness ratings of stressors with best friend and achievement. The outliers were changed to scores within three standard deviations from the mean. No multivariate outliers were found. Next, preliminary analyses were conducted to provide an overview of the data. To help reduce the number of variables, those that were highly correlated and therefore redundant, and those variables not

associated with the attachment and/or depression variables were subsequently dropped from further analyses. Sex differences were also explored.

Descriptive statistics for depression measure. Scores on the Beck Depression Inventory were examined to assess the adolescents' levels of depressive symptoms. Adolescents scored on average 11.78 ($SD = 8.85$; range = 0 to 39) on the Beck Depression Inventory. Similar to previous research, a t -test for unequal variances, $t(123.32) = 4.13$, $p < .001$, revealed that girls reported significantly more depressive symptoms ($M = 13.71$, $SD = 9.38$) than did boys ($M = 8.06$, $SD = 6.34$). According to Beck and Steer (1987), scores of 9 or below on the BDI are considered within the normal range, scores of 10 to 18 indicate mild-moderate depression, and scores of 19 to 29 indicate moderate-severe depression, suggesting that the adolescent girls were, on average, experiencing mild to moderate levels of depressive symptoms. However, closer examination of the entire sample revealed that 50% of the participants ($n = 67$) fell in the normal/asymptomatic range, 30.6% ($n = 41$) fell in the mild-moderate range of depression, 14.2% ($n = 19$) were in the moderate-severe range and 5.2% ($n = 7$) fell in the extremely severe range (i.e., scores of 30 and up). Scores on the BDI were positively skewed and therefore, a square root transformation was performed.

Descriptive statistics for measures of attachment. Presented in Table 1 are the mean ratings and standard deviations for adolescents' scores on the anxiety and avoidance dimensions on the ECR, representing generalized attachment orientation, as well as for the RQ working models of self and of other with each of the four attachment figures. On average, teens reported low to moderate levels of anxiety and avoidance on the ECR.

Two independent sample t -tests were conducted to assess for sex differences. A

Table 1

Mean Ratings (and Standard Deviations) of Attachment Dimensions^a and Working Models of Self and Other for Specific Attachment Figures^b

	Anxiety	Avoidance	Self	Other
Generalized	3.61 (1.17)	3.30 (1.01)		
Mother			3.11 (3.45)	1.10 (4.04)
Father			3.08 (3.52)	0.27 (4.14)
Best friend			3.65 (3.64)	2.36 (3.67)
Romantic partner ($n = 106$)			2.14 (4.24)	2.29 (4.19)

Note. $N = 134$;

^a Attachment dimensions for general orientation are based on the Experiences in Close Relationships Questionnaire. Scores for the anxiety and avoidance dimensions range from 1 to 7 with high scores indicating high levels of anxiety or avoidance, respectively.

^b Models of self and of other are based on continuous ratings from the Relationship Questionnaire. Scores for the models can range from -12 to 12 with a high positive score indicating a more positive working model and a high negative score indicating a more negative working model.

significant t-test, $t(131) = 2.26, p < .05$, revealed that girls were more anxious in their general attachment ($M = 3.77, SD = 1.18$) than were boys ($M = 3.30, SD = 1.10$), but there was no significant sex difference in level of avoidance.

With regards to their attachments to specific targets, adolescents tended to have more positive than negative models of self, consistent with secure and dismissing attachment orientations, and slightly more positive than negative models of other, consistent with secure and preoccupied orientations. Using the Wilks' criterion, results from a 2 (sex) x 4 (target figures) between-within subjects ANOVA design for models of self (DV) indicated that there was no significant interaction effect, $F(3, 101) = 0.89, ns$ or main effect of sex, $F(1, 103) = 0.43, ns$. However, there was a significant main effect of target indicating that the adolescents differed in their ratings of models of self with the four attachment figures, $F(3, 101) = 4.98, p < .01$. Follow-up t -tests for paired samples revealed that adolescents' model of self with mother, $t(106) = -2.42, p < .05$, model of self with father, $t(106) = -2.20, p < .05$, and model of self with best friend, $t(105) = -3.62, p < .001$, were all significantly more positive than model of self with romantic partner. A second 2 (sex) x 4 (target figures) between-within subjects ANOVA design for models of other (DV) indicated that there was no significant interaction effect, $F(3, 101) = 0.73, ns$ or main effect of sex, $F(1, 103) = 1.05, ns$. A significant main effect of target, $F(3, 101) = 6.88, p < .001$, indicated that adolescents differed in their ratings of models of other with the four attachment figures. Follow-up t -tests for paired samples showed that the adolescents' model of other with best friend was significantly more positive than their model of other with mother, $t(133) = 2.95, p < .01$, and their model of other with father,

$t(132) = 5.03, p < .001$. Likewise, adolescents' model of other with romantic partner was significantly more positive than model of other with father, $t(106) = 3.19, p < .01$.

Partial correlations, controlling for sex, between the generalized attachment dimensions of the ECR and target-specific working models of the RQ are shown in Table 2. As expected, for the most part, the anxiety dimension from the ECR was significantly correlated with models of self and the avoidance dimension correlated significantly with models of others. The negative direction of the correlations support the contention that the anxiety and avoidance dimensions are inversely related to the positivity of the self- and other-models. There were generally low to moderate correlations among the models of self as well as among the models of others with different attachment figures. For example, model of self with mother was correlated .26 ($p < .01$) with model of self with father, and model of other with mother was correlated .33 ($p < .01$) with model of other with father. Overall, the low to moderate correlations among the working models suggest that the quality of adolescents' attachment relationships varied depending on the target figure.

Preliminary analyses for interpersonal and achievement stressors. Partial correlations, controlling for sex, between the attachment dimensions, cognitive attributions, and ruminative coping for the interpersonal stressors are shown in the top-half of Table 3 and for the achievement-related stressors in the bottom-half of Table 3. As seen in the table, adolescents' stable and global negative attributions about themselves and others for the interpersonal stressors were highly correlated ($r = .75, p < .001$), suggesting that it was difficult for the adolescents to separate and disentangle thoughts

Table 2

Partial Correlations, Controlling for Sex, Between Generalized Attachment Dimensions^a
and Working Models of Self and Other for Specific Attachment Figures^b

	2	3	4	5	6	7	8	9	10
1. Anxiety	.23*	-.06	-.08	-.18*	-.12	-.25**	-.16	-.21*	.25*
2. Avoidance		-.16	-.29**	-.17	-.36**	-.20*	-.23**	-.08	-.04
3. Self - Mom			.21*	.26**	.19*	.15	.06	.17	-.05
4. Other - Mom				.06	.33**	-.04	.16	-.08	.01
5. Self - Dad					.32**	.23**	.07	.31**	-.15
6. Other - Dad						.13	.25**	.13	.05
7. Self - Friend							.28**	.19	.12
8. Other - Friend								.07	.09
9. Self - Partner ($n = 106$)									.25*
10. Other - Partner ($n = 106$)									---

Note. $N = 133$; * $p < .05$ ** $p < .01$

^a Attachment dimensions for general orientation are based on the Experiences in Close Relationships Questionnaire.

^b Models of self and of other are based on continuous ratings from the Relationship Questionnaire.

Table 3

**Partial Correlations, Controlling for Sex, Between Generalized Attachment Orientation^a,
Cognitive Appraisals, and Ruminative Coping in Response to Interpersonal (Top-
Diagonal) and Achievement-Related (Bottom-Diagonal) Stressors**

	1	2	3	4	5	6	7
1. Anxiety	---	.22*	.46**	.45**	.02	.25**	.43**
2. Avoidance	.22*	---	.25**	.41**	-.06	.16	.09
3. Other-stable-global	.24**	-.01	---	.75**	.05	.09	.32**
4. Self-stable-global	.43**	.29**	.22*	---	-.09	.19*	.36**
5. Other-unstable-specific	.09	-.10	.35**	.11	---	.53**	.22*
6. Self-unstable-specific	.23**	.33**	-.18*	.33**	-.01	---	.39**
7. Ruminative coping	.37**	.08	.29**	.27**	.06	.19*	---

Note. $N = 133$; * $p < .05$ ** $p < .01$

^a Attachment dimensions for general orientation are based on the Experiences in Close Relationships Questionnaire.

about self from thoughts about others in these situations. As such, these two variables were averaged together to create a new variable of stable-global attributions that was used for further analyses. However, the correlation between adolescents' stable-global negative attributions about themselves and about other was only modest for the achievement-related vignettes ($r = .22, p < .05$). To directly compare these stressors to interpersonal stressors, the negative stable-global attributions about self and about other for achievement-related stress were averaged into a new variable of stable-global attributions. In addition, these two variables are analysed separately for achievement-stressors only because of the modest correlation. A t -test comparison for paired samples, $t(133) = 3.11, p < .01$, revealed that the adolescents on average made significantly more negative stable-global attributions in response to interpersonal stressors ($M = .300, SD = .194$) than they did in response to the achievement-related stressors ($M = .229, SD = .179$). Boys and girls did not differ in the average number of negative attributions endorsed following interpersonal ($t(132) = -1.88, ns; M = .264, SD = .15$ versus $M = .319, SD = .17$) or achievement-related stressors ($t(132) = .56, ns; M = .241, SD = .21$ versus $M = .223, SD = .16$).

As seen in Table 3, ruminative coping was found to generally correlate moderately with the cognitive attributions variables, such as self-stable-global, but was not redundant with them. A t -test comparison for paired samples, $t(133) = 1.11, ns$, revealed that adolescents did not differ in the extent to which they relied on a ruminative coping strategy for interpersonal ($M = 2.15, SD = .66$) versus achievement-related ($M = 2.06, SD = .66$) stressors. However, girls were found to ruminate more than boys

following both interpersonal ($t(132) = 3.50, p < .01; M = 2.27, SD = .59$ versus $M = 1.19, SD = .51$) and achievement-related stressors ($t(132) = 2.80, p < .01; M = 2.17, SD = .68$ versus $M = 1.84, SD = .54$).

Objective I: The Relation between Attachment and Depression for Interpersonal Versus Achievement-Related Stressors

As outlined earlier, the relation between attachment and depression was hypothesized to be context-specific. That is, individual differences in attachment orientation, measured by the dimensions of anxiety and avoidance, were expected to be associated with different processing patterns for interpersonal and achievement-related stressors. The first step to examining this objective was to establish a relation between attachment and depression. Note that for all of the following analyses, two-way and three-way interaction effects with gender were tested in order to assess for gender differences. Given that the interaction terms were, for the most part, nonsignificant, and for the sake of simplicity, only where significant are the interactions reported.

Hypothesis I. Adolescents who are insecure in their attachment orientation were expected to be at greatest risk for depression. Specifically, adolescents who are high on the anxiety dimension of attachment (i.e., corresponding to preoccupied and fearful attachment styles) and to a lesser extent, those high on the avoidance dimension of attachment (i.e., consistent with dismissing and fearful attachment styles) were expected to be more likely to report depressive symptoms. The partial correlations, controlling for sex, that were initially examined seemed to support the hypotheses. The anxiety dimension correlated .44 ($p < .01$) with depression and the avoidance dimension was also

correlated significantly with depression ($r = .31, p < .01$).

To further test this hypothesis, a hierarchical multiple regression was conducted. See Table 4. After controlling for sex at step 1 ($\Delta R^2 = .11, p < .01$), the attachment dimensions, anxiety and avoidance, entered together at step 2, significantly predicted depression ($\Delta R^2 = .21, p < .001$). Anxiety ($sr^2 = .13, p < .001$) and avoidance ($sr^2 = .04, p < .01$) were both unique predictors. The anxiety X avoidance interaction term, entered at step 3, did not explain additional variance of depression ($\Delta R^2 = .003, ns$). In support of the hypothesis, these results indicate that adolescents who were more anxious and/or more avoidant in their attachment orientation reported more depressive symptoms.

Overview of sets of Hypotheses II & III. With an established relation between insecure attachment and depression, it was possible to examine differences between individuals who were more anxious and/or more avoidant in their processing of interpersonal versus achievement-related stressors. Adolescents who were more anxious in their attachment were expected to (a) find the interpersonal and achievement situations as highly stressful (Hypothesis II(a)), (b) attribute both types of stressful events to stable and global negative causes (Hypothesis II(b)), (c) use ruminative coping strategies (Hypothesis II(c)), and (d) as a result, be more likely to report depressive symptoms (Hypothesis II (d)). In contrast, adolescents who were high on the avoidant dimension of attachment were expected to (a) report achievement-related but not interpersonal situations as highly stressful (Hypothesis III (a)), (b) appraise achievement stressors as due to stable, global negative factors about the self, while interpreting interpersonal stressors as being caused by stable, global negative factors about others (Hypothesis

Table 4

Hierarchical Regression Examining the Prediction of Attachment Dimensions to Depression (N = 133)

Predictors	R^2	ΔR^2	Beta Weights	
			Entry	Last Step
Step 1	.11***	.11***		
Sex			-.33***	-.27***
Step 2	.32***	.21***		
Anxiety			.37***	.37***
Avoidance			.21**	.21**
Step 3	.33***	.00		
Anxiety X Avoidance			-.05	-.05

* $p < .05$ ** $p < .01$ *** $p < .001$

III (b)), (c) use avoidance and distancing but not ruminative coping strategies (Hypothesis III (c)), and (d) report more depressive symptoms, particularly in response to achievement stressors (Hypothesis III (d)).

Hypotheses II (a) & III (a): Stressfulness of the vignettes. As indicated above, adolescents high on the anxiety dimension of attachment were expected to find both the interpersonal and achievement-related vignettes as stressful, whereas adolescents high on avoidance were expected to find the achievement-related vignettes, but not the interpersonal vignettes, as stressful. To determine the stressfulness of the vignettes, the adolescents rated on a scale of 1 to 7 the extent to which they found the interpersonal and achievement-related hypothetical situations to be stressful. As shown in Table 5, the interpersonal vignettes and achievement-related vignettes were, on average, rated as moderately to highly stressful and were rated as equally stressful ($M = 5.27$, $SD = .95$ versus $M = 5.26$, $SD = 1.25$, respectfully). To test the above hypotheses, two hierarchical regressions, controlling for sex, were performed with stressfulness ratings for interpersonal and achievement vignettes as the dependent variables (see Table 6). The criterion for the first regression was computed by taking the average score of the stressfulness for the vignettes with mother, father, best friend and romantic partner. At step 1, sex accounted for a significant 8.6% of the variance of the ratings for the interpersonal vignettes. Girls rated these hypothetical situations as significantly more stressful than boys. The anxiety and avoidance attachment dimensions, entered at step 2, explained an additional 13.5% of the variance ($p < .001$). Both the anxiety ($\underline{sr}^2 = .12$, $p <$

Table 5

Mean Ratings (and Standard Deviations) of the Stressfulness of the Hypothetical Vignette**Stressors**

Vignette	Mean (SD)
Interpersonal	5.27 (0.95)
Achievement	5.26 (1.25)
<u>Interpersonal</u>	
Mother	4.64 (1.37) ^a
Father	5.18 (1.29) ^b
Best Friend	5.54 (1.31) ^c
Romantic Partner	5.72 (1.25) ^c

Note. $N = 134$: means with different letter superscripts differ significantly, $p < .05$ with Bonferroni correction.

.001) and avoidance dimensions ($sr^2 = .03$, $p < .05$) were unique predictors. The anxiety X avoidance interaction, entered at step 3, failed to reach significance ($\Delta R^2 = .02$, $p < .07$) although the overall regression was significant, $F(4,128) = 10.22$, $p < .001$. As shown by the beta weights in Table 6, adolescents who were high on the anxiety dimension, in particular, and/or low on the avoidance dimension of attachment were likely to find the interpersonal situations as very stressful.

For the achievement-related vignettes, sex explained less than 1% of the variance of the stressfulness ratings at step 1 (see Table 6). The anxiety and avoidance dimensions, entered as a block at step 2, accounted for a significant 5.2% of the variance ($p < .05$); however, the overall regression was nonsignificant ($p < .07$). Both anxiety ($sr^2 = .03$, $p < .05$) and avoidance ($sr^2 = .03$, $p < .05$) contributed uniquely to the step. The anxiety X avoidance interaction term, entered at step 3, failed to explain additional variance ($\Delta R^2 = .01$, $p = .34$) and the regression remained nonsignificant, $F(4,128) = 2.09$, $p < .09$. Even though these results reflect only a trend, the direction of the beta weights of the attachment dimensions are consistent with the previous regression suggesting that adolescents who were more anxious and/or less avoidant were likely to find the achievement vignettes as stressful. The results of the two regressions, however, differ in terms of amount of variance accounted for by the attachment dimensions. For the stressfulness ratings of the achievement-related vignettes, the anxiety and avoidance dimensions were more equivalent in percent of variance explained, whereas for the interpersonal stressors, the anxiety dimension was a much stronger predictor than the

Table 6

Hierarchical Regressions Examining Prediction of Generalized Attachment Dimensions to the Ratings of the Stressfulness of the Interpersonal and Achievement-Related Vignettes

Predictors	Interpersonal			Achievement		
	R ²	R ² Δ	Beta	R ²	R ² Δ	Beta
Step 1	.09***	---		.00	---	
Sex			-.20*			-.00
Step 2	.22***	.14***		.05 ^t	.05*	
Anxiety			.39***			.21*
Avoidance			-.18*			-.18*
Step 3	.24***	.02 ^t		.06 ^t	.01	
Anxiety X Avoidance			.15 ^t			.08

Note. $N = 133$

^t $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

avoidance dimension¹.

In sum, these results support the hypothesis that adolescents who were high on the anxiety dimension of attachment reported that both achievement and, in particular, interpersonal problems were highly stressful. As expected, adolescents high on avoidance were less likely to report that the interpersonal situations were stressful. However, contrary to expectations, these adolescents also seemed to be less likely to find the achievement-related stressors as highly stressful. Although there was no gender difference for the stressfulness ratings of the achievement-related vignettes, girls reported being more stressed by the interpersonal stressors than did boys.

Test of mediation processes for interpersonal stressors: Hypotheses II (b), (c), (d)

¹ To verify whether this difference was due to the fact that eight vignettes were averaged together for the interpersonal rating and only two were averaged for the achievement rating of stressfulness, another regression was conducted with stressfulness ratings for best friend vignettes only as the independent variable. The results were basically consistent with those from the previous analysis. Although avoidance was not found to be a significant unique predictor, the direction of the beta weight was the same. Specifically, after entering sex at step 1 ($\Delta R^2 = .07, p < .05$), the attachment dimensions explained an additional 9.3% of the variance. Anxiety ($\beta = .31, p < .01$), but not avoidance ($\beta = -.12, ns$), was a unique predictor and accounted for almost all of the variance ($sr^2 = .09$). The anxiety X avoidance interaction term entered at step 3 was nonsignificant ($\Delta R^2 = .02, ns$).

& III (b), (c), (d). Given that the insecure attachment dimensions were found to predict depression, the next step to addressing the hypotheses outlined earlier was to determine whether the stable, global, negative attributions and ruminative coping mediated this relation differently for adolescents high on anxiety and/or avoidance for interpersonal versus achievement-related stress. The interpersonal stressors were examined first.

Four conditions must be met for a variable to be considered a mediator (Baron & Kenny, 1986; Holmbeck, 1997). First, the predictor (i.e., attachment dimensions) must be significantly associated with the dependent variable (i.e., depression). Second, the predictor must be significantly associated with the hypothesized mediator (i.e., negative attributions and ruminative coping). Third, the mediator must be significantly associated with the dependent variable. Finally, the impact of the predictor on the dependent variable is less after controlling for the mediator. That is, the effect of the attachment dimensions on depression should be reduced after controlling for the potential mediators, negative attributions and ruminative coping.

As was shown in Table 4, the first condition was met in that the attachment dimensions predicted depression. Anxiety ($\beta = .37, p < .001$) and avoidance ($\beta = .21, p < .01$) were both found to be significant unique predictors. Next, several hierarchical regressions were conducted to determine whether the criteria for mediation were met for the interpersonal stressors. The relation between the attachment dimensions and negative attributions, one of the potential mediating variables, was examined (i.e., hypotheses II (b) and III (b)). As seen in Table 7, after entering sex at step 1 as a control variable ($\Delta R^2 = .02, ns$), the anxiety and avoidance attachment dimensions entered together at step 2,

Table 7

Hierarchical Regression Examining the Prediction of Attachment Dimensions to Negative Attributions for Interpersonal Stressors (N = 133)

Predictors	R^2	ΔR^2	Beta Weights	
			Entry	Last Step
Step 1	.02	.02		
Sex			-.16	-.08
Step 2	.31***	.28***		
Anxiety			.44***	.44***
Avoidance			.24**	.24**

* $p < .05$ ** $p < .01$ *** $p < .001$

significantly predicted negative stable-global attributions ($\Delta R^2 = .28, p < .001$). Both anxiety ($sr^2 = .18, p < .001$) and avoidance ($sr^2 = .05, p < .01$) were unique predictors. That is, the more anxious or more avoidant in attachment orientation, the more negative attributions were made. These results support Hypothesis II (b) as adolescents high on the anxiety dimension, in particular, were likely to attribute the interpersonal stressors to stable, global and negative causes about themselves and others. Hypothesis III (b) was also partially supported as adolescents high on the avoidance dimension were found to attribute these stressors to stable, global, and negative factors related to others and themselves.

Another regression was performed to examine the relation between the attachment dimensions and the second possible mediator, ruminative coping (see Table 8). Sex was entered first at step 1 ($\Delta R^2 = .08, p < .001$). The significant beta weight ($\beta = -.29, p < .001$) indicated that girls were more likely to use ruminative coping in response to interpersonal stress. The attachment dimensions, entered as a block at step 2, significantly predicted ruminative coping ($\Delta R^2 = .17, p < .001$). The anxiety dimension was the significant unique predictor ($sr^2 = .16, p < .001$). Thus, the more anxious, but not the more avoidant, in attachment orientation, the more likely ruminative coping was used. These findings support Hypotheses II (c) and III (c) as adolescents high on the anxiety dimension, but not high on the avoidance dimension, were expected to use the emotion-focused, ruminative coping strategy in response to interpersonal stressors.

For negative attributions and ruminative coping to function as mediators, these variables must be significantly predictive of the dependent variable, depression. As

Table 8

Hierarchical Regression Examining the Prediction of Attachment Dimensions to
Ruminative Coping for Interpersonal Stressors (N = 133)

Predictors	R^2	ΔR^2	Beta Weights	
			Entry	Last Step
Step 1	.08***	.08***		
Sex			-.29***	-.08
Step 2	.25***	.17***		
Anxiety			.42***	.42***
Avoidance			-.01	-.01

* $p < .05$ ** $p < .01$ *** $p < .001$

shown in Table 9, after controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), attributions and ruminative coping, entered together at step 2, were found to significantly predict depression ($\Delta R^2 = .16, p < .001$). Negative attributions ($sr^2 = .10, p < .001$), and not ruminative coping ($sr^2 = .01, ns$), was the unique predictor. That is, negative attributions explained most of the variance accounted for by the step and almost all the rest of the variance was shared. Nonetheless, ruminative coping did not explain additional variance of depression, once negative attributions were considered. Therefore, ruminative coping was dropped from further analysis as a potential mediator for interpersonal stress.

For the mediation effect to occur, the attachment dimensions should no longer significantly predict depression after controlling for negative attributions. In the final regression shown in Table 9, sex was entered at step 1 ($\Delta R^2 = .11, p < .001$), attributions at step 2 ($\Delta R^2 = .15, p < .001$), followed by the attachment dimensions, entered as a block at step 3 ($\Delta R^2 = .09, p < .001$). Even though the attachment dimensions significantly predicted depression after taking negative attributions into account, closer examination of the beta weights seemed to suggest a partial mediation effect. The beta weights for anxiety ($\beta = .29, p < .01$) and avoidance ($\beta = .17, p < .05$) were reduced after controlling for negative attributions. See Figure 1. The change in the regression coefficient from .37 to .29 for anxiety and from .21 to .17 for avoidance are indicators of the potency of the mediator (Holmbeck, 1997). The significance of the indirect effects from anxiety to depression and from avoidance to depression through the mediator, attributions, were tested. The unstandardized regression coefficients and the standard errors from the regression program were used to calculate the formula suggested by Baron and Kenny

Table 9

Hierarchical Regressions Examining the Prediction of Attachment Dimensions and Potential Mediators to Depression for the Interpersonal Vignettes (N = 133)

Predictors	R ²	ΔR^2	Beta weights	
			Entry	Last Step
Step 1	.11***	.11***		
Sex			-.33***	-.24**
Step 2	.27***	.16***		
Negative Attributions			.35***	.35***
Ruminative Coping			.12	.12
Step 1	.11***	.11***		
Sex			-.33***	-.25***
Step 2	.26***	.15***		
Attributions			.39***	.20*
Step 3	.35***	.09***		
Anxiety			.29***	.29***
Avoidance			.17*	.17*

* p < .05 ** p < .01 *** p < .001

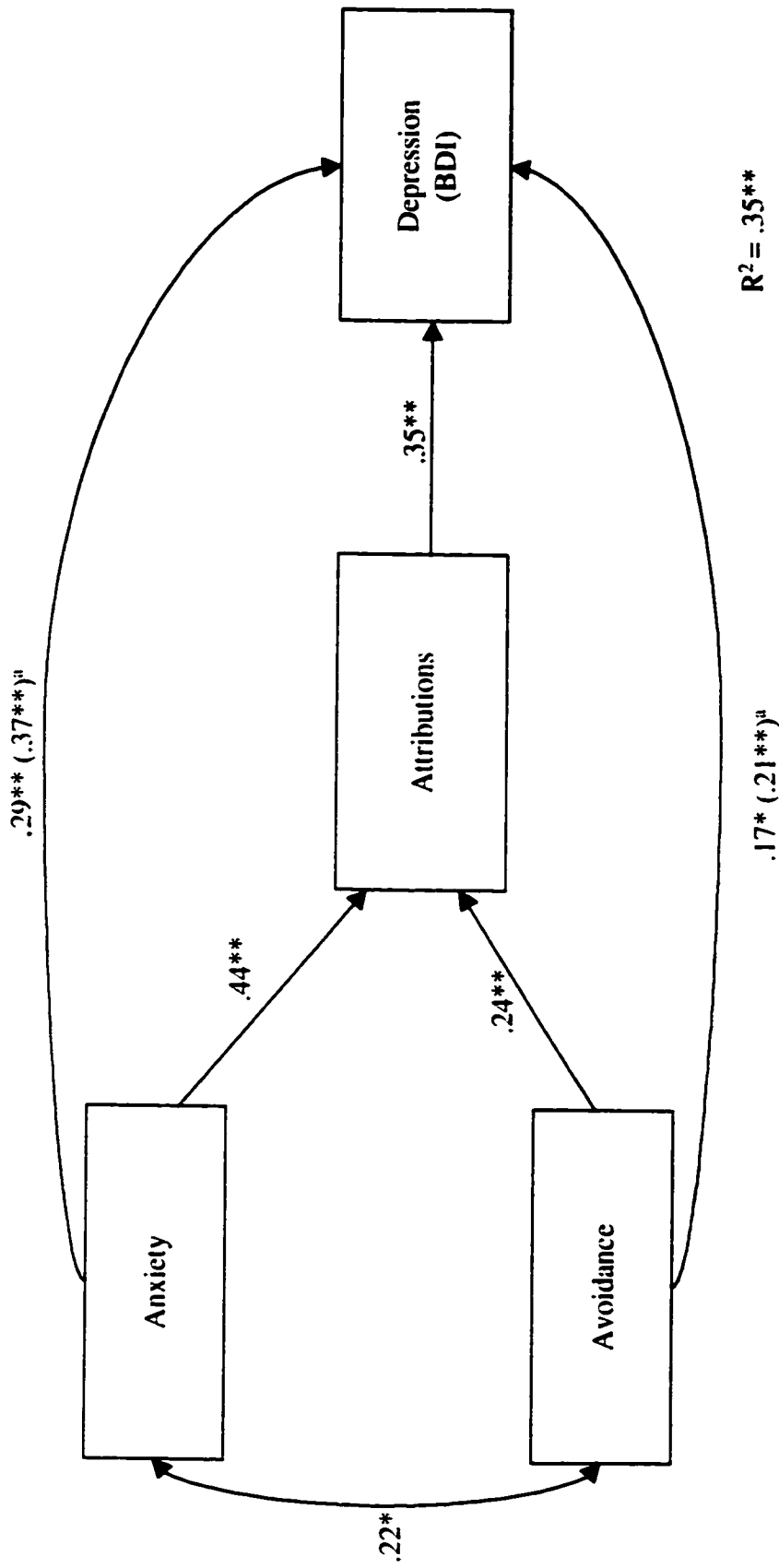


Figure 1. Processing interpersonal stress: Path model of the relation between attachment dimensions and depression¹

¹ The beta weights shown are based on hierarchical regression analyses.

^a Beta weight in bracket represents weight without the mediators
 N = 133; * p < .05 ** p < .01

(1986) and Kline (1998). The indirect effect from anxiety to depression ($z = 3.39$) was found to be significant at the .01 level and the indirect effect from avoidance to depression ($z = 2.52$) was significant at the .05 level.

The results from these analyses provided a more complete examination of Hypotheses II and III. The findings indicate that adolescents high on the anxiety dimension of attachment found the interpersonal situations to be very stressful, and tended to respond to these situations by making stable, global, negative attributions and by using ruminative coping strategies. The tendency to make these types of attributions was, in turn, associated with increased depressive symptoms. Although adolescents high on avoidance were not likely to report that the interpersonal situations were stressful, they nonetheless tended to make negative attributions about themselves and others in response to these stressors, but to a somewhat lesser extent than their anxious counterparts. Unlike the adolescents high on anxiety, these adolescents did not rely on a ruminative coping strategy. However, their tendency to endorse the negative attributions was, in turn, associated with more symptoms of depression.

Test of mediation processes for achievement-related stressors: Hypotheses II (b), (c), (d) & III (b), (c), (d). Recall (for Hypothesis II), it was predicted that adolescents high on the anxiety dimension would (a) rate the achievement vignettes as stressful, (b) attribute these stressors to stable, global and negative causes as they did for interpersonal stressors, (c) use a ruminative coping strategy, and (d) as a result, report higher depressive symptoms. For Hypothesis III, it was predicted that those high on avoidance would (a) rate the achievement vignettes as stressful, (b) appraise the achievement stressors as due

to negative stable-global causes about the self, (c) use other strategies but not ruminative coping, and (d) report depressive symptoms. The relation between the attachment dimensions and the stressfulness rating was tested earlier.

Consistent with interpersonal stressors, the same process of a series of hierarchical regressions was used to determine whether negative attributions and ruminative coping mediate the relation between attachment and depression for achievement-related stressors. Having already established associations between the dimensions of anxiety and avoidance and depression (see Table 4), the relation between attachment dimensions and negative attributions for achievement stressors was next examined. As shown in Table 10, after controlling for sex ($\Delta R^2 = .00$, ns), the attachment dimensions entered together at step 2 significantly predicted negative attributions ($\Delta R^2 = .15$, $p < .001$). However, anxiety ($sr^2 = .14$, $p < .001$) was a significant unique predictor accounting for almost all the variance explained for negative attributions. That is, the more anxious, but not avoidant, in attachment orientation, the more negative attributions endorsed. Thus, these results supported Hypothesis II (b) but did not support Hypothesis III (b).

A second regression was conducted to determine the relation between attachment and ruminative coping (see Table 11). Once sex was accounted for at step 1 ($\Delta R^2 = .05$, $p < .01$), the attachment dimensions, entered together at step 2, significantly predicted ruminative coping ($\Delta R^2 = .13$, $p < .001$). Again, anxiety ($sr^2 = .12$, $p < .001$) was the significant unique predictor. Hence, the more anxious, but not avoidant, in attachment orientation, the more rumination was used as a coping strategy in response to the achievement-related stress. Hypotheses III (a) and (b) were both supported by these

Table 10

Hierarchical Regression Examining the Prediction of Attachment Dimensions to Negative Attributions for Achievement-Related Stressors (N = 133)

Predictors	R^2	ΔR^2	Beta Weights	
			Entry	Last Step
Step 1	.00	.00		
Sex			.06	.13
Step 2	.16***	.16***		
Anxiety			.39***	.36***
Avoidance			.06	.06

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 11

Hierarchical Regression Examining the Prediction of Attachment Dimensions toRuminative Coping for Achievement-Related Stressors (N = 133)

Predictors	R^2	ΔR^2	Beta Weights	
			Entry	Last Step
Step 1	.05**	.05**		
Sex			-.23**	-.16*
Step 2	.18***	.13***		
Anxiety			.36***	.36***
Avoidance			.01	.01

* $p < .05$ ** $p < .01$ *** $p < .001$

findings.

In order for negative attributions and ruminative coping to potentially mediate the relation between attachment and depression, these variables have to predict depression. As shown in Table 12, after controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), negative attributions and rumination, entered as a block at step 2, significantly predicted depression ($\Delta R^2 = .16, p < .001$). As before, negative attributions ($sr^2 = .11, p < .001$), but not ruminative coping ($sr^2 = .01, ns$), was the significant unique predictor, suggesting that rumination explained little of the variance of depression, once negative attributions were taken into account. As such, rumination was eliminated from further analysis with achievement-related stress.

A final regression was conducted to test for a mediation effect (see Table 12). After controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), negative attributions, entered at step 2, significantly predicted depression ($\Delta R^2 = .16, p < .001$). At step 3, the attachment dimensions were found to significantly predict depression ($\Delta R^2 = .12, p < .001$). However, there seemed to be a partial mediation effect: the beta weight for anxiety ($\beta = .27, p < .01$) was reduced after controlling for negative attributions. See Figure 2. The reduction in the beta weight from .37 to .27 indicates the potency of the mediator (Holmbeck, 1997). The significance of the indirect effect from anxiety to depression through attributions was tested using the unstandardized beta weights and standard errors from the regression program. Based on the formula by Baron and Kenny (1986) and Kline (1998), the indirect effect ($z = 2.97$) was significant at the .01 level. These results indicate that the hypothesized relation between the anxiety attachment dimension and

Table 12

Hierarchical Regressions Examining the Prediction of Attachment Dimensions and Potential Mediators to Depression for the Achievement-Related Vignettes (N = 133)

Predictors	R^2	ΔR^2	Beta weights	
			Entry	Last Step
Step 1	.11***	.11***		
Sex			-.33***	-.33***
Step 2	.27***	.16***		
Negative Attributions			.36***	.36***
Ruminative Coping			.10	.10
Step 1	.11***	.11***		
Sex			-.33***	-.30***
Step 2	.27***	.16***		
Attributions			.39***	.26***
Step 3	.38***	.12***		
Anxiety			.27***	.27***
Avoidance			.20**	.20**

** $p < .01$ *** $p < .001$

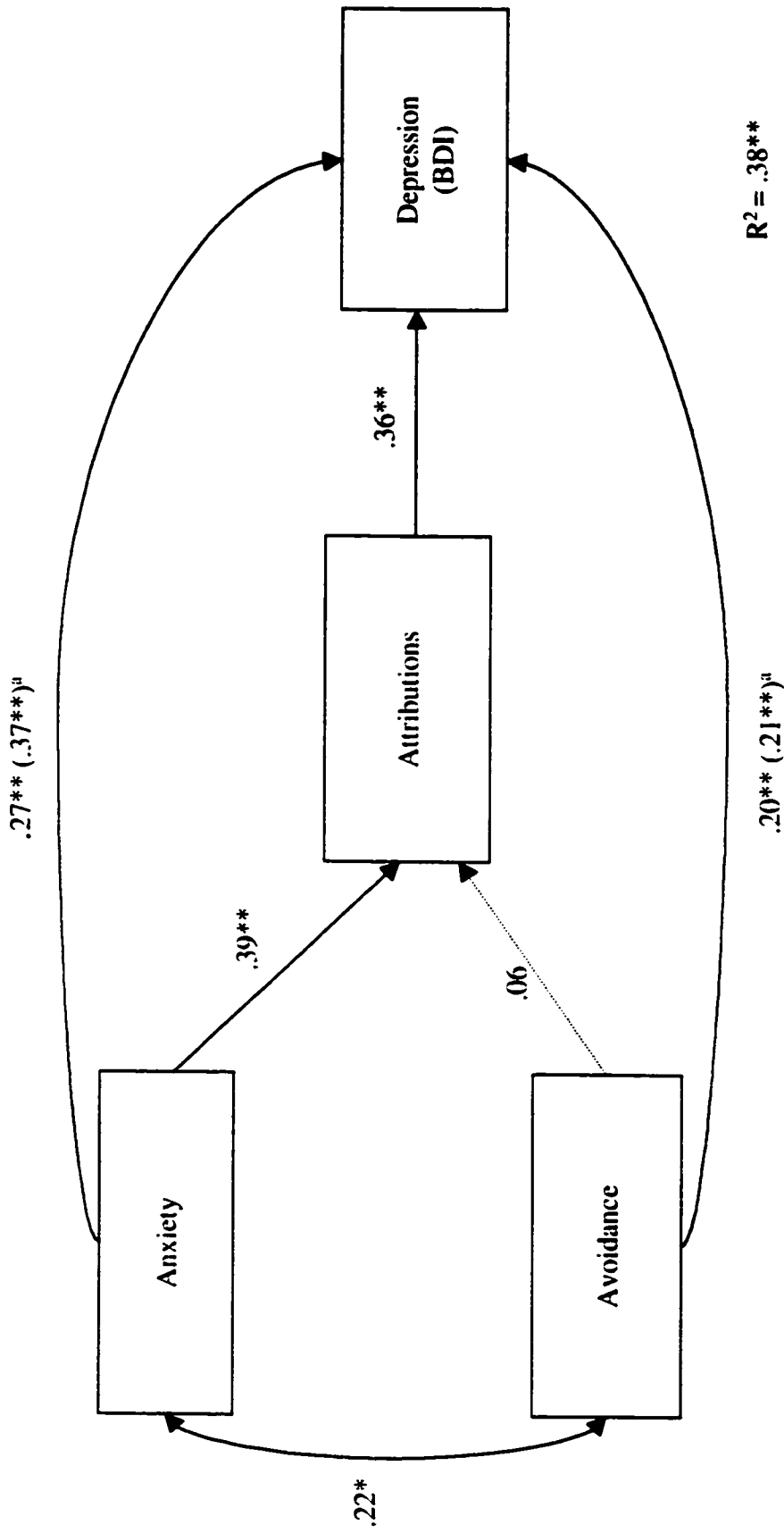


Figure 2. Processing achievement-related stress: Path model of the relation between attachment dimensions and depression¹

¹ The beta weights shown are based on hierarchical regression analyses.

^a Beta weight in bracket represents weight without the mediators

Note. Broken lines represent nonsignificant paths

N = 133; * $p < .05$ ** $p < .01$

depression was the same for interpersonal and achievement-related stressors, where negative attributions was a partial mediator.

The latter series of regression analyses allowed for a direct comparison of the relation between the attachment dimensions and depression for the interpersonal and achievement-related vignettes. However, as noted earlier, the stable-global-negative attributions for self and for other were correlated .75 for interpersonal vignettes and only .22 for achievement-related vignettes. As such, the regressions were rerun for achievement vignettes with negative-stable-global attributions for self and for other as two separate variables. The relation between the attachment dimensions and depression was previously established (see Table 4). Two regressions were conducted to determine whether the attachment dimensions predicted attributions about self and attributions about other (see Table 13). Sex was entered at step 1 ($\Delta R^2 = .06, p < .01$). As before, girls tended to make more negative stable-global attributions about themselves in response to the achievement-related problems. The attachment dimensions, entered together at step 2, significantly predicted negative stable-global attributions about self ($\Delta R^2 = .21, p < .001$). Both anxiety ($sr^2 = .13, p < .001$) and avoidance ($sr^2 = .04, p < .01$) were significant unique predictors. Sex was again entered at step 1 in the second regression ($\Delta R^2 = .05, p < .01$). The significant beta weight ($\beta = .23, p < .01$) indicated that boys made more negative stable-global attributions about the other in response to achievement-related problems. The attachment dimensions, entered as a block at step 2, significantly predicted negative stable-global attributions about other ($\Delta R^2 = .06, p < .01$). The anxiety dimension was the only significant unique predictor ($sr^2 = .06, p < .001$) and accounted

Table 13

Hierarchical Regressions Examining the Prediction of Attachment Dimensions to
Negative Attributions about Self and Other for Achievement-Related Vignettes (N = 133)

Predictors	R ²	ΔR ²	Beta weight
<u>Attributions about Self</u>			
Step 1	.06**	.06**	
Sex			-.25**
Step 2	.27***	.21***	
Anxiety			.38***
Avoidance			.20**
<u>Attributions about Other</u>			
Step 1	.05**	.05**	
Sex			.23**
Step 2	.11**	.06*	
Anxiety			.25**
Avoidance			-.06

** p < .01 *** p < .001

for all the variance of that step. These results suggest that adolescents who are more anxious in their attachment orientation tended to make negative stable-global attributions about themselves and about others in response to achievement-related stress.

Interestingly, girls tended to make more negative attributions about themselves, whereas boys tended to make negative attributions about others. Adolescents higher on avoidance made negative stable-global attributions about themselves, but not about others, in response to these stressors. This latter finding is consistent with and supports Hypothesis III (b).

In order to meet the criteria for mediation, negative-stable-global attributions about self and about other are required to predict depression. A regression was conducted to determine these relations. After controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), the two types of attributions, entered as a block at step 2, significantly predicted depression ($\Delta R^2 = .20, p < .001$). Negative stable-global attributions about self ($s_r^2 = .14, p < .001$) and negative stable-global attributions about other ($s_r^2 = .02, p < .05$) were both unique predictors. This result suggested that both attributions about self and about other would be tested as potential mediators of the relation between attachment and depression.

A final regression was conducted to test for mediation (see Table 14). Once sex was entered at step 1 ($\Delta R^2 = .11, p < .001$), negative attributions about self and about other, entered together at step 2, significantly predicted depression ($\Delta R^2 = .20, p < .001$). The attachment dimensions, entered as a block at step 3, were found to significantly predict depression ($\Delta R^2 = .08, p < .001$). There seemed to be partial mediation effects: the beta weights for anxiety ($\beta = .25, p < .01$) and avoidance ($\beta = .17, p < .05$) were

Table 14

**Hierarchical Regression Examining the Prediction of Attachment Dimensions and
Attributions about Self and Other to Depression for the Achievement-Related Vignettes
(N = 133)**

Predictors	R^2	ΔR^2	Beta weights	
			Entry	Last Step
Step 1	.11***	.11***		
Sex			-.33***	-.26***
Step 2	.31***	.20***		
Attributions about Self			.39***	.24**
Attributions about Other			.17*	.15
Step 3	.39***	.08***		
Anxiety			.25**	.25**
Avoidance			.17*	.17*

* $p < .05$ ** $p < .01$ *** $p < .001$

reduced after controlling for negative attributions about self and about other. See Figure 3. The change in the regression coefficients from .37 to .25 for anxiety and from .21 to .17 for avoidance are indicators of the potency of the mediators (Holmbeck, 1997). The significance of the indirect effect from avoidance to depression through attributions about self was tested. Calculated as previously, the indirect effect from avoidance to depression was significant ($z = 2.32, p < .05$). This result suggests that adolescents high on avoidance were likely to make negative stable-global attributions about themselves in response to the achievement-related stressors which, in turn, was associated with increased depressive symptoms. Next, the significance of the indirect effects from anxiety to depression through attributions about self and attributions about other were tested separately. The indirect effect through attributions about self ($z = 3.46, p < .01$), but not through attributions about other ($z = 1.66, ns$), was significant. Thus, in response to achievement stressors, adolescents high on the anxiety dimension were likely to make negative stable-global attributions about themselves, which in turn, were associated with more depressive symptoms.

Summary. Results from the above analyses, taken together, suggest many similarities between adolescents high on the anxiety and/or avoidance dimensions of attachment in the processing of interpersonal and achievement-related stressors. For interpersonal stressors, adolescents high on anxiety, in particular, and/or high on avoidance tended to make negative-stable-global attributions about themselves and others in response to the stress which in turn, was associated with increased depressive symptoms. Adolescents high on the anxiety dimension, whereas those low on avoidance,

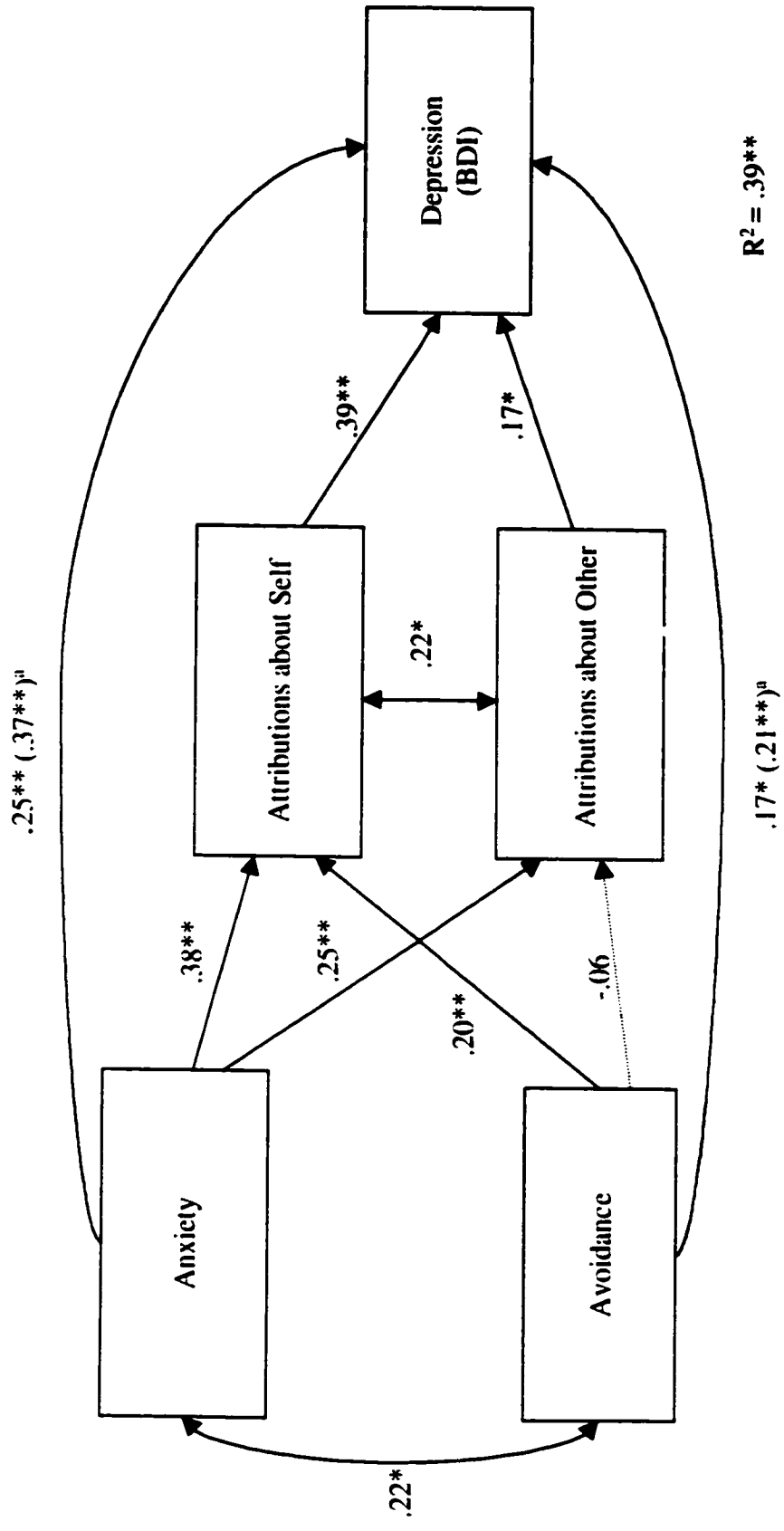


Figure 3. Processing achievement-related stress: Prediction from general attachment to depression considering attributions about self and other as mediators¹

¹ The beta weights shown are based on hierarchical regression analyses.

^a Beta weight in bracket represents weight without the mediators

Note. Broken lines represent nonsignificant paths

N = 133; * $p < .05$ ** $p < .01$

rated the interpersonal stressors as highly stressful. For the achievement-related stressors, a similar pattern was found. Adolescents high on anxiety made more negative stable-global attributions when faced with these stressors that, in turn, were associated with more severe depression. Although initially it appeared that adolescents high on avoidance were not likely to make negative attributions in response to achievement-related stress, the results changed when the negative attributions were separated into attributions about self and about other. Adolescents high on avoidance tended to make negative stable-global attributions about themselves, but not about others, in response to achievement-related stress; these attributions were associated with depression. Likewise, adolescents high on anxiety also tended to make negative stable-global attributions about themselves, more than about others, for these stressors. Thus, it seems that there are more similarities between adolescents who are insecure in their attachment orientation, whether high on anxiety or high on avoidance, than there are differences. However, the pattern was stronger for anxiety as there was a clearer and bigger partial mediation effect for anxiety than avoidance. That is, adolescents' feelings about the evaluation of others' availability and dependability were important to a seemingly lesser extent than their feelings of anxiety around the self.

In general, boys and girls tended to process the interpersonal and achievement stressors similarly as there were no significant interaction effects with gender. However, girls were more anxious in their attachment orientation, found the interpersonal problems to be more stressful, were more likely to use a ruminative coping strategy, and reported more depressive symptoms than did boys. Interestingly, girls were more likely to make

negative stable-global attributions about themselves in response to achievement-related problems, while boys tended to make more negative stable-global attributions about others in response to these same stressors. This difference may help explain the relatively small correlation between the attributions about self and other for achievement stressors and the weaker path from anxiety to depression through attributions about other.

Objective II: Attachment to Different Figures and the Relation to Depression

The second main objective of this study was to investigate (1) the relative importance of working models of attachment in relation to mother, father, best friend, and romantic partner in the prediction of depression; (2) whether adolescents process stress differently within these four attachment relationships resulting in different pathways to depression; and (3) whether negative stable-global attributions and ruminative coping mediate these relations. As before, all the analyses that follow were also run with two-way and three-way interaction terms to test for gender differences. For simplicity, the gender effects are presented only where significant.

Goal I: The relative importance of different attachment figures. It is believed that different figures within the attachment hierarchy may be differentially associated with adolescent adjustment. During adolescence, the romantic partner becomes a key figure in the functioning of the attachment system. Moreover, mothers, more than fathers, continue to serve important attachment functions (i.e., safe haven and secure base behaviors) during adolescence. Thus, relative to best friend and father, romantic partner and mother are expected to be the two relationships most closely and uniquely associated with adjustment. Therefore, it was hypothesized that adolescents who have more

negative working models of self and/or of other in relation to their romantic partner and/or their mother are at greatest risk for depression (Hypothesis 1).

In order to test this hypothesis, two regression analyses were performed to assess the differential predictive validity of attachment models of self and of other with mother, father, best friend, and romantic partner to depression² (see Table 15). In the first regression, adolescents who were involved in a romantic relationship and thus, who reported on their attachment to this person as well as to the other three attachment figures were included ($n = 106$). After controlling for sex at step 1 ($\Delta R^2 = .09, p < .001$), the attachment models of self and of other with each of the four attachment figures were entered together as a block at step 2. These eight variables explained an additional 22.2% ($p < .001$) of the variance of depression. Besides sex ($sr^2 = .10, p < .001$), the significant unique predictors were models of self ($sr^2 = .03, p < .05$) and of other ($sr^2 = .05, p < .01$) with mother and models of self ($sr^2 = .07, p < .01$) and of other ($sr^2 = .03, p < .05$) with romantic partner. Together, these four variables explained 18% of 22% of the variance

² In order to test for gender differences, models of self and models of other with ($n = 106$) or without ($n = 133$) romantic partner were analyzed separately in four regressions. In these regressions, sex was entered at step 1, models of self or of other were entered at step 2, and the interaction terms for models of self or of other by sex were entered together at step 3. The last step was not significant in any of the four regressions. In the interest of simplicity and readability, models of self and of other were analyzed together in two regressions.

Table 15

Hierarchical Regression Examining Differential Prediction of Attachment Models of Self and of Other with Four Figures to Depression in Adolescence

Predictors	R ²	R ² Δ	Beta
Step 1	.09**	---	
Sex			-.33***
Step 2	.31***	.22***	
Self with Mother			-.19*
Self with Father			.08
Self with Friend			.07
Self with Partner			-.30**
Other with Mother			-.25**
Other with Father			-.05
Other with Friend			-.05
Other with Partner			.18*

Note. $N = 106$

* $p < .05$ ** $p < .01$ *** $p < .001$

accounted for by the step. Thus, insecure attachment relationships with mother and romantic partner contributed significantly and differentially to current levels of depression for adolescents involved in a romantic relationship.

In the second regression, the differential predictive validity of working models of attachment with mother, father, and best friend to depression was assessed for the entire sample (i.e., adolescents who either had or did not have a romantic partner). As shown in Table 16, after controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), the attachment models of self and of other with mother, father, and best friend, entered as a block at step 2, significantly predicted depression ($\Delta R^2 = .13, p < .01$). Similar results to the previous regression were obtained. Negative models of self ($s_r^2 = .04, p < .05$) and of other ($s_r^2 = .04, p < .05$) with mother were the only significant unique predictors. These two variables accounted for most (8%) of the variance of the step.

In summary, the results of these regressions support the hypothesis and suggest that adolescents' relationships with their mother and romantic partner differentially predicted risk for depression. Specifically, adolescents who had more negative models of self and of other in relation to mother and those who had more negative models of self but more positive models of other in relation to their romantic partner (for those who were involved in a romantic relationship) endorsed more symptoms of depression. There were no significant differences for boys or girls.

Goal II: Pathways from attachment to different targets to depression. The second goal was to investigate whether negative attributions and ruminative coping mediate the link between relationship-specific attachment models and depression when confronted

Table 16

Hierarchical Regressions Examining Differential Prediction of Attachment Models of Self and of Other with Three Figures to Depression in Adolescence

Predictors	R ²	R ² Δ	Beta
Step 1	.11**	---	
Sex			-.33***
Step 2	.24***	.13**	
Self with Mother			-.21*
Self with Father			-.04
Self with Friend			-.00
Other with Mother			-.21*
Other with Father			-.06
Other with Friend			-.01

Note. N = 133: * $p < .05$ ** $p < .01$ *** $p < .001$

with stressors within the different relationships (i.e., mother, father, best friend, and romantic partner). The findings from the previous analyses, in which working models with mother and romantic partner were uniquely predictive of depression, suggest that the processing patterns from working models of attachment to depression may differ depending on the attachment figure. Given that attachment models in relation to father and best friend did not uniquely predict depression and in the interest of readability, the patterns for these two figures are discussed in Appendices E and F, respectively. The pathways linking attachment in relation to mother and romantic partner to depression are presented shortly. First, differences in how the adolescents generally responded to the stressors involving the four target figures were examined.

Responses to the stressors. Adolescents were hypothesized to report the interpersonal problems involving romantic partner and/or best friend as highly stressful. As adolescents have more experience in their relationships with their parents and thus have well-developed expectations of the relational patterns with each parent, it was hypothesized that these stressors would not be rated as stressful as those with peers. The means and standard deviations for the participants' ratings of the stressfulness of the interpersonal situations involving the four different attachment figures, based on a scale of 1 to 7, were shown previously in Table 5. To determine whether adolescents differed in their ratings of the stressfulness of the interpersonal situations with specific target figures, a 2 (sex) x 4 (target figures) between-within subjects ANOVA design for stressfulness scores (DV) was conducted. Based on the Wilks' criterion, results yielded a non-significant interaction effect, $F(3,130) = .97$, *ns*, but a significant main effect of sex.

$F(1,132) = 11.00, p < .01$. Girls ($M = 5.47, SD = 1.11$) reported the interpersonal problems were more stressful than did boys ($M = 4.91, SD = 1.49$). There was also a significant main effect of target figure, $F(3,130) = 20.62, p < .001$. Follow-up t -tests for paired samples, with Bonferroni correction, revealed that adolescents found the stressors involving their mother to be the least stressful of the four. Stressors involving father were significantly less stressful than those with best friend or romantic partner, which did not differ from each other, and were rated as the most stressful. Thus, as hypothesized, adolescents found the stressors involving their best friend and romantic partner as the most stressful.

Given that adolescents likely have a stronger sense of how problems in their relationships with their mother and father will unfold, it was also expected that adolescents would make fewer negative attributions and would be less likely to rely on a ruminative coping strategy in response to stressors involving parents relative to stressors involving their best friend and romantic partner. Presented in Table 17 are the means and standard deviations for the average number of negative attributions endorsed by adolescents as well as the mean scores on the ruminative coping scale for each type of stress. Using the Wilks' criterion, a 2 (sex) X 4 (targets) between-within subjects ANOVA with the negative stable-global attributions (for self and other combined) as the dependent variable revealed a nonsignificant interaction effect, $F(3,130) = 2.08, ns$ and main effect of sex, $F(1,132) = 3.54, p < .10$. However, there was a significant main effect of target, $F(3, 130) = 16.74, p < .001$. Follow-up t -tests for paired samples, with Bonferroni correction, showed that adolescents endorsed more negative stable-global

Table 17

Mean Ratings (and Standard Deviations) of the Negative Stable-Global Attributions Endorsed and the Ruminative Coping Scores for the Different Hypothetical Stressors

Vignette	<u>Stable-Global Attributions</u>	<u>Ruminative coping</u>
	Mean (SD)	Mean (SD)
<u>Interpersonal</u>		
Mother	.236 (.181) ^a	2.10 (.64) ^a
Father	.278 (.193) ^b	2.07 (.65) ^a
Best Friend	.343 (.208) ^c	2.14 (.65) ^a
Romantic Partner	.343 (.193) ^c	2.29 (.69) ^b

Note: $N = 134$; means with different letter superscripts in the column differ significantly.

$p < .01$ with Bonferroni correction.

attributions in stressors involving best friend ($M = .343$, $SD = .208$) and romantic partner ($M = .343$, $SD = .193$) than they did with mother and father. The fewest number of endorsed statements were made for stressors involving mother ($M = .236$, $SD = .181$). For stressors with father, the number of attributions endorsed was significantly different from the others and fell in the middle ($M = .278$, $SD = .193$). These results support the hypothesis.

With rumination as the dependent variable, a second 2 (sex) X 4 (targets) between-within subjects ANOVA revealed a nonsignificant interaction effect, $F(3,130) = 0.56$, *ns*, but a significant main effect of sex, $F(1,132) = 12.22$, $p < .001$ and a significant main effect of target, $F(3,130) = 7.03$, $p < .001$. On average, girls ($M = 2.27$, $SD = .66$) reported ruminating more often than boys ($M = 1.91$, $SD = .58$) for all types of stress. Follow-up *t*-tests for paired samples, with Bonferroni correction, showed that adolescents ruminated significantly more often following stressors involving their romantic partner ($M = 2.29$, $SD = .69$) than with any other attachment figure. Adolescents reported ruminating equally often for stressors involving mother, father, and best friend. These results partially supported the hypothesis in that adolescents ruminated the most following stressors involving their romantic partner but not their best friend.

In summary, adolescents rated the stressors with romantic partner and best friend as the most stressful and made the highest number of negative stable-global attributions in response to these problems. Moreover, adolescents used a ruminative coping strategy most often when confronted with stressors involving romantic partner. Although boys and girls did not differ in the number of negative stable-global attributions endorsed

following the stressors, girls rated the vignettes as more stressful and ruminated more often than boys in response to problems involving each of the four target figures.

Pathway I: Link between attachment to mother and depression. Adolescents who have more negative models of self and/or of other with mother were expected to endorse more negative stable-global attributions about themselves and the other in response to stressors involving mother and thus, report experiencing more depressive symptoms. The potential mediating role of a ruminative coping strategy was also explored.

To test the hypothesis, a series of hierarchical regressions were conducted. Although the relative importance of attachment models to mother had been previously established, a regression was conducted to examine the relation between models of self and of other and depression independent of the other target figures. Controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), models of self and of other in relation to mother, entered as a block at step 2, significantly predicted depression ($\Delta R^2 = .13, p < .001$). Models of self ($s_r^2 = .05, p < .01$) and of other ($s_r^2 = .05, p < .01$) were both unique predictors. See Table 18. That is, the more negative the working models in relation to mother, the more severe depressive symptoms reported.

Separate regressions were performed to investigate whether the attachment models predicted the potential mediators, negative attributions and rumination. With negative attributions for stressors with mother as the dependent variable, sex was entered at step 1 ($\Delta R^2 = .02, ns$). The attachment models, entered together at step 2, significantly predicted negative attributions ($\Delta R^2 = .16, p < .001$). Models of self ($s_r^2 = .08, p < .001$) and of other ($s_r^2 = .05, p < .05$) were significant unique predictors. Thus, the more

Table 18

Hierarchical Regressions Examining the Prediction of Working Models of Attachment and Potential Mediators to Depression for the Vignettes with Mother (N = 134)

Predictors	R^2	ΔR^2	Beta weights	
			Entry	Last Step
Step 1	.11***	.11**		
Sex			-.33***	-.33***
Step 2	.24***	.13***		
Model of Self			-.23**	-.23***
Model of Other			-.24**	-.24***

* $p < .05$ ** $p < .01$ *** $p < .001$

negative the models of self and of other in relation to mother, the more negative attributions were made in response to stressors involving mother. To explore the relation between attachment to mother and ruminative coping, a regression was conducted. After sex was entered at step 1 ($\Delta R^2 = .05$, $p < .01$), the attachment models, entered as a block at step 2, did not significantly predict ruminative coping ($\Delta R^2 = .02$, ns). Given that the models of attachment did not predict ruminative coping, this variable was dropped from subsequent analyses for mother.

To meet one of the essential criteria for mediation, negative attributions must predict the criterion, depression. Controlling for sex at step 1 ($\Delta R^2 = .11$, $p < .001$), negative attributions, entered at step 2, explained an additional 15.2% ($p < .001$) of the variance of depression. The interaction term, attributions X sex, entered at step 3 was significant ($\Delta R^2 = .03$, $p < .05$). This result suggested that the hypothesized mediator, negative attributions, was functioning differently for boys and girls and that the pathway from attachment with mother to depression likely differed across genders. As such, the regressions were rerun separately for boys and girls.

Pathway I(a): Link between attachment to mother and depression for girls. A simultaneous regression was conducted to determine whether attachment models of self and of other with mother predicted depression for girls ($n = 88$). Models of self and of other with mother significantly predicted depression ($R^2 = .18$, $p < .001$). Both models of self ($sr^2 = .07$, $p < .01$) and of other ($sr^2 = .08$, $p < .001$) were significant unique predictors. See Table 19. Thus, girls who had more negative models of self and/or of other with mother reported greater symptoms of depression.

Table 19

Simultaneous and Hierarchical Regressions Examining the Prediction of Girls' Working Models of Attachment and Potential Mediators to Depression for the Vignettes with Mother (n = 88)

Predictors	R ²	ΔR ²	Beta weights	
			Entry	Last Step
Step 1	.18***	.18***		
Model of Self			-.27**	-.27**
Model of Other			-.28**	-.28**
Step 1	.31***	.31***		
Attributions			.56***	.46***
Step 2	.37***	.05*		
Model of Self			-.15	-.15
Model of Other			-.17	-.17

* p < .05 ** p < .01 *** p < .001

To assess whether girls' attachment models in relation to mother predicted the potential mediators, negative attributions and rumination, two regressions were conducted. Models of self and of other predicted negative attributions ($R^2 = .14$, $p < .01$). As before, both models of self ($sr^2 = .06$, $p < .05$) and of other ($sr^2 = .05$, $p < .05$) were unique predictors. The more negative girls' models of self and/or of other with mother, the more negative attributions endorsed. Models of self and of other were not significantly predictive of ruminative coping ($R^2 = .01$, ns). As such, ruminative coping was dropped from further analyses.

Next, to meet one of the criteria for mediation, the relation between attributions and depression was examined. Negative attributions ($R^2 = .31$, $p < .001$) significantly predicted depression. See Table 19. That is, the more negative attributions endorsed by girls, the more depressive symptoms reported.

Finally, the mediation model for girls was tested. For mediation to occur, the relation between the working models of attachment and depression should no longer significantly predict depression, once negative attributions were taken into account. After controlling for negative attributions at step 1 ($\Delta R^2 = .31$, $p < .001$), models of self and of other with mother, entered together at step 2, significantly predicted depression ($\Delta R^2 = .05$, $p < .05$). See Table 19. However, closer examination of the beta weights suggested a mediation effect. The beta weights for model of self ($\beta = -.15$, ns) and for model of other ($\beta = -.17$, $p < .10$) were no longer significant after controlling for negative attributions. See Figure 4. The changes in regression coefficients from $-.27$ to $-.15$ for model of self and from $-.28$ to $-.17$ for model of other are indicative of the potency of the mediator

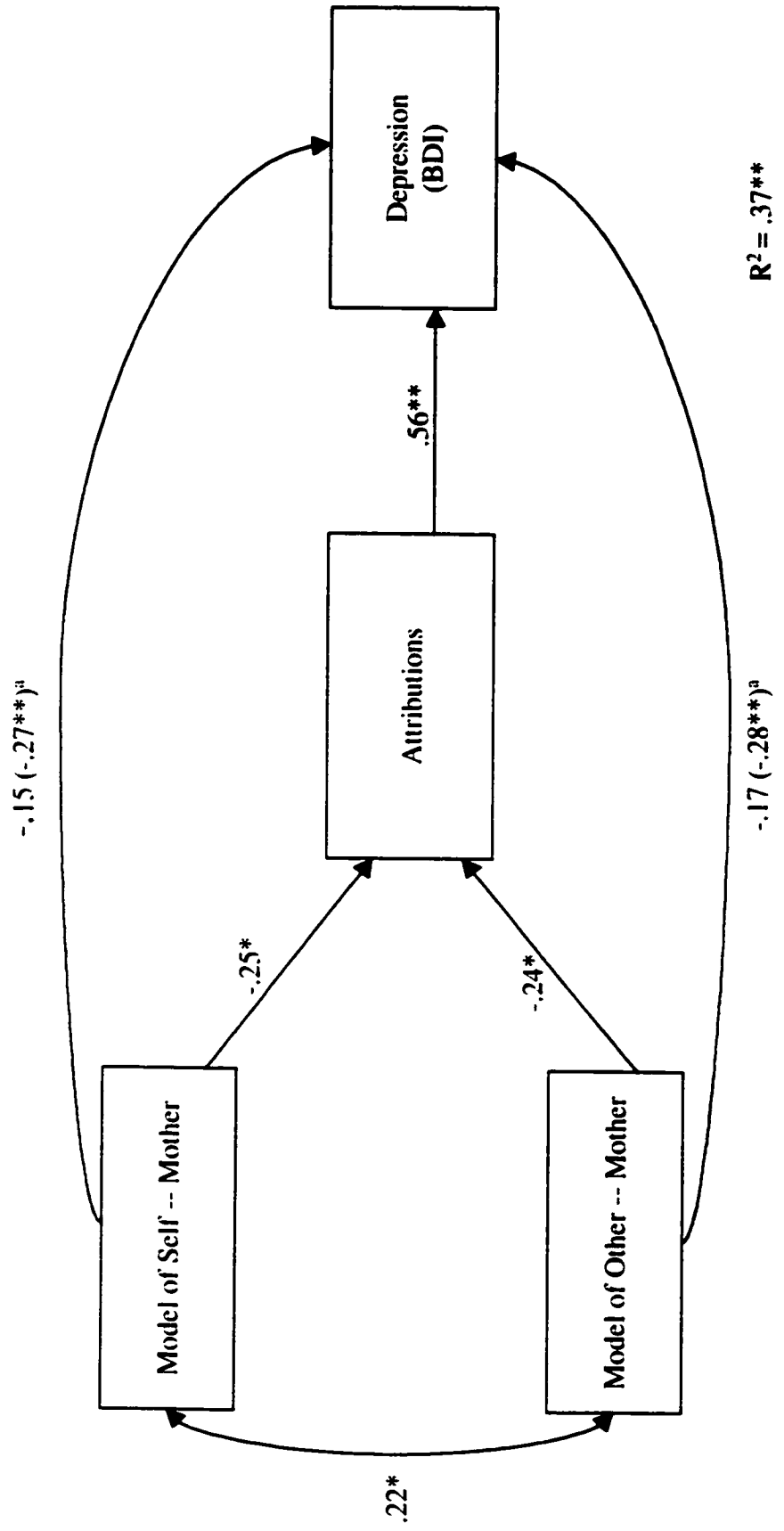


Figure 4. Processing relationship stress involving mother: Pathway from models of attachment to depression for girls¹

¹ The beta weights shown are based on regression analyses.

^a Beta weight in bracket represents weight without the mediators
 N = 88; * p < .05 ** p < .01

(Holmbeck, 1997). Calculated as previously (Kline, 1998), the indirect effect from model of self to depression through negative attributions was significant ($z = -2.25, p < .05$). Likewise, the indirect effect from model of other to depression through attributions was also significant ($z = -2.13, p < .05$). Thus, the relations between girls' working models of attachment to mother and depression were mediated by negative attributions.

Pathway I(b): Link between attachment to mother and depression for boys. A simultaneous regression was run to investigate the relation between attachment to mother and depression for boys ($n = 46$). Models of self and of other with mother failed to significantly predict depression scores for boys ($R^2 = .10, ns$). This result indicated that the mediation model could not apply to adolescent boys. However, there was the possibility of indirect effects linking attachment to depression.

Two regressions were conducted to examine whether boys' models of attachment in relation to mother predicted negative attributions and ruminative coping in response to stress. Models of self and of other, entered together, significantly predicted negative attributions ($R^2 = .23, p < .01$). Model of self ($sr^2 = .14, p < .01$) was the only unique predictor and accounted for most of the variance. Models of self and of other, entered together, also significantly predicted ruminative coping ($R^2 = .14, p < .05$). As before, model of self ($sr^2 = .11, p < .05$) was the only unique predictor and explained most of the variance. These result indicated that boys who had more negative models of self in relation to mother tended to both endorse more negative attributions and use a ruminative coping strategy in response to stressors involving their mother.

For indirect effects to have occurred, negative attributions and ruminative coping

must be predictive of depressive symptoms. When entered simultaneously into a regression, negative attributions and rumination failed to predict depression ($R^2 = .02$, ns). See Figure 5. Thus, there were no direct or indirect effects from attachment to depression for boys.

In summary, these results supported the hypothesis for girls only. Adolescent girls who had more negative models of self and of other in relation to mother tended to make negative stable-global attributions about themselves and the other in response to stress which, in turn, was associated with greater depressive symptoms.

Pathway II: Link between attachment to romantic partner and depression. It was hypothesized that adolescents who have more negative models of self and/or of other with their romantic partner would be likely to (a) make more negative stable-global attributions about themselves and the other in response to stress, (b) use a ruminative coping strategy, and (c) as such, report experiencing more symptoms of depression. Several hierarchical regressions were performed to assess the relation between attachment models with romantic partner and depression in addition to the potential mediating roles of negative attributions and ruminative coping when processing stressors involving this figure. Only adolescents who were involved in a romantic relationship were included in these analyses ($n = 106$).

The first regression reestablished the association between working models of attachment with romantic partner and depression, independent of the other attachment figures. After controlling for sex at step 1 ($\Delta R^2 = .08$, $p < .01$), models of self and of other, entered as a block at step 2, significantly predicted depression ($\Delta R^2 = .07$, $p < .05$).

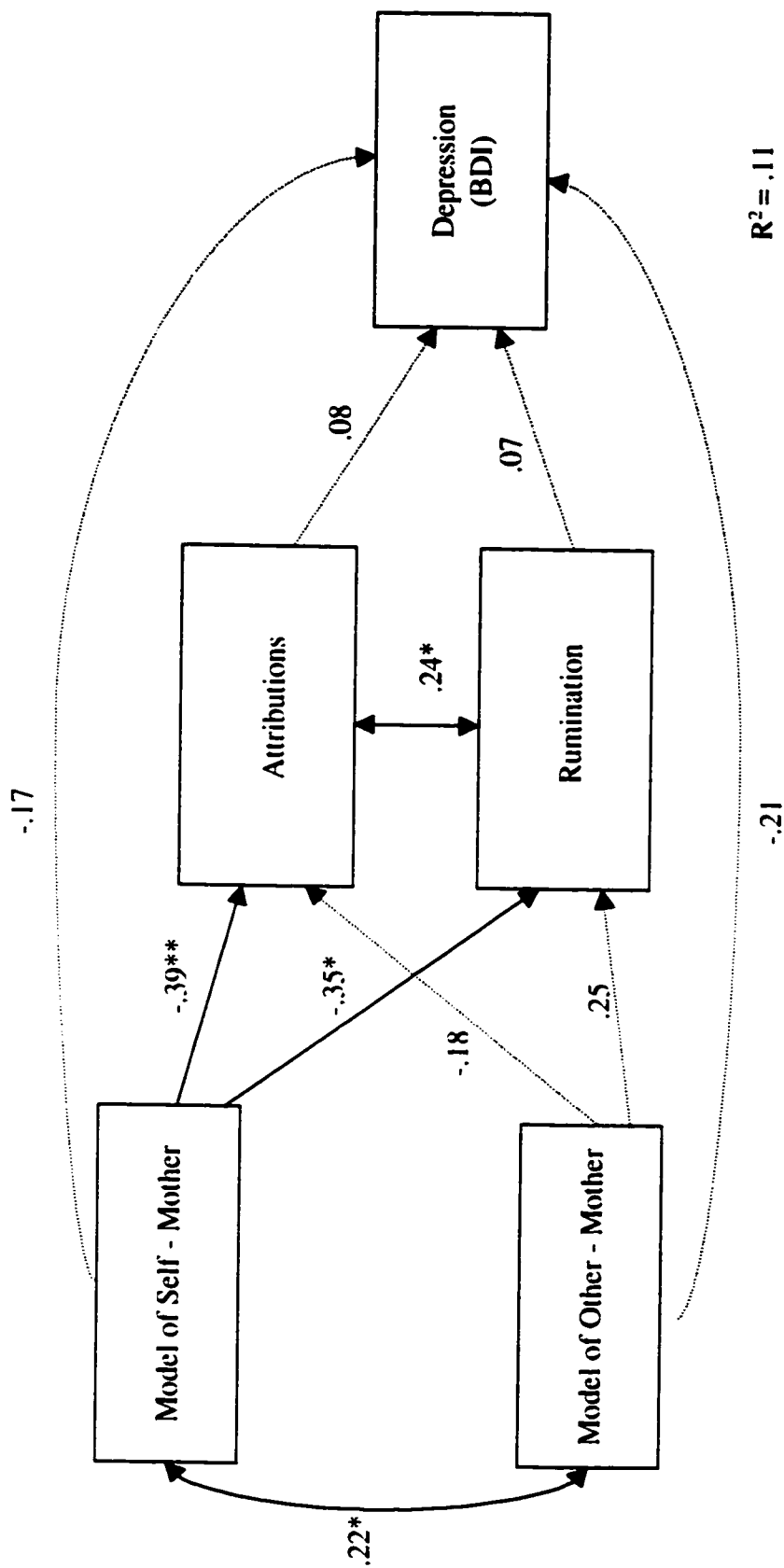


Figure 5. Processing relationship stress involving mother: Pathway from models of attachment to depression for boys¹

¹ The beta weights shown are based on regression analyses.

Note. Broken lines represent nonsignificant paths.

N = 46; * $p < .05$ ** $p < .01$

Model of self ($\underline{sr}^2 = .07, p < .01$), but not model of other ($\underline{sr}^2 = .01, \underline{ns}$), was a significant unique predictor. See Table 20 and Figure 6. That is, the more negative the model of self in relation to romantic partner, the more depressive symptoms reported.

Next, hierarchical regressions were conducted to investigate whether the attachment models predicted the potential mediators, negative attributions and rumination. Sex was entered at step 1 ($\Delta R^2 = .06, p < .05$). Girls ($\beta = -.24, p < .05$) were found to make more negative attributions in response to stressors involving romantic partner than were boys. Models of self and of other, entered together at step 2, predicted negative attributions ($\Delta R^2 = .12, p < .001$). Model of self ($\underline{sr}^2 = .12, p < .001$) accounted for all of the variance and thus, was the only significant unique predictor. In the second regression, sex was entered at step 1 ($\Delta R^2 = .06, p < .05$). Girls ($\beta = -.24, p < .05$) also used a ruminative coping strategy more than boys. The attachment models, entered as a block at step 2, significantly predicted ruminative coping ($\Delta R^2 = .14, p < .001$). Model of self ($\underline{sr}^2 = .09, p < .001$) and model of other ($\underline{sr}^2 = .07, p < .01$) were significant unique predictors. Thus, the more negative the model of self, the more negative attributions and rumination reported; the more positive the model of other, the more a ruminative coping strategy was used.

The predictive validity of negative attributions and ruminative coping to depression was examined in order to verify that these variables met one of the criteria for mediation. After controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), negative attributions and ruminative coping, entered as a block at step 2, significantly predicted the criterion, depression ($\Delta R^2 = .11, p < .001$). Negative attributions ($\underline{sr}^2 = .06, p < .01$) and rumination

Table 20

Hierarchical Regressions Examining the Prediction of Working Models of Attachment and Potential Mediators to Depression for the Vignettes with Romantic Partner (N = 106)

Predictors	R^2	ΔR^2	Beta weights	
			Entry	Last Step
Step 1	.09**	.09**		
Sex			-.29**	-.31**
Step 2	.16**	.07*		
Model of Self			-.27**	-.27**
Model of Other			.15	.15
Step 1	.11***	.11***		
Sex			-.33***	-.23**
Step 2	.22***	.11***		
Negative Attributions			.25**	.25**
Ruminative Coping			.19*	.19*

* $p < .05$ ** $p < .01$ *** $p < .001$

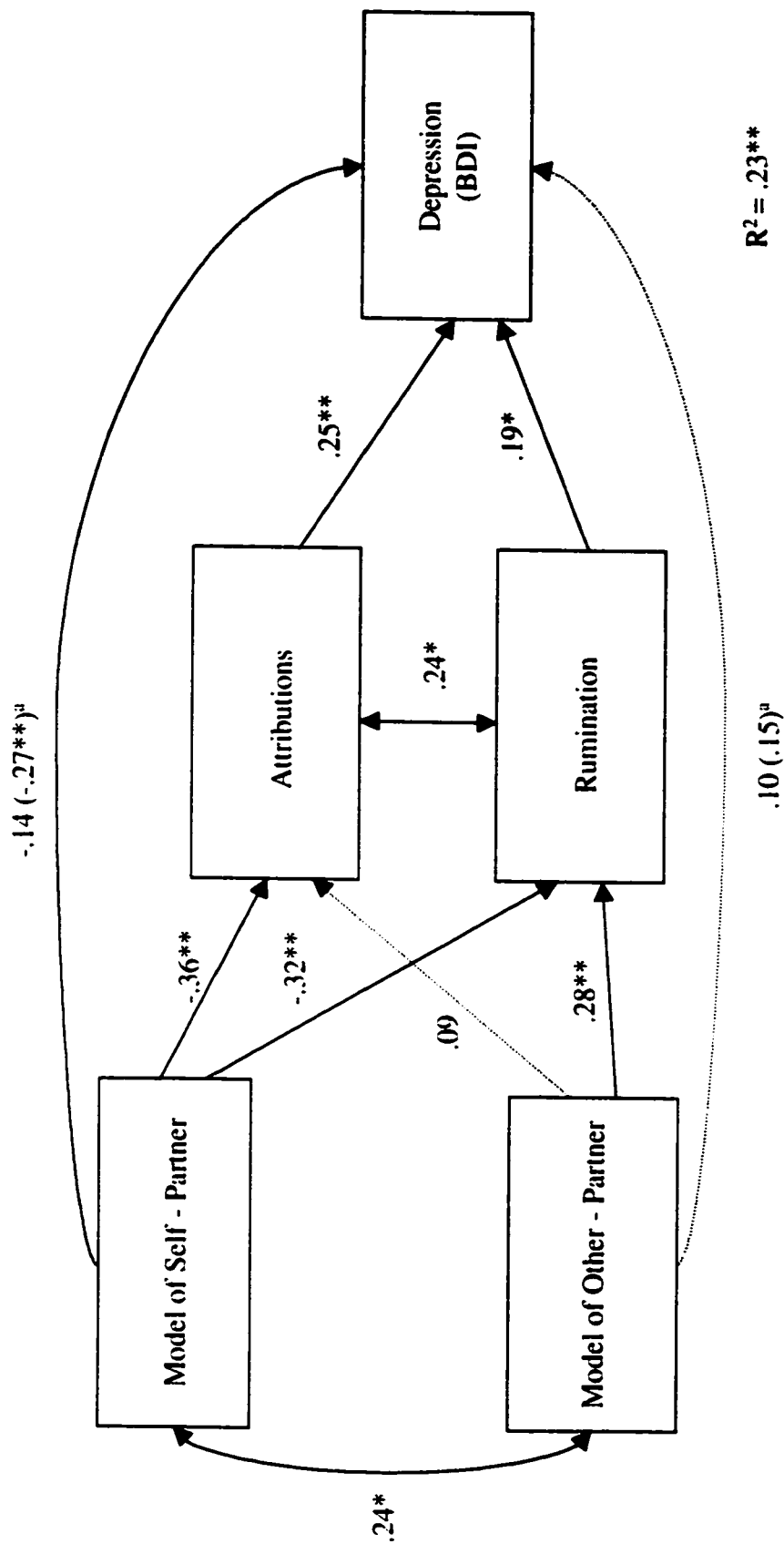


Figure 6. Processing relationship stress involving romantic partner: Prediction from models of attachment to attributions, rumination, and depression¹

¹ The beta weights shown are based on hierarchical regression analyses.

^a Beta weight in bracket represents weight without the mediators
 N = 106; * p < .05 ** p < .01

($s_r^2 = .03$, $p < .05$) were both unique predictors. See Table 20. These results indicate that the more negative attributions made and/or the more a ruminative strategy is relied upon, the more depressive symptoms reported.

The final regression tested whether the relation between model of self with romantic partner and depression was mediated by negative attributions and ruminative coping. After controlling for sex at step 1 ($\Delta R^2 = .09$, $p < .01$), negative attributions and ruminative coping, entered together at step 2, significantly predicted depression ($\Delta R^2 = .13$, $p < .001$). The attachment models, entered at step 3, did not significantly explain additional variance of depression ($\Delta R^2 = .02$, *ns*). See Table 21. Thus, there was a mediator effect: model of self ($\beta = -.14$, *ns*) was no longer a significant predictor of depression after controlling for attributions and rumination. See also Figure 6.

In summary, the results support the hypothesis for the working model of self in relation to romantic partner. Adolescents who had more negative models of self in relation to their romantic partner tended to make negative stable-global attributions and to use a ruminative coping strategy to deal with stress in that relationship which, in turn, was associated with increased depressive symptoms. Girls tended to make more negative attributions and ruminated more than boys; however, there were no significant gender interaction effects suggesting that the processing pattern was similar for boys and girls. Interestingly and unexpectedly, adolescents who had a more positive model of their romantic partner also tended to use a ruminative strategy to cope with stressors involving their partner.

Summary. Results from the above analyses, taken together, support the validity of examining both the relative importance of different attachment figures in the prediction of

Table 21

Hierarchical Regression Examining the Relation Between Models of Attachment and Depression After Controlling for Attributions and Rumination for Vignettes with Romantic Partner (N = 106)

Predictors	R^2	ΔR^2	Beta weights	
			Entry	Last Step
Step 1	.09**	.09**		
Sex			-.29**	-.22*
Step 2	.21***	.13***		
Attributions			.31**	.27**
Rumination			.14	.09
Step 3	.23***	.02		
Model of Self			-.14	-.14
Model of Other			.10	.10

* $p < .05$ ** $p < .01$ *** $p < .001$

depression as well as the different pathways linking working models of attachment to mother, father, best friend, and romantic partner and depression. When the working models in relation to the different attachment figures were compared, insecure relationships with mother and romantic partner were found to differentially predict risk for depression. Upon closer examination of the pathways to depression in relation to specific targets, it was found that adolescent girls, but not boys, who had more negative models of self and of other in relation to mother tended to make negative stable-global attributions about themselves and the other in response to stress, which in turn, were associated with greater depressive symptoms. Thus, there was a mediation effect for girls only that explained the relation between attachment to mother and depression. A full mediation effect was also found for romantic partner as adolescents who had more negative models of self in relation to this figure tended to make negative attributions and to use a ruminative coping strategy to deal with stress in that relationship, which was also associated with increased depressive symptoms. This pattern was similar for both girls and boys.

Unlike for mother and romantic partner, working models of attachment in relation to father and to best friend were only indirectly related to depression (see Appendices E and F). Specifically, adolescents who had more negative models of self or other in relation to father and/or more negative models of self in relation to best friend tended to endorse negative attributions in response to stressors. These negative attributions were associated with depressive symptoms.

Discussion

The results of this study provided a greater understanding of the links between generalized attachment orientation, attachment to specific figures, and depression in adolescence. Adolescents with more insecure orientations to attachment relationships were found to perceive stressful situations and in some instances, cope with the stressors in ways that seemed to contribute to levels of depressive symptoms. Differences in attachment orientation were also related to the manner in which adolescents responded to two types of stressful situations (i.e., interpersonal versus achievement-related). Moreover, the results indicated that the quality of the relationships with certain attachment figures (i.e., mother and romantic partner) was more closely associated with the risk for depression and that the pathways to depression varied depending on the relationship under consideration. These findings are discussed further by examining the objectives of this study separately.

Objective I: Understanding the Relation between Attachment and Depression for Interpersonal Versus Achievement-related Stressors

In establishing a relation between attachment and depression, the results of this study indicated that adolescents who were high on the anxiety dimension of attachment (i.e., corresponding to preoccupied and fearful attachment styles) and/or high on the avoidance dimension of attachment (i.e., consistent with dismissing and fearful attachment styles) were more likely to report depressive symptoms. These findings support previous research that has suggested that individuals with preoccupied and fearful attachment styles are more vulnerable to experiencing depression (e.g., Carnelley et al., 1994; Murphy & Bates, 1997). However, these results are also consistent with those from

Kobak et al. (1991) who found that the relation between attachment insecurity and depressive symptoms was more robust than the relation between preoccupied attachment and depression. That is, it seems that adolescents who are insecurely attached in general are more likely to be at risk for experiencing depressive symptoms.

While insecure attachment was associated with depression, individual differences in attachment orientation were found to affect the pathways to depression. One striking difference between adolescents who were more anxious versus more avoidant in their attachment orientation concerned their perceptions of interpersonal and achievement-related stresses. Overall, the adolescents reported that the interpersonal and achievement stressors were moderately or highly stressful. As hypothesized, adolescents who were higher on the anxiety dimension of attachment rated both types of stress as salient and stressful. However, they were more likely to be stressed by the interpersonal stressors, in particular, as the anxiety dimension was found to be a stronger predictor of the stressfulness rating for interpersonal than achievement-related vignettes. In contrast, adolescents who were high on the avoidance dimension of attachment, were less likely to report that the interpersonal vignettes or achievement-related vignettes were stressful. Perhaps these adolescents were defensively denying their sensitivity to stress. This result is comparable to Kobak and Sceery (1988) who found that adolescents with a dismissing attachment pattern tended to minimize acknowledgement of distress by reporting no more self-related distress than secures even though they were rated by peers as more anxious, more hostile, and less ego resilient.

These individual differences suggest that the appraisal of stressfulness of problems varied as a function of attachment orientation. That is, even at a level of initial

perceptions of stress, adolescents who are more anxious or more avoidant are affected differently. For the same type of situation, individuals who are more anxious will feel highly stressed while those who are more avoidant will report feeling less stressed. Further, how people perceive or judge the situation will likely have an impact on their emotional state. Indeed, attachment theorists (e.g., Bowlby, 1980; Cassidy, 1994) have suggested that anxious individuals are hypervigilant to signals of distress and maximize their negative emotionality, whereas avoidant individuals suppress their feelings of distress when they are exposed to stressful situations so as to maintain their independence from others.

Despite these initial differences, many similarities as well as other differences between adolescents high on anxiety and/or avoidance were found when negative stable-global attributions and ruminative coping were examined as potential mediators of the relation between attachment and depression in response to interpersonal versus achievement-related stress. When faced with interpersonal stresses, adolescents who were either high on the anxiety dimension of attachment and/or high on the avoidance dimension were found to make negative stable-global attributions about both themselves and the attachment figures. These negative attributions, in turn, were associated with more depressive symptoms. The effect was stronger, however, for adolescents who were high on the anxiety dimension. These results support, for the most part, Collins' (1996) findings that preoccupied adults explained events in negative ways and reported more emotional distress, while avoidant adults also provided negative explanations but did not report emotional distress. In this study, adolescents who were high on avoidance experienced depressive symptoms but did not initially report being stressed by the

interpersonal situations.

Taken together, the interpersonal stressors appeared to heighten the salience of attachment relationships for the adolescents who were more anxious and/or more avoidant in their attachment orientation. Adolescents who were more anxious identified that they were feeling stressed, whereas adolescents who were more avoidant did not. As a result, relational schemas specific to the attachment relationships were likely primed along with corresponding thoughts about the self and about the other (e.g., Baldwin, 1992, 1995). These schema likely sensitized the adolescents to interpret the stressors in ways that were consistent with their negative expectations (Hammen et al., 1995; Shirk, Boergers, Eason, & Van Horn, 1998). For adolescents who were more anxious, in particular, and/or more avoidant in their attachment orientation, negative thoughts about both self and about the other were likely congruent with preexisting expectations and therefore, were readily accessible. Consistent with their poorer emotion regulation skills, adolescents who were more anxious, and/or to a lesser extent more avoidant, in their attachment orientations may have been more overwhelmed by the negative thoughts. Once these thoughts were accessed and processed, adolescents' negative emotionality and depressive symptoms likely increased.

Of interest, for interpersonal stressors, the adolescents did not distinguish the negative self-thoughts from negative thoughts about the attachment figures and thus, they thought about their own incompetence, worthlessness, and unlovability as well as the insensitivity, unresponsiveness and unavailability of others. In comparison to negative views of self, the role of individuals' perceptions of others has received less attention in the depression literature. The results of this study suggested that how adolescents

perceived attachment figures in general was important for adjustment. In accordance with the models of depression proposed by Hammen (1992) and Cummings and Cicchetti (1990), cognitive vulnerability to depression may involve not only the tendency to appraise events in terms of personal unworthiness, but also working models of self and other. These models are believed to develop, in part, in the context of early maladaptive attachment relations with parents and may be reinforced and generalized by interpersonal incompetencies within these and other relationships (Hammen, 1992). In evaluating risk for depression, not only should consideration be given to adolescents' views of themselves, but also to perceptions of various attachment figures' ability to fulfill attachment needs.

Adolescents who had a more anxious attachment orientation seemed to use a similar reasoning strategy in dealing with interpersonal and achievement-related stressors. In response to achievement-related stresses, these adolescents were found to endorse negative stable-global attributions about themselves, and to an extent about others. In contrast, adolescents high on the avoidance attachment dimension were found to endorse only negative attributions about themselves and not about the other. Although there were no interactions with gender, girls tended to endorse more negative attributions about themselves, while boys endorsed more negative attributions about others and hence, reasoned that others were to blame. For all adolescents, the tendency to endorse the negative attributions was associated with more depressive symptoms.

These results indicate that achievement-related stressors signalled the attachment system differently for adolescents who were high on the anxiety dimension of attachment compared to those high on avoidance. Adolescents who were more anxious in their

attachment orientation interpreted these stressors (i.e., failure of a test and loss of a potential job) as evidence of self-unworthiness and to an extent, the disapproval of others. These stresses also appeared to increase the accessibility and activation of negative thoughts about self and about others as they did for the interpersonal stressors. This result is consistent with previous research that suggested anxiously-attached persons have an interpersonal orientation towards work (Hazan & Shaver, 1990). Again, overcome by these negative attributions, adolescents who were higher on the anxiety dimension were more likely to report depressive symptoms.

The similar approaches to processing both interpersonal and achievement stresses for adolescents high on anxiety support previous theoretical contentions of the existence of chronically accessible relational schemas (Baldwin, 1995, 1999). That is, based on repetitive early interpersonal experiences, adolescents have developed generalized expectations for relational patterns between the self and others and thus the tendency to perceive attachment experiences in stylistic ways (Baldwin et al., 1996). For adolescents who are more anxious in their attachment orientation, their negative relational schemas seem to be particularly influential in their sense of self and others and in how they interpret different kinds of interactions. With these adolescents' seeming vulnerability to depression, predominant relational schemas representing highly dependent interaction patterns may be operating.

In contrast to adolescents who were more anxious in their attachment orientation, adolescents high on avoidance processed the achievement-related stresses differently than interpersonal stresses. These adolescents were likely to make only negative attributions about the self in the achievement domain where they are thought to invest their self-worth

(Bringle & Bagby, 1992). Although they may have tried to protect themselves by denying how stressful the achievement-related problems were, they did have negative self-thoughts that were associated with levels of depression.

According to attachment theory (Bowlby, 1980) and the different theories of depression (i.e., Arieti & Bemporad, 1980; Beck, 1983; Blatt, 1974), there were two proposed pathways to the development of depression. Specifically, these diathesis-stress theories suggested that a matching between insecure attachment (i.e., anxious or avoidant) or personality organization (i.e., dependency/sociotropy and self-criticism/autonomy) and type of negative event (i.e., interpersonal or achievement-type stress) leads to depression. Research evidence has shown that dependency and sociotropy are associated with anxious attachment (Zuroff & Fitzpatrick, 1995) and that individuals high in dependency/sociotropy who are confronted with negative interpersonal events become depressed (e.g., Allen et al., 1996; Blatt & Zuroff, 1992).

The results of this study do not, however, support a specific match between anxious attachment and interpersonal stress. The more anxious adolescents in this study were found to be stressed by both interpersonal and achievement-related stressors, albeit to a lesser extent. Moreover, they were also found to process both kinds of stresses with similar types of negative attributions about themselves and others, which were associated with depression. In light of these findings, the theories of depression may need to be modified to incorporate anxious individuals' tendency to interpret general kinds of stress in terms of interpersonal rejection that is contributing to their vulnerability to depression.

Likewise, the results of this study did not support a specific match between avoidant attachment and achievement-related stress. Adolescents high on avoidance

interpreted achievement problems as a reflection of shortcomings of the self, while perceiving interpersonal stressors similarly to their anxious counterparts. Thus, important consideration should be given, as part of the theories of depression, to the negative stable-global attributions about self and other made in response to stress in general.

Objective II: Attachment to Different Figures and the Relation to Depression

The second main objective of this study was to investigate whether (1) attachment to mother, father, best friend, and romantic partner differentially predicted depression; (2) adolescents processed stress differently within these four attachment relationships resulting in different pathways to depression; and (3) negative stable-global attributions and ruminative coping mediated these relations. It was expected that the working models of attachment in relation to mother, father, best friend, and romantic partner would be differentially predictive of adolescent depression. Indeed, romantic partner and mother were expected to and found to be the two relationships most closely and uniquely associated with depression. The importance of adolescents' relationships with each of these figures is discussed next.

The importance of quality of attachment to mother in adolescence. The results of this study suggest that mothers continue to fulfill important attachment functions during adolescence. Relative to attachment to father and best friend and regardless of whether or not the adolescents had a romantic partner, negative working models of self and of other with mother consistently and uniquely predicted depressive symptoms. That is, an insecure attachment relationship with mother seems to be especially influential for adolescents' mental health.

Closer examination of the data revealed that it was only the female adolescents.

who had more negative models of self and of other in relation to mother, who were more likely to report depressive symptoms. These girls tended to make negative stable-global attributions in response to stressors involving mother that, in turn, were associated with increased depressive symptoms. Further, this tendency to endorse negative attributions about self and mother fully mediated the association between girls' insecure attachment models and depression.

These findings suggest that mothers may occupy a unique role in female adolescents' attachment hierarchies. Indeed, mothers have been ranked with romantic partners most highly for degree of emotional connection (Trinke & Bartholomew, 1997). Unlike male adolescents who decreased their reliance on their mothers with age, female adolescents have been found to increasingly utilize their mothers for support and proximity with age (Paterson et al., 1994). These results may be related to gender role expectations that may guide adolescents' behaviours and their reliance on their mothers to fulfill attachment functions. Males may experience more expectations of becoming autonomous, while females may experience more expectations for maintaining relatedness with mothers.

As adolescents mature, current cognitive appraisals of the attachment figure's availability are believed to determine feelings of security (Bowlby, 1973; Kobak, 1999). Open parent-adolescent communication allows the adolescent to develop secure expectations about the attachment figure's responsiveness. Security of parent-teen attachment should also allow for both the parent and the adolescent to assert autonomy while at the same time maintaining a sense of closeness and relatedness (Kobak, 1999). Not surprisingly then, secure adolescents have been found to be better able to

communicate with their mothers about attachment-related issues (Kobak et al., 1993). Specifically, secure teens are able to assert themselves and engage in discussions of disagreements with less display of dysfunctional anger (Kobak et al., 1993).

In contrast, the appraisal of the attachment figure's unavailability likely contributes to poor regulation of emotions and feelings of insecurity. A more insecure parent-teen attachment may create an imbalance for teens between the need to become more autonomous and the need to maintain closeness. Indeed, Kobak and colleagues (1993) found that male adolescents with deactivating attachment strategies (i.e., similar to avoidants) overtly expressed their anger in problem-solving interactions with their mothers (possibly to distance themselves), while females allowed their mothers to dominate the discussions (possibly to maintain relatedness).

Continually poor communication and resolution of conflict in the mother-teen relationship may result in symptomatic expressions of emotions, such as sadness, and ultimately, to more serious depressive symptoms. For example, mother-teen problem-solving interactions characterized by maternal dominance and dysfunctional anger have been found to be associated with adolescent depressive symptoms (Kobak et al., 1991). And, maternal parenting style (i.e., psychological control) has been found to predict young adolescents' depressive cognitions (Garber & Flynn, 2001). As well, the negative interaction experiences with mothers may lead to depressive symptoms when the adolescent is unable to evaluate and distinguish between negative parental behaviours and views of self.

In this study, when faced with hypothetical stressful situations in which mothers were perceived as unavailable and/or rejecting, female and male adolescents, who had

more negative working models of self and of their mother, endorsed negative stable-global attributions about both themselves and their mother. The difference between girls and boys, however, was that the negative attributions made by girls, but not by boys, were predictive of depressive symptoms. That is, the negative attributions were likely experienced differently by girls and boys. When distressed, the pattern for girls was to internalize their feelings, which may have served the purpose of guarding a sense of relatedness with their mothers. By not openly expressing their thoughts and feelings, these girls seemed to be at an increased risk for depressive symptoms. Indeed, previous research on attachment and psychopathology has shown that high scores on anxious proximity seeking behaviours were predictive of patient status for females but not for males (West, Rose, & Sheldon, 1993). In comparison, boys, in keeping with male gender expectations of becoming more autonomous, may respond to their negative attributions by engaging in externalizing or acting-out behaviours, such as through aggression. This latter hypothesis was not a focus of this study and thus, additional research is required to investigate this association for boys.

The importance of quality of attachment to romantic partner in adolescence.

Relative to attachment with mother, father, and best friend, working models of attachment with romantic partner were also unique predictors of adolescent depression as was hypothesized. This finding is consistent with previous research suggesting that by mid- to late-adolescence, romantic partners begin to fulfill all attachment functions (Hazan & Zeifman, 1994) and are ranked highly in the attachment hierarchy (Trinke & Bartholomew, 1997). In this study, adolescents who had a more negative model of self and/or a more positive model of other in relation to their romantic partner reported more

depressive symptoms. Previous research has supported the significance of romantic relationships during adolescence in vulnerability to depression. For example, a recent break-up with a boyfriend or girlfriend has been found to significantly increase the likelihood of a first episode of depression in adolescence (Monroe, Rohde, Seeley, & Lewinsohn, 1999). Adolescents may be less sure of themselves in romantic relationships as they generally have had less experience in this type of relationship than in relationships with their parents or best friends. And, should these relationships not meet prior expectations, adolescents may feel an enhanced sense of vulnerability. In accordance with this idea, the vignettes involving romantic partner were rated, along with those involving best friend, as the most stressful. Indeed, insecurely attached adolescents have been found to rate conflict with dating partner as a greater threat (i.e., conflict seen as "big problem") than did their securely-attached counterparts (Torquati & Vazsonyi, 1999).

Given that adolescents can voluntarily choose their romantic partners, unlike their parents, they may tend to perceive problems as due to their own shortcomings rather than their partners'. In support of this contention, adolescents were found to endorse the highest number of negative stable-global attributions following the stressors involving romantic partners and best friendships. And, in their attempt to cope with these stressors, the adolescents indicated that they ruminated the most with romantic partner. Interestingly, in comparing the self-models in relation to the different attachment figures, adolescents' working model of self in relation to romantic partner was rated as significantly less positive than self-models with mother, father, or best friend. Thus, when adolescents feel insecure and have a more negative view of themselves in a romantic relationship, which is supposed to potentially provide companionship, intimacy,

and support, they may experience a diminished sense of self.

Upon closer examination of the pathways between attachment to romantic partner and depression, adolescents who had more negative models of self in relation to their partner endorsed more negative stable-global attributions and used a ruminative coping strategy in response to relational stress, which in turn, were associated with depressive symptoms. Negative attributions and ruminative coping fully mediated the relation between models of self and depression. That is, adolescents who had a more negative view of themselves in relation to their romantic partners were inclined to think that they were unlovable, unattractive, and worthless and that their partners were unresponsive and unreliable when faced with stress. Girls, in particular, were more likely to make the negative appraisals and to ruminate. Consistent with these results, in a recent study, adolescent girls experiencing low intimacy in romantic relationships showed cognitive reactivity (i.e., endorsed an increase in negative cognitions) in response to a negative mood induction (Williams, Connolly, & Segal, 2001). Williams and colleagues (2001) suggested that because cognitive reactivity has been found to be associated with the onset of a depressive episode (Segal, Gemar, & Williams, 1999), adolescent girls who have low intimacy in their romantic relationships may be at risk for experiencing depression.

It was an interesting finding that rumination mediated the relation between working models of attachment and depression in relation to romantic partners only and not with the other attachment figures or with the generalized attachment dimensions. Perhaps then, adolescents ruminate about their feelings and analyse the causes of problems when they are less sure of themselves in a particular relationship and when they perceive themselves more negatively than they see their partner. Stressors in a romantic

relationship may be more taxing on cognitive and emotional resources and hence, adolescents may require greater effort to process the details of the situation and to try to understand their feelings. By ruminating and encouraging self-focus on negativity, the problem remains unresolved and may be associated with depressive symptoms. Indeed, previous research has found that introspection/self-isolation and self-blame, two components of rumination, are associated with vulnerability to episodes of dysphoria (Roberts et al., 1998). It may be that adolescents, who have a negative self-model and positive other-model in relation to their romantic partner, rely on rumination because they are still uncertain and are questioning whether their partner can adequately satisfy all of the attachment functions (i.e., proximity seeking, safe haven, and secure base). Thus, the use of a ruminative coping strategy may depend on the degree of uncertainty, emotional intensity, and the attachment figure involved in the situation.

These results may have implications for Nolen-Hoeksema's (1991) response styles theory of rumination. According to Nolen-Hoeksema (1998), rumination is believed to exacerbate depression through several mechanisms, including by enhancing the negative effects of depressed mood on thinking, by making depressive interpretations more accessible, and by interfering with interpersonal problem-solving. The findings of this study suggest that the use of a ruminative response style may be more context-specific rather than a more generalized strategy for dealing with depressive feelings. Individuals may rely on ruminative coping only when faced with particular types of stress, such as when they have limited prior experience with that type of problem and when there is a lot of uncertainty about the self in that situation. For mid- to late-adolescents who are insecure in their attachment, a stress involving their boy/girlfriends

seems to elicit a tendency to ruminate given that they have limited experience and may be feel less confident in romantic relationships.

In summary, mothers and romantic partners appear to have important and unique roles for adolescents' emotional adjustment. An insecure attachment relationship with one or both of these persons may increase risk for depression in adolescence. Adolescents who are securely attached to their mother and/or romantic partner may be less vulnerable to experiencing depression. These results may help explain the equivocal findings in the literature discussed earlier in which perceived levels of attachment to parents and to peers have been differentially associated with adolescent well-being (e.g., Laible et al., 2000; Nada Raja et al., 1992). The previous studies failed to distinguish mother versus father and romantic partner versus friends. The relative importance of romantic partner and for girls, mother, found in this study, may also be related to developmental stage and the attachment functions these figures fulfill in mid- to late-adolescence. The most compelling sense of who adolescents are derives from relationships or relationship patterns that provide the greatest feelings of attachment. When the attachment relationship with the person(s) who occupies the top of the attachment hierarchy is insecure, the individual's sense of self is likely to be more fragile. As a result, negative interactions and stress involving such figures likely have negative effects, such as increasing vulnerability to depression. It should be noted, however, that the results of this study do not minimize the importance of fathers and best friends in adolescent adjustment. The specific links between attachment relationships with father and best friend to depression merit further research.

The Common Thread: Cognitive Processes Linking Generalized Attachment Orientation, Attachment to Specific Figures, and Depression

Although adolescents were found to process stress differently depending on the attachment figure involved in the stressful situation, one of the most notable similarities across targets concerned the importance of the negative attributions endorsed in response to stressors. For stresses with romantic partner and for girls, mother, these negative attributions were found to completely mediate the relation between negative working models of self and depression. For stressors with father and best friend, there were indirect effects between models of self and depression. That is, regardless of the attachment figure involved in the stress, adolescents who had more negative working models of self in relation to that person were inclined to make negative stable-global attributions. These attributions, in turn, were associated with depression.

Likewise, the importance of negative attributions as a mediational process was evident in the relation between generalized attachment orientation and depression. For interpersonal and achievement-related stress, adolescents who were high on the anxiety dimension of attachment, endorsed negative stable-global attributions about self and other. Adolescents high on avoidance made negative stable-global attributions about themselves and others in response to interpersonal stresses and negative attributions about themselves only for achievement-related stresses. For all adolescents and for different types of stress, the tendency to make these attributions was associated with depression.

Overall, the results of this study suggest the value of integrating attachment theory and cognitive theories of depression to better understand adolescents' vulnerability to depression. Based on early and later experiences with attachment figures, adolescents

develop working models of self and of others that serve as the templates for understanding the social world. When these experiences lead to the development of negative models of self and of others, the adolescent is at increased risk for depression. Cognitive models of depression help explain the cognitive processes involved in depression. For example, Beck's (1983; Beck et al., 1979) cognitive model of depression highlighted the interplay between negative thoughts about self, the world, and the future in depression. According to Beck, depressed individuals' thinking is biased toward negative interpretations arising from negative schemata or beliefs and faulty information processing. Similarly, the learned helplessness (e.g., Abramson et al., 1978) and hopelessness models (Abramson et al., 1989) of depression identified a pessimistic attributional style (i.e., the tendency to attribute important negative events to stable, global, internal causes about self) as a central component in the etiology of depression. Results of this study support previous research that has found that a negative attributional style temporally precedes increases in depressive symptoms in adolescence (e.g., Nolen-Hoeksema et al., 1992; Robinson et al., 1995). The results are also congruent with the findings of a meta-analytic review in which attributions for negative events to internal, stable, and global causes were found to have a reliable and significant association with depression (Sweeney et al., 1986).

In thinking within this cognitive framework, the results of this study, not only support these cognitive models of depression and underscore the role of negative attributions in depression, but also suggest that there are different attribution patterns associated with depression. Specifically, this study expands the literature by suggesting that (a) the types of attributions may differ depending on the significant other involved in

the stressful situation; (b) attributions often involve general, unchanging thoughts about not only the self but also the other; (c) there is a greater potential mediating role of attributions in the association between attachment to specific individuals (i.e., mother for girls and romantic partner for both boys and girls versus other) in predicting depression; and (d) regardless of the type of negative stressful event, there is an association between negative stable-global attributions and depression.

Limitations

There were several limitations of this study. First, the sample of participants was relatively small. With this sample size, there was a limit to the type of analyses conducted. For example, there was an insufficient number of participants to be able to evaluate the proposed models using path analysis rather than hierarchical regressions. In relatively complex models as examined in this study, the ratio of the number of subjects to the number of model parameters should be at a minimum 10:1 and preferably 20:1 to conduct structural equation modeling (Kline, 1998). With 134 participants, the minimum participant to parameter ratio was not met. As such, the models were tested using regressions, which was essentially able to address the same questions. Also, given the limited sample size and the relatively large number of statistical analyses conducted to address the questions of this study, the possible risk of Type I errors should be considered. Replication studies are required to validate the interesting findings of the present study.

Second, this study relied on self-report measures of attachment and depression. Self-report measures of attachment are frequently used in the literature and have been found to have predictive validity. One concern may be the shared method variance of the

questionnaires assessing attachment to mother, father, best friend, and romantic partner. However, given the modest correlation between the models of self and the models of other with the four targets as well as the differential prediction of the models to depression, this would suggest the results were not a function of the questionnaire. Additionally, although several methods of measuring depressive symptoms would have provided a more comprehensive assessment of the levels of depression, the self-report measure administered in this study is a commonly used measure. And, in a review of studies comparing adolescents' self-reported symptoms to clinical rating, Gotlib and Hammen (1992) as seen in Schwartz and Koenig (1996) found that self-reports of emotional distress were "reasonably accurate predictors of actual clinical status" (p. 41).

A possible limitation in the design of the vignette task was that the stressful situations were different for each attachment figure. For example, the two stresses involving mother were different from the vignettes involving father, best friend, and romantic partner. It is acknowledged that this may have had an impact on the results of the study. However, it is also important to note that there were two vignettes per target figure and that the attributions and coping items following each vignette were comparable. In addition, the themes across the interpersonal vignettes were consistent where each of the four target persons were depicted as unavailable for the individual in one vignette and as rejecting the individual in the other. One strength of this study is the experimental design used to present the stressors in a randomized order and responses in a randomized order. This more interactive method enabled the adolescents to focus on the task and may have made it easier for the adolescents to relate to the problems.

An additional caveat of this study is its correlational design. All data were

collected concurrently. As such, causation cannot be inferred. The theory suggests that working models would developmentally precede the occurrence of depression. However, one could argue that depression might negatively distort adolescents' ratings of attachment. Nevertheless, some studies have shown that the negative perceptions of parents do not change once depression has remitted (e.g., Gerlsma et al., 1993). Also, the participants of this study were from the general population and few were likely to be considered clinically depressed. Although the participants did vary in levels of depression, half of them were asymptomatic. Thus, this study is of symptoms consistent with depression and not clinical depression per se, which may limit the generalizability of the findings to clinical populations. It was, therefore, unlikely that the attachment ratings were merely a reflection of distortions due to depression. Also, the attachment dimensions and working models of attachment in relation to the four attachment figures were not all correlated with the BDI ratings (see Appendix G), which contradicts the notion that the attachment ratings were colored by depression. Finally, with a correlation design, it is possible to argue that rather than mediating the relation between attachment and depression, negative attributions and rumination may be more of an outcome of feeling depressed. Longitudinal prospective research is needed to disentangle these possibilities.

Clinical Implications

Overall, these findings may have some implications for the prevention and treatment of depression in adolescence. First, the results suggest that therapy and prevention programs should focus on helping to modify the negative attributions about self and others made in response to stressful interpersonal and achievement situations.

Indeed, Seligman and colleagues (Gillham, Reivich, Jaycox, & Seligman, 1995; Jaycox, Reivich, Gillham, & Seligman, 1994) have found that a cognitive prevention program that focussed on changing negative explanatory style and teaching social problem-solving techniques successfully reduced the rates of depressive symptoms in children. Similarly, high school adolescents at-risk for depression who were taught cognitive strategies of identifying and challenging negative thoughts in a group prevention program were subsequently found to have lower incidence rates of unipolar depressive disorder (Clarke et al., 1995). Thus, enabling adolescents to alter their cognitive attributions in response to stress seems to be effective in reducing risk for depression. The findings from this study suggest that with adolescents, special attention should be given to dealing with conflict or problems in relationships with mother and romantic partner. Further, it would be helpful to teach adolescents to use more problem-solving strategies rather than emotion-focused coping strategies like rumination.

Second, the results of this study suggest that family therapy may be beneficial for the treatment of depression in adolescence. By improving family functioning (e.g., the quality of teen-mother relationships), adolescents may show better emotional adjustment. Previous research studies have demonstrated success for family-based preventive intervention programs that target offspring of parents with mood disorder (e.g., Beardslee et al., 1992, 1993). Perhaps then, interventions for families with a depressed adolescent may also prove to be beneficial.

The results of this study also have some implications for parenting adolescents. Previous research has indicated that adolescents undergoing stressful life events, who were insecurely attached to their parents, were more likely to become depressed than

were adolescents who were securely attached (Hammen et al., 1995; Kobak et al., 1991). Moreover, persistent parent-adolescent conflict was found to predict increases in internalizing symptoms, whereas diminishing disagreements predicted symptom decline (Rueter et al., 1999). The findings of this study in conjunction with previous findings suggest that an insecure mother-daughter relationship that is conflictual may pose a significant risk for depression. Efforts to create more open communication between parent and adolescent would likely improve the relationship and decrease vulnerability to depression. Engagement in discussions of disagreements should be encouraged, allowing for the adolescents to assert themselves with their parents in ways that do not limit the parents' ability to share their point of view. Given that appraisals of the attachment figure's current availability fosters feelings of security (Kobak, 1999), it is possible to improve upon the experience of security in a parent-adolescent relationship by opening lines of communication and increasing responsiveness to the other's needs.

Future Research

Future research should test further integrated models of depression that include interpersonal (e.g., the role of models of attachment, the effects of negative interpersonal events) and cognitive (e.g., negative attributions, social problem-solving) factors. This study evaluated the concurrent relations among these variables and the results were suggestive of different pathways to depression. Longitudinal research is therefore needed to determine whether insecure working models of attachment contribute to the development of the tendency to make negative attributions following interpersonal life-events involving significant others, which in turn, precedes the onset of depressive symptoms or clinical depression. Moreover, interpersonal and cognitive vulnerability to

depression in adolescence may be specific to negative real-life events involving close relationships with mother and romantic partner that interact with having insecure models or schemas of self in relation to these attachment figures. Again, longitudinal research is required to examine more closely the development of these vulnerability processes.

Additional research is required to more fully comprehend the impact of insecure working models of self and of other in relation to father and best friend on adjustment in adolescence. The quality of adolescents' relationships with their fathers and best friends may be more closely associated with other outcomes, such as social competence (e.g., Rice et al., 1997) and/or externalizing types of behaviours. Perhaps relationships with fathers and best friends teach adolescents more about how to navigate the outside, social world and to develop autonomy. Nonetheless, results from this study suggest the merit of examining the role of different attachment figures for adolescent adjustment.

Conclusions

The results of this study increase our understanding of the relation between attachment and depression in adolescence. In general, adolescents who have an insecure attachment orientation are at risk for depression. Differences in approach to stresses as a function of attachment orientation, such as in the appraisal of stressfulness of situations, the magnitude of the associations between attachment, attributions, and depression, as well as the types of cognitive attributions made in response to achievement-related stressors were observed. These differences underscore some of the different pathways to depression in adolescence.

Insecure attachment relationships with mother and romantic partner (but not with father and best friend) were significant predictors of depression. Mother and romantic

partner appear to be important attachment figures in the attachment hierarchy of adolescents. A secure relationship with mother for girls and/or romantic partner for both boys and girls may help protect adolescents from experiencing depression. Attachment relationships involving father and best friend were only indirectly associated with depression and thus, may play different kind of roles in adolescent emotional adjustment.

Results of this study suggest that adolescents processed stress differently depending on the attachment figure under consideration. Negative attributions helped explain the association between working models of attachment in relation to mother, for girls, and to romantic partner with depression. Moreover, adolescents who had more negative models of self and more positive models of other in relation to their romantic partner tended to use a ruminative coping strategy, which was also associated with depression. Thus, the pathways to depression are complex and seem to depend on the types of stressors that occur, who is involved in the stress, as well as the supports (i.e., the presence of secure attachment relationships) that may help buffer risk for depression.

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Appendix A
Questionnaires



16644

FEELINGS AND IDEAS (BDI90)

Please do not mark in this area

				2
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On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Mark an in the box beside the statement you picked. Be sure to read all the statements in each group before making your choice. Your responses are confidential.

1. I do not feel sad.
 I feel sad.
 I am sad all the time and I can't snap out of it.
 I am so sad or unhappy that I can't stand it.

2. I am not particularly discouraged about the future.
 I feel discouraged about the future.
 I feel I have nothing to look forward to.
 I feel that the future is hopeless and that things cannot improve.

3. I do not feel like a failure.
 I feel I have failed more than the average person.
 As I look back on my life all I can see is a lot of failures.
 I feel I am a complete failure as a person.

4. I get as much satisfaction out of things as I used to.
 I don't enjoy things the way I used to
 I don't get real satisfaction out of anything anymore.
 I am dissatisfied or bored with everything.

5. I don't feel particularly guilty.
 I feel guilty a good part of the time.
 I feel quite guilty most of the time.
 I feel guilty all of the time.

6. I don't feel I am being punished.
 I feel I may be punished.
 I expect to be punished.
 I feel I am being punished.

7. I don't feel disappointed in myself.
 I am disappointed in myself.
 I am disgusted with myself.
 I hate myself.

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Please do not mark in this area

8. I don't feel I am any worse than anybody else.
 I am critical of myself for my weaknesses or mistakes.
 I blame myself all the time for my faults.
 I blame myself for everything bad that happens.
-
9. I don't cry any more than usual.
 I cry more now than I used to.
 I cry all the time now.
 I used to be able to cry, but now I can't cry even though I want to.
-
10. I am no more irritated now than I ever am.
 I get annoyed or irritated more easily than I used to.
 I feel irritated all the time now.
 I don't get irritated at all by the things that used to irritate me.
-
11. I have not lost interest in other people.
 I am less interested in other people than I used to be.
 I have lost most of my interest in other people.
 I have lost all my interest in other people.
-
12. I make decisions about as well as I ever could.
 I put off making decisions more than I used to.
 I have greater difficulty in making decisions than before.
 I can't make decisions at all anymore.
-
13. I don't feel I look any worse than I used to.
 I am worried that I am looking unattractive.
 I feel that there are permanent changes in my appearance that make me look unattractive
 I believe that I look ugly.
-
14. I can work about as well as before.
 It takes an extra effort to get started at doing something
 I have to push myself very hard to do anything.
 I can't do any work at all.
-
15. I can sleep as well as usual.
 I don't sleep as well as I used to.
 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
 I wake up several hours earlier than I used to and cannot get back to sleep.

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Please do not mark in this area

16. I don't get more tired than usual.
 I get tired more easily than I used to.
 I get tired from doing almost anything.
 I am too tired to do anything.
-

17. My appetite is no worse than usual.
 My appetite is not as good as it used to be.
 My appetite is much worse now.
 I have no appetite at all anymore.
-

18. I haven't lost much weight, if any, lately.
 I have lost more than 5 pounds.
 I have lost more than 10 pounds.
 I have lost more than 15 pounds.

I am purposely trying to lose weight by eating less : Yes No

19. I am no more worried about my health than usual.
 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
 I am very worried about physical problems and it's hard to think of much else.
 I am so worried about my physical problems that I cannot think about anything else.
-

20. I have not noticed any recent change in my interest in sex.
 I am less interested in sex than I used to be.
 I am much less interested in sex now.
 I have lost interest in sex completely.

16644



EXPERIENCES IN CLOSE RELATIONSHIPS

Please do not mark in this area

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The following statements concern how you feel in your close relationships. We are interested in how you generally experience your close relationships, not just what is happening in your current relationships. Respond to each statement by indicating how much you agree or disagree with it. Mark an in the box that corresponds to your choice. Use the following scale:

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

	1	2	3	4	5	6	7
1. I prefer not to show people I am close to how I feel deep down.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I worry about being abandoned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I am very comfortable being close to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I worry a lot about my relationships with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Just when others start to get close to me I find myself pulling away.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I worry that people won't care about me as much as I care about them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I get uncomfortable when others want to be very close.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I worry a fair amount about losing people I am close to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I don't feel comfortable opening up to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I often wish that other peoples' feelings for me were as strong as my feelings for them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I want to get close to others, but I keep pulling back.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I often want to share everything I feel, think, and do with people I am close to, and this sometimes scares them away.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I am nervous when others get too close to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I worry about being alone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I feel comfortable sharing my private thoughts and feelings with others I am close to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. My desire to be very close sometimes scares people away.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I try to avoid getting too close to people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





Please do not mark in this area

	1	2	3	4	5	6	7
	Disagree Strongly			Neutral/Mixed	Agree Strongly		
	1	2	3	4	5	6	7
18. I need a lot of reassurance that I am loved by others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I find it relatively easy to get close to other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Sometimes I feel that I force others to show more feeling, more commitment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I find it difficult to allow myself to depend on others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I do not often worry about being abandoned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I prefer not to be too close to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. If I can't get people I am close with to show interest in me, I get upset or angry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I tell other people just about everything.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. I find that others don't want to get as close as I would like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. I usually discuss my problems and concerns with people I am close to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. I feel comfortable depending on others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. I get frustrated when people I am close to are not around as much as I would like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. I don't like asking people I am close to for comfort, advice, or help.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. I get frustrated if others are not available when I need them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. It helps to turn to people I am close to in times of need.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. When people disapprove of me, I feel really bad about myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. I turn to others for many things, including comfort and reassurance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. I resent it when people I am close to spend time away from me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



SPECIFIC RELATIONSHIPS

The questionnaires on the next few pages ask about your relationships with each of your **parents**, your **best friend**, and your **girlfriend or boyfriend** (if you have one). We would like you to take some time to think about your relationship with each person. Think about the good times and the bad times, how you feel about each person, and how you feel about yourself when you're with each person.

The questionnaires are very similar but each one asks about a **specific person**. Please think of your relationship with **that person** when you answer the questions. Imagine a typical time with each of them when you fill out the questionnaires.



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RELATIONSHIP WITH YOUR BEST FRIEND (RQBF)

Please do not mark in this area

				2
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Think about your relationship with your best same-sex friend. Now read each paragraph below and indicate to what extent **each** paragraph describes your relationship with your best friend. When you see a *** in the paragraphs below, think of your best friend by name. Put an in the box **UNDER** the number that is true for you.

1. It is easy for me to become emotionally close to my best friend. I am comfortable depending on *** and having him/her depend on me. I don't worry about being alone or having *** not accept me.

Not At All							Very Much	
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I am comfortable not having a close emotional relationship with my best friend. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on *** or have *** depend on me.

Not At All							Very Much	
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I want to be completely emotionally close with my best friend, but I often find that s/he is reluctant to get as close as I would like. I am uncomfortable not having a close relationship with ***, but I sometimes worry that *** doesn't value me as much as I value him/her.

Not At All							Very Much	
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. I am uncomfortable getting close to my best friend. I want to be emotionally close to ***, but I find it difficult to trust him/her completely, or to depend on him/her. I worry that I will be hurt if I allow myself to become too close to ***.

Not At All							Very Much	
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

54832





YOUR ROMANTIC RELATIONSHIP (RQR)

Please do not mark in this area

				2
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If you do not have a current girlfriend/boyfriend or have not recently had a girlfriend/boyfriend, just leave this blank and go to the next questionnaire.

Please tell us who you are thinking of when you fill out this questionnaire (one box):

- Current girl/boyfriend OR Most recent girl/boyfriend

Think about your relationship with your girlfriend/boyfriend. Now read each paragraph below and indicate to what extent **each** paragraph describes your relationship with this person. When you see a *** in the paragraphs below, think of your girlfriend/boyfriend by name. Put an in the box UNDER the number that is true for you.

1. It is easy for me to become emotionally close to my girlfriend/boyfriend. I am comfortable depending on *** and having her/him depend on me. I don't worry about being alone or having *** not accept me.

Not At All							Very Much
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I am comfortable not having a close emotional relationship with my girlfriend/boyfriend. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on *** or have *** depend on me.

Not At All							Very Much
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I want to be completely emotionally close with my girlfriend/boyfriend, but I often find that s/he is reluctant to get as close as I would like. I am uncomfortable not having a close relationship with ***, but I sometimes worry that *** doesn't value me as much as I value her/him.

Not At All							Very Much
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. I am uncomfortable getting close to my girlfriend/boyfriend. I want to be emotionally close to ***, but I find it difficult to trust her/him completely, or to depend on her/him. I worry that I will be hurt if I allow myself to become too close to ***.

Not At All							Very Much
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

54843





54819

RELATIONSHIP WITH MOTHER (RQM)

Please do not mark in this area

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If you don't have a mom or stepmom, just leave this blank and go to the next questionnaire.

Please tell us who you are thinking of when you fill out this questionnaire (one box):

Mom OR Stepmom

Think about your relationship with your mother. Now read each paragraph below and indicate to what extent **each** paragraph describes your relationship with your mother. Put an in the box UNDER the number that is true for you.

1. It is easy for me to become emotionally close to my mother. I am comfortable depending on my mother and having my mother depend on me. I don't worry about being alone or having my mother not accept me.

Not At All							Very Much
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. I am comfortable not having a close emotional relationship with my mother. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on my mother or have my mother depend on me.

Not At All							Very Much
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. I want to be completely emotionally close with my mother, but I often find that my mother is reluctant to get as close as I would like. I am uncomfortable not having a close relationship with my mother, but I sometimes worry that she doesn't value me as much as I value her.

Not At All							Very Much
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4. I am uncomfortable getting close to my mother. I want to be emotionally close to my mother, but I find it difficult to trust her completely, or to depend on her. I worry that I will be hurt if I allow myself to become too close to my mother.

Not At All							Very Much
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	





54801

RELATIONSHIP WITH FATHER (RQD)

Please do not mark in this area

				2
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If you don't have a dad or stepdad, just leave this blank and go to the next questionnaire.

Please tell us who you are thinking of when you fill out this questionnaire (one box):

Dad OR Stepdad

Think about your relationship with your father. Now read each paragraph below and indicate to what extent **each** paragraph describes your relationship with your father. **Put an in the box UNDER the number** that is true for you.

1. It is easy for me to become emotionally close to my father. I am comfortable depending on my father and having my father depend on me. I don't worry about being alone or having my father not accept me.

Not At All						Very Much
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I am comfortable not having a close emotional relationship with my father. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on my father or have my father depend on me.

Not At All						Very Much
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I want to be completely emotionally close with my father, but I often find that my father is reluctant to get as close as I would like. I am uncomfortable not having a close relationship with my father, but I sometimes worry that he doesn't value me as much as I value him.

Not At All						Very Much
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. I am uncomfortable getting close to my father. I want to be emotionally close to my father, but I find it difficult to trust him completely, or to depend on him. I worry that I will be hurt if I allow myself to become too close to my father.

Not At All						Very Much
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Appendix B

**Correlations between attachment style ratings on the Relationship Questionnaire for
mother, father, romantic partner, and best friend**

Table B1.

Correlations Between the Attachment Style Ratings on the Relationship Questionnaire for Mother

	1	2	3	4
1. Secure	–	-.38**	-.08	-.22*
2. Dismissing		–	.17*	.36**
3. Preoccupied			–	.37**
4. Fearful				–

Note. $N = 134$: * $p < .05$ ** $p < .01$

Table B2.

Correlations Between the Attachment Style Ratings on the Relationship Questionnaire forFather

	1	2	3	4
1. Secure	–	-.41**	-.19*	-.37**
2. Dismissing		–	.18*	.29**
3. Preoccupied			–	.28**
4. Fearful				–

Note. $N = 133$; * $p < .05$ ** $p < .01$

Table B3.

Correlations Between the Attachment Style Ratings on the Relationship Questionnaire for Romantic Partner

	1	2	3	4
1. Secure	–	-.46**	-.40**	-.43**
2. Dismissing		–	.08	.30**
3. Preoccupied			–	.32**
4. Fearful				–

Note. $N = 106$; * $p < .05$ ** $p < .01$

Table B4.

Correlations Between the Attachment Style Ratings on the Relationship Questionnaire for Best Friend

	1	2	3	4
1. Secure	–	-.36**	-.25**	-.41**
2. Dismissing		–	.15	.39**
3. Preoccupied			–	.52**
4. Fearful				–

Note. $N = 133$; * $p < .05$ ** $p < .01$

Appendix C

Vignettes of stressful situations

Mother Vignettes

Imagine that you have a very important decision to make. This decision will have a big effect on your future and you are very anxious about it. You are very concerned about making the best choice by tomorrow's deadline. You go to your mom for her advice and to discuss what you should do. You really want her help. She tells you that she doesn't have the time to talk with you. She says she is too busy.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
 Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your mom had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work as quickly as possible.**

If this situation with your mom had actually happened, would you think:

- | | | | | |
|---|---|--------------------------|---|--------------------------|
| My mom is unreliable. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom is insensitive. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom was having a particularly bad day. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom is cold. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom doesn't know how to help me. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom was busy, but she will help me later. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom isn't good at comforting me. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom is unresponsive. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom doesn't know how to make me feel better. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom was distracted with other things. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom is uncooperative. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom is rejecting me. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| My mom can't be trusted. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| | | | | |
| I am basically unlovable. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| I can solve my own problems. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| I am not a dependable person. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| I didn't notice that my mom was busy. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| I am not worthy of my mom's love and attention. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| I can't solve my problems. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| I can't keep my mom interested in me. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |
| I will never get my mom to give me what I need. | Y | <input type="checkbox"/> | N | <input type="checkbox"/> |

- I approached my mom at a particularly bad time. Y N
- I am worthless. Y N
- I can only depend on myself. Y N
- I wasn't thinking of my mom's feelings. Y N
- I can't do anything about this situation. Y N
- I will never get the support I need from my mom. Y N
- I am incapable of trusting others. Y N
- I can do something about this problem. Y N

Please **think about what you would do in this situation** where you had an important decision to make and your mom said she was too busy to talk with you. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your mom had actually occurred, would you:

- | | | | | |
|---|---|---|---|---|
| 1) go some place alone to think about my feelings. (rumination) | 0 | 1 | 2 | 3 |
| 2) go on as if nothing happened. | 0 | 1 | 2 | 3 |
| 3) wish that the situation with my mom would go away or somehow be over with. | 0 | 1 | 2 | 3 |
| 4) stand my ground with my mom and fight for what I want. | 0 | 1 | 2 | 3 |
| 5) talk to someone else about how I am feeling. | 0 | 1 | 2 | 3 |
| 6) go away by myself and think about why I feel this way. (rumination) | 0 | 1 | 2 | 3 |
| 7) make a plan of action and follow it. | 0 | 1 | 2 | 3 |
| 8) hope for a miracle. | 0 | 1 | 2 | 3 |
| 9) think "why do I always react this way." (rumination) | 0 | 1 | 2 | 3 |
| 10) not let it get to me; refuse to think too much about it. | 0 | 1 | 2 | 3 |
| 11) express anger to my mom, who caused the problem. | 0 | 1 | 2 | 3 |
| 12) talk to a relative or friend I respect for advice. | 0 | 1 | 2 | 3 |
| 13) know what has to be done, so I try extra hard to make things work. | 0 | 1 | 2 | 3 |
| 14) think "why can't I get going." (rumination) | 0 | 1 | 2 | 3 |

Please think about **how you would feel after this event**, if it actually happened to you. For each of the following items, indicate "yes" if you would feel the emotion and "no" if you wouldn't feel the emotion. **Please work quickly.**

- | | | | | | | | | |
|--------------|------------------------------|-----------------------------|-------------|------------------------------|-----------------------------|-----------|------------------------------|-----------------------------|
| Angry | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Sad | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Rejected | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Nervous | <input type="checkbox"/> | <input type="checkbox"/> | Indifferent | <input type="checkbox"/> | <input type="checkbox"/> | Irritated | <input type="checkbox"/> | <input type="checkbox"/> |
| Unloved | <input type="checkbox"/> | <input type="checkbox"/> | Unemotional | <input type="checkbox"/> | <input type="checkbox"/> | Tense | <input type="checkbox"/> | <input type="checkbox"/> |
| Worried | <input type="checkbox"/> | <input type="checkbox"/> | Resentful | <input type="checkbox"/> | <input type="checkbox"/> | Helpless | <input type="checkbox"/> | <input type="checkbox"/> |
| Disagreeable | <input type="checkbox"/> | <input type="checkbox"/> | Afraid | <input type="checkbox"/> | <input type="checkbox"/> | Lonely | <input type="checkbox"/> | <input type="checkbox"/> |
| Lost | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | |

Imagine that you lied to your Mom about where you were and what you did last night. You believe that your Mom would not understand or approve of your behavior if you told her the truth. Your Mom realizes that you lied to her and confronts you about it. She tells you that she is extremely disappointed that you lied to her and behaved the way you did. She didn't think you were like that.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
 Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your mom had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work as quickly as possible.**

If this situation with your mom had actually happened, would you think:

- | | | |
|---|----------------------------|----------------------------|
| My mom is not dependable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom is insensitive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom was in a bad mood today. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom is cold. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom doesn't understand how I feel. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom doesn't know how to meet my needs. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom is unresponsive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom was being unreasonable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom is inconsiderate. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom is hostile. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom over-reacted to this situation. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom doesn't care about me any more. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My mom can't be trusted. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
|
 | | |
| I am basically unlovable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can handle these situations on my own. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not a dependable person. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I made my mom react the way she did. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not worthy of my mom's love and care. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can make my own decisions. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't deal with these situations by myself. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get my mom to give me what I need. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I wasn't paying attention to my mom's feelings. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

- | | | |
|--|----------------------------|----------------------------|
| I am worthless. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can only depend on myself. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I was being inconsiderate to my mom. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't do anything about this situation. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get the support I need from my mom. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am incapable of trusting others. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can do something about this problem. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

Please **think about what you would do in this situation** where you lied to your mom and your mom confronts you about it, telling you that she is disappointed and didn't think you were like that. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your mom had actually occurred, would you:

- | | | | | |
|--|---|---|---|---|
| Go some place alone to think about my feelings. | 0 | 1 | 2 | 3 |
| Go away by myself and think about why I feel this way. | 0 | 1 | 2 | 3 |
| Think "why do I always react this way." | 0 | 1 | 2 | 3 |
| Think "why can't I get going." | 0 | 1 | 2 | 3 |

Father Vignettes

Imagine that you and your dad have plans to do something you are really looking forward to. You and your dad haven't had a chance to do this sort of thing for a long time. You are very excited about going. At the last minute, your dad cancels without telling you why. He just says that he can't go.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your dad had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work as quickly as possible.**

If this situation with your dad had actually happened, would you think:

- | | | |
|------------------------|----------------------------|----------------------------|
| My dad is unreliable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is insensitive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

- | | | |
|--|----------------------------|----------------------------|
| My dad was having a particularly bad day. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is cold. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad doesn't know how to meet my needs. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad was busy, but he will have time for me later. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad isn't good at comforting me. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is unresponsive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad doesn't know how to make me feel better. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad was distracted with other things. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is inconsiderate. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is rejecting me. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad can't be trusted. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| | | |
| I am basically unlovable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can handle these situations on my own. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not a dependable person. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I didn't notice that my dad was busy. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not worthy of my dad's love and attention. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't deal with these situations by myself. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't keep my dad interested in me. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get my dad to give me what I need. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I was being inconsiderate to my dad. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am worthless. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can only depend on myself. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I wasn't thinking of my dad's feelings. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't do anything about this situation. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get the support I need from my dad. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am incapable of trusting others. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can do something about this problem. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

Please **think about what you would do in this situation** where you and your dad had plans to do something and he cancels without telling you why. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your dad had actually occurred, would you:

- | | | | | |
|--|---|---|---|---|
| Go some place alone to think about my feelings. | 0 | 1 | 2 | 3 |
| Go away by myself and think about why I feel this way. | 0 | 1 | 2 | 3 |
| Think "why do I always react this way." | 0 | 1 | 2 | 3 |
| Think "why can't I get going." | 0 | 1 | 2 | 3 |

Imagine that you would very much like to go on a special school trip. In order to go, you need your dad's advice and help. When you ask for it, he refuses to talk about it or to help you and tells you that he is not happy with the way you've been acting lately. He doesn't think you deserve to go.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
 Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your dad had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work as quickly as possible.**

If this situation with your dad had actually happened, would you think:

- | | | |
|---|----------------------------|----------------------------|
| My dad is not dependable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is insensitive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad was in a bad mood today. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is cold. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad doesn't understand how I feel. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad doesn't know how to meet my needs. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is unresponsive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad was being unreasonable this time. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is uncooperative. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad is hostile. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad wasn't being fair to me. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad doesn't care about me any more. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad can't be trusted. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My dad doesn't know how to help me. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
|
 | | |
| I am basically unlovable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can solve my own problems. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not a dependable person. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I made my dad react the way he did. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not worthy of my dad's love and care. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can make my own decisions. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't solve my problems. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get my dad to give me what I need. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I asked my dad in a bad way. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

- | | | |
|--|----------------------------|----------------------------|
| I am worthless. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can only depend on myself. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I approached my dad at a particularly bad time. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't do anything about this situation. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get the support I need from my dad. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am incapable of trusting others. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can do something about this problem. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

Please **think about what you would do in this situation** where you ask your dad for advice and money for a school trip and he refuses to talk about it, telling you he doesn't think you deserve to go. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your dad had actually occurred, would you:

- | | | | | |
|--|---|---|---|---|
| Go some place alone to think about my feelings. | 0 | 1 | 2 | 3 |
| Go away by myself and think about why I feel this way. | 0 | 1 | 2 | 3 |
| Think "why do I always react this way." | 0 | 1 | 2 | 3 |
| Think "why can't I get going." | 0 | 1 | 2 | 3 |

Best Friend Vignettes

Imagine that you and your best friend go to a party. When the two of you get there, your best friend leaves you for the entire night to go talk with other friends. You do not know these friends, and your best friend doesn't introduce you. You don't know anyone else at the party.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
 Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your best friend had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work quickly.**

If this situation with your best friend had actually happened, would you think:

- | | | |
|-----------------------------------|----------------------------|----------------------------|
| My best friend is not dependable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My best friend is insensitive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

My best friend was acting unusual tonight.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend is cold.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend doesn't know how to help me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend wasn't paying attention to my feelings.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend isn't good at comforting me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend is unresponsive.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend doesn't know how to make me feel better.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend was distracted with other things.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend is inconsiderate.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend is rejecting me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My best friend can't be trusted.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am basically unlovable.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can handle these situations on my own.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not a dependable person.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I was boring my friend tonight.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not worthy of my best friend's love and attention.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't deal with these situations by myself.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't keep my best friend interested in me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never get my best friend to give me what I need.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I wasn't being fun tonight.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am worthless.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can only depend on myself.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I was being moody.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't do anything about this situation.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never get the support I need from my best friend.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am incapable of trusting others.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can do something about this problem.	Y <input type="checkbox"/>	N <input type="checkbox"/>

Please **think about what you would do in this situation** where you and your best friend go to a party and they leave you for the entire night. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your best friend had actually occurred, would you:

Go some place alone to think about my feelings.	0	1	2	3
Go away by myself and think about why I feel this way.	0	1	2	3
Think "why do I always react this way."	0	1	2	3
Think "why can't I get going."	0	1	2	3

Imagine that you and your best friend are not getting along very well lately and that you have been arguing much more than usual. This morning at school, the two of you had another argument. Later, you find your best friend hanging around with a new group of friends. They look like they are having a great time together, laughing and joking around. You go up to your best friend and the others, but they ignore you.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your best friend had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work quickly.**

If this situation with your best friend had actually happened, would you think:

- My best friend is unreliable. Y N
- My best friend is insensitive. Y N
- My best friend was in a bad mood today. Y N
- My best friend is cold. Y N
- My best friend doesn't understand how I feel. Y N
- My best friend doesn't know how to meet my needs. Y N
- My best friend is unresponsive. Y N
- My best friend was acting weird today. Y N
- My best friend is uncooperative. Y N
- My best friend is hostile. Y N
- My best friend was busy, but s/he will talk to me later. Y N
- My best friend doesn't care about me any more. Y N
- My best friend can't be trusted. Y N

- I am basically unlovable. Y N
- I can solve my own problems. Y N
- I am not a dependable person. Y N
- I made my best friend react this way. Y N
- I am not worthy of my best friend's love and care. Y N
- I can make my own decisions. Y N
- I can't solve my problems. Y N
- I will never get my best friend to give me what I need. Y N
- I wasn't paying attention to my best friend's feelings. Y N
- I am worthless. Y N

- I can only depend on myself. Y N
- I was being unreasonable this time. Y N
- I can't do anything about this situation. Y N
- I will never get the support I need from my best friend. Y N
- I am incapable of trusting others. Y N
- I can do something about this problem. Y N

Please **think about what you would do in this situation** where you and your best friend have been arguing more than usual and when you go up to your best friend and the new group of friends, they ignore you. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your best friend had actually occurred, would you:

- Go some place alone to think about my feelings. 0 1 2 3
- Go away by myself and think about why I feel this way. 0 1 2 3
- Think "why do I always react this way." 0 1 2 3
- Think "why can't I get going." 0 1 2 3

Romantic Partner Vignettes

Imagine that you have been with your boy/girlfriend for six months. You usually see each other every weekend but lately, you haven't been able to. You call your boy/girlfriend to make plans for the weekend and to talk about a problem you have been having. S/he says that you can't get together on the weekend or even talk right now because s/he is busy.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your boy/girlfriend had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work quickly.**

If this situation with your boy/girlfriend had actually happened, would you think:

- My boy/girlfriend is not attracted to me any more. Y N
- My boy/girlfriend is not dependable. Y N
- My boy/girlfriend is insensitive. Y N

My boy/girlfriend was having a particularly bad day.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend is cold.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend doesn't know how to help me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend was busy, but will be there for me later.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend isn't good at comforting me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend is unresponsive.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend doesn't know how to make me feel better.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend was distracted with other things.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend is uncooperative.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend is rejecting me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
My boy/girlfriend can't be trusted.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not attractive to my boy/girlfriend.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am basically unlovable.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can solve my own problems.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not a dependable person.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I wasn't being fair to my boy/girlfriend.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not worthy of my boy/girlfriend's love and attention.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't solve my problems.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't keep my boy/girlfriend interested in me.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never get my boy/girlfriend to give me what I need.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I approached my boy/girlfriend at a particularly bad time.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am worthless.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can only depend on myself.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I wasn't thinking of my boy/girlfriend's feelings.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't do anything about this situation.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never get the support I need from my boy/girlfriend.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am incapable of trusting others.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can do something about this problem.	Y <input type="checkbox"/>	N <input type="checkbox"/>

Please **think about what you would do in this situation** where you haven't seen your boy/girlfriend for a while and you call to make plans and to talk about a problem, but s/he is busy. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your boy/girlfriend had actually occurred, would you:

Go some place alone to think about my feelings.	0	1	2	3
Go away by myself and think about why I feel this way.	0	1	2	3

Think "why do I always react this way." 0 1 2 3
 Think "why can't I get going." 0 1 2 3

Imagine that you have a big argument with your boy/girlfriend at a party. A little later, you look for them to talk about it and try to work things out. Just then, you see them flirting with someone else and when they see you, they turn away.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
 Not at all Extremely

For each of the following statements, please think about what you would think if this situation with your boy/girlfriend had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work quickly.**

If this situation with your boy/girlfriend had actually happened, would you think:

- | | | |
|---|----------------------------|----------------------------|
| My boy/girlfriend is not attracted to me any more. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend is unreliable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend is insensitive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend was acting unusual tonight. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend is cold. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend doesn't understand how I feel. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend doesn't know how to meet my needs. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend is unresponsive. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend wasn't paying attention to my feelings. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend is inconsiderate. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend is hostile. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend was in a bad mood. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend doesn't care about me any more. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| My boy/girlfriend can't be trusted. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| | | |
| I am not attractive to my boy/girlfriend any more. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am basically unlovable. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can handle these situations on my own. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not a dependable person. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I made my boy/girlfriend react this way. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am not worthy of my boy/girlfriend's love and care. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can make my own decisions. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

- | | | |
|---|----------------------------|----------------------------|
| I can't deal with these situations by myself. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get my boy/girlfriend to give me what I need. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I was not being fun tonight. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am worthless. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can only depend on myself. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I was being unreasonable tonight. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can't do anything about this situation. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I will never get the support I need from my boy/girlfriend. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I am incapable of trusting others. | Y <input type="checkbox"/> | N <input type="checkbox"/> |
| I can do something about this problem. | Y <input type="checkbox"/> | N <input type="checkbox"/> |

Please **think about what you would do in this situation** where you have a big argument with your boy/girlfriend at a party and when you look for them to talk about it, you see them flirting with someone else and they turn away. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation with your boy/girlfriend had actually occurred, would you:

- | | | | | |
|--|---|---|---|---|
| Go some place alone to think about my feelings. | 0 | 1 | 2 | 3 |
| Go away by myself and think about why I feel this way. | 0 | 1 | 2 | 3 |
| Think "why do I always react this way." | 0 | 1 | 2 | 3 |
| Think "why can't I get going." | 0 | 1 | 2 | 3 |

Achievement-related Vignettes

Imagine that you are sitting in class and you are about to get a test back. You studied very hard for this test, more than you usually do. You are anxious to know how you did because this subject is important to you and to your career. The teacher hands you your paper and you see that you got a bad mark.

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
 Not at all Extremely

For each of the following statements, please think about what you would think if this situation had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work as quickly as possible.**

If this situation had actually happened, would you think:

The teacher is not dependable.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher is insensitive.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher wrote a tricky test.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher is cold.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher doesn't understand how I feel.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher is unfair.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher asked impossible questions.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher is incompetent.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher is hostile.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher is unreliable.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The teacher was a hard marker on this test.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not good at school.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can handle these situations on my own.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not a dependable person.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I didn't make enough of an effort on this test.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am a failure.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can solve my own problems.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't deal with these situations by myself.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never achieve what I want.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I was too tired to concentrate on this test.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am worthless.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can only depend on myself.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I didn't try as hard as I could have.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't do anything about this situation.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never do well in school.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am incompetent.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am incapable of trusting others.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can do something about this problem.	Y <input type="checkbox"/>	N <input type="checkbox"/>

Please **think about what you would do in this situation** where you studied very hard for a test on a subject that is important to you and you got a bad mark. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation had actually occurred, would you:

Go some place alone to think about my feelings.

0 1 2 3

Go away by myself and think about why I feel this way.	0	1	2	3
Think "why do I always react this way."	0	1	2	3
Think "why can't I get going."	0	1	2	3

Imagine that you applied for a part-time job that you really want. You believe that this job would be a great opportunity and that you would be very good at it. You also believe that the interview went well and so you have a great chance of getting the job. You are anxiously waiting to find out. The employer calls and tells you that he decided not to hire you

How stressful would you find this event?

1.....2.....3.....4.....5.....6.....7
 Not at all Extremely

For each of the following statements, please think about what you would think if this situation had actually happened. Check the box "Y" (Yes) if you would have that thought or the box "N" (No) if you would not have that thought. **Please work as quickly as possible.**

If this situation had actually happened, would you think:

The employer is not dependable.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer is insensitive.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer misjudged my qualifications.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer is cold.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer doesn't understand how I feel.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer is unfair.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer made a mistake.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer is incompetent.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer is unreliable.	Y <input type="checkbox"/>	N <input type="checkbox"/>
The employer was being unreasonable.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can handle these situations on my own.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am not a dependable person.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I didn't try as hard as I could have to get the job.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am a failure.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can solve my own problems.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never achieve what I want.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't solve my problems.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I didn't give a good impression of myself.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am worthless.	Y <input type="checkbox"/>	N <input type="checkbox"/>

I can only depend on myself.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I didn't make enough of an effort in the interview.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can't do anything about this situation.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I will never get a good job.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am incompetent.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I am incapable of trusting others.	Y <input type="checkbox"/>	N <input type="checkbox"/>
I can do something about this problem.	Y <input type="checkbox"/>	N <input type="checkbox"/>

Please **think about what you would do in this situation** where you applied for a job that you really want and would be good at, and the interview went well but the employer decided not to hire you. Use the following scale to indicate the extent to which you would use each strategy.

0 = not at all 1 = a little 2 = somewhat 3 = very much

If this situation had actually occurred, would you:

Go some place alone to think about my feelings.	0	1	2	3
Go away by myself and think about why I feel this way.	0	1	2	3
Think "why do I always react this way."	0	1	2	3
Think "why can't I get going."	0	1	2	3

Appendix D
Consent forms



Concordia
UNIVERSITY

February 1999
(Lasalle)

Dear Student:

Thank you for your participation in last year's Relationship and Behaviour Project. As promised, we are enclosing a summary of our findings. Your answers really helped us learn about teens' relationships, coping skills, and sense of well-being.

We are also writing to invite you to participate again, in a study related to last year's. This next study is about how adolescents make judgements, cope with, and feel about a variety of types of stressful situations, including those with parents, friends, and dating partners. It is important to find out more about these views in order to understand what helps teens develop good relationships with others, deal with problems, and feel good about themselves. This study also looks at how relationships and behaviours change over time. We are asking for your help.

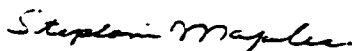
Participation at school will involve two sessions, each lasting about an hour. In the first session, you will be asked questions on a computer and to complete a few questionnaires about your relationships and feelings. In the computer task, hypothetical problems with parents, friends, dating partners and with school will be described briefly, and you will be asked what you would think, do, and feel in these situations. During the second session, you will be asked to fill out questionnaires similar to the ones you completed in the last study, about your feelings, the way you cope with stress, your sexual behaviour, and whether or not you have tried drugs, alcohol, or have broken rules.


Of course all information will be completely confidential to the research team and identified only by number. We're interested in knowing from you what sorts of things help teens have good relationships and cope with problems. We really want you to participate to complete this puzzle. In return for your help, we'll give you \$10. And of course, you are free to discontinue at any time. We think you'll enjoy it though.

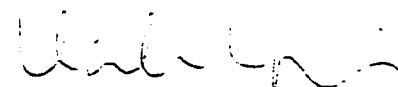
Please complete the enclosed consent form whether or not you wish to participate and send it back to us as soon as possible in the enclosed prepaid envelope. We want to hear from you whether your answer is "yes" or "no". Everyone returning the form will have a chance to win one of several Cineplex Odeon movie passes. Thank you again for your support in our research.

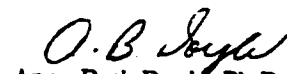
If you have any questions about the study, please feel free to call Stephanie or Clairalice at 848-7560. We look forward to hearing from you very soon.

Sincerely,


Stephanie Margolese, M.A.
Ph.D Candidate


Dorothy Markiewicz, Ph.D.
Associate Professor of Applied
Human Sciences and of Psychology


Clairalice Campini, B.A.
M.A. Candidate


Anna-Beth Doyle, Ph.D.
Professor of Psychology

CENTRE FOR RESEARCH IN HUMAN DEVELOPMENT
tel: (514) 848-7560 fax: (514) 848-2815

February 1999

CONSENT FORM TO PARTICIPATE IN RESEARCH (Lasalle)

Check where applicable:

_____ **I agree** to participate in the study conducted by Stephanie Margolese, Clairalice Campini, Dr. Dorothy Markiewicz, and Dr. Anna-Beth Doyle of the Centre for Research in Human Development. I have been informed that the study is about relationships, coping, emotions, and behaviour.

OR

_____ I am not sure if I want to participate and I want to be called to discuss the project.
My name and phone number is:

OR

_____ **I do not agree** to participate in this study and do not wish to be called.
My name is (so we can put your name in the draw):

IF YOU AGREE TO PARTICIPATE, please complete the following:

I have been informed that the purpose of the research is to study the links between relationship quality, coping style, emotions, and behaviour. Participation will be at my school, and will involve two sessions of approximately 50-60 minutes. During the first session, I will answer questions on a portable computer about what I would think, do, and how I would feel in hypothetical situations with parents, friends, school or work. I will also complete questionnaires about my mood, and my relationships with my friends and my parents. During the second session, I will complete questionnaires about the ways I cope with stress, my feelings about myself, and involvement in rule-breaking behaviour, use of alcohol and drugs, and attitudes regarding sexual behaviour. I understand that **ALL INFORMATION WILL BE CONFIDENTIAL** to the research team, and identified only by number. I understand that I may withdraw my consent and may discontinue participation at any time.

I HAVE READ THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND AGREE TO PARTICIPATE IN THIS STUDY.

Name (please print): _____

Signature: _____ Date: _____

Address: _____

Phone Number: (____) _____

School: _____ Grade: _____

Please return this form in the postage-prepaid envelope to Concordia University as soon as possible.



Concordia
UNIVERSITY

February 1999
(CEGEP)

Dear Student:

Thank you for your participation in last year's Relationship and Behaviour Project. As promised, we are enclosing a summary of our findings. Your answers really helped us learn about teens' relationships, coping skills, and sense of well-being.

We are also writing to invite you to participate again, in a study related to last year's. This next study is about how adolescents make judgements, cope with, and feel about a variety of types of stressful situations, including those with parents, friends, and dating partners. It is important to find out more about these views in order to understand what helps teens develop good relationships with others, deal with problems, and feel good about themselves. This study also looks at how relationships and behaviours change over time. We are asking for your help.

Participation will involve one session (approximately 2 hours) at either your CEGEP or Concordia University. In this session, you will be asked to do a computer task in which hypothetical problems with parents, friends, dating partners and with school will be described briefly, and to answer questions about what you would think, do, and feel in these situations. You will also be asked to complete questionnaires similar to the ones you completed in the last study, about your relationships, feelings, the way you cope with stress, your sexual behaviour, and whether or not you have tried drugs, alcohol, or have broken rules.

Of course all information will be completely confidential to the research team and identified only by number. We're interested in knowing from you what sorts of things help teens have good relationships and cope with problems. We really want you to participate to complete this puzzle. In return for your help, we'll give you \$10. And of course, you are free to discontinue at any time. We think you'll enjoy it though.

Please complete the enclosed consent form whether or not you wish to participate and send it back to us as soon as possible in the enclosed prepaid envelope. We want to hear from you whether your answer is "yes" or "no". Everyone returning the form will have a chance to win one of several Cineplex Odeon movie passes. Thank you again for your support in our research.

If you have any questions about the study, please feel free to call Stephanie or Clairalice at 848-7560. We look forward to hearing from you very soon.

Sincerely,

Stephanie Margolese, M.A.
Ph.D Candidate

Dorothy Markiewicz, Ph.D.
Associate Professor of Applied
Human Sciences and of Psychology

Clairalice Campini, B.A.
M.A. Candidate

Anna-Beth Doyle, Ph.D.
Professor of Psychology

CENTRE FOR RESEARCH IN HUMAN DEVELOPMENT
tel: (514) 848-7560 fax: (514) 848-2815

February 1999

CONSENT FORM TO PARTICIPATE IN RESEARCH (CEGEP)

Check where applicable:

_____ **I agree** to participate in the study conducted by Stephanie Margolese, Clairalice Campini, Dr. Dorothy Markiewicz, and Dr. Anna-Beth Doyle of the Centre for Research in Human Development. I have been informed that the study is about relationships, coping, emotions, and behaviour.

OR

_____ I am not sure if I want to participate and I want to be called to discuss the project.
My name and phone number is:

OR

_____ **I do not agree** to participate in this study and do not wish to be called.
My name is (so we can put your name in the draw):

IF YOU AGREE TO PARTICIPATE, please complete the following:

I have been informed that the purpose of the research is to study the links between relationship quality, coping style, emotions, and behaviour. Participation will be at my CEGEP or at Concordia University, and will involve one session of approximately 2 hours. During the session, I will answer questions on a portable computer about what I would think, do, and how I would feel in hypothetical situations with parents, friends, school or work. I will also complete questionnaires about my mood, my relationships with my friends and my parents, the ways I cope with stress, my feelings about myself, and involvement in rule-breaking behaviour, use of alcohol and drugs, and attitudes regarding sexual behaviour. I understand that **ALL INFORMATION WILL BE CONFIDENTIAL** to the research team, and identified only by number. I understand that I may withdraw my consent and may discontinue participation at any time.

I HAVE READ THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND AGREE TO PARTICIPATE IN THIS STUDY.

Name (please print): _____

Signature: _____ Date: _____

Address: _____

Phone Number: (____) _____

CEGEP: _____ CEGEP level: _____

Please return this form in the postage-prepaid envelope to Concordia University as soon as possible.

Appendix E

Pathway III: Links between attachment to father and depression

It was expected that adolescents who had negative models of self and/or other in relation to their father would be likely to (a) make negative stable-global attributions about the self and other, and (b) report increased depressive symptoms. The use of a ruminative coping strategy in response to stressors involving father was explored. The results from the regressions presented earlier comparing the predictive validity of models of self and of other with three or four attachment figures suggested that the attachment models with father were not predictive of depression. However, when the partial correlations (controlling for sex) were examined, model of other with father was found to be significantly correlated with depression ($r = -.19, p < .05$) whereas model of self with father was not ($r = -.12, ns$). Moreover, regardless of whether attachment is associated with depression, it is possible that models of self and of other in relation to father indirectly predicted depression through associations with negative attributions and ruminative coping which, in turn, may be associated with depression. Thus, several hierarchical regressions were conducted to explore whether there are these indirect effects.

A regression was performed to evaluate the relation between attachment to father and depression. After controlling for sex at step 1 ($\Delta R^2 = .10, p < .001$), model of self and of other with father, entered as a block at step 2, failed to significantly predict depression ($\Delta R^2 = .04, ns$). Without direct effects between attachment to father and depression, the existence of indirect effects was explored.

Regressions were next performed to assess whether attachment to father predicted negative attributions and ruminative coping used in response to stressors involving father. After controlling for sex at step 1 ($\Delta R^2 = .00, ns$), models of self and of

other in relation to father, entered together at step 2, significantly predicted negative attributions ($\Delta R^2 = .17, p < .001$). Models of self ($sr^2 = .06, p < .01$) and of other ($sr^2 = .06, p < .01$) were significant unique predictors. That is, the more negative the attachment models, the more negative attributions were endorsed. In the second regression, sex was entered at step 1 ($\Delta R^2 = .06, p < .01$). Girls ($\beta = -.24, p < .01$) were found to ruminate more than boys. The attachment models, entered as a block at step 2, significantly predicted ruminative coping ($\Delta R^2 = .06, p < .05$). Model of self ($sr^2 = .06, p < .01$), but not model of other ($sr^2 = .002, ns$), was a significant predictor. Thus, the more negative the model of self in relation to father, the more ruminative coping was used in response to stress.

In a final regression, the predictive validity of negative attributions and ruminative coping to depression was examined. After controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), negative attributions and ruminative coping, entered as a block at step 2, significantly predicted depression ($\Delta R^2 = .16, p < .001$). Negative attributions ($sr^2 = .14, p < .001$), but not rumination ($sr^2 = .002, ns$), was a significant unique predictor. See Figure E1. This result indicated that there was an indirect effect from attachment to depression through negative attributions only. Follow-up tests of the significance of the indirect effects (Kline, 1998) indicated that both paths from model of self ($z = -2.40, p < .05$) and from model of other ($z = -2.53, p < .05$) to depression through attributions were significant.

In summary, although attachment to father did not directly predict depression, there was an indirect relation through negative attributions. That is, adolescents who had more negative models of self and of other in relation to father were likely to make

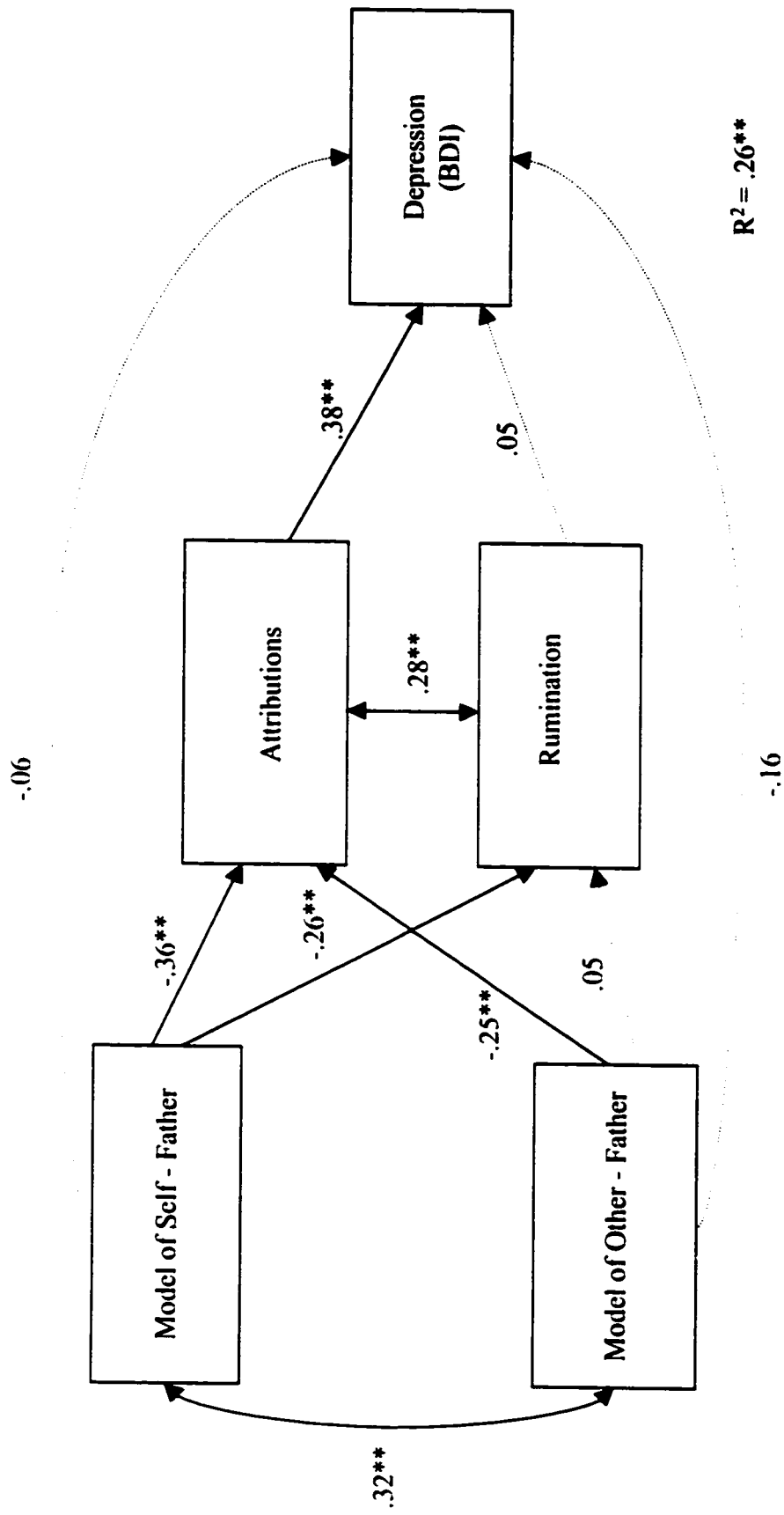


Figure E1. Processing relationship stress involving father: Prediction from models of attachment to attributions, rumination, and depression¹

¹ The beta weights shown are based on hierarchical regression analyses. N = 133; * $p < .05$ ** $p < .01$

negative stable-global attributions in response to stress, and these attributions were associated with increased depressive symptoms.

Appendix F

Pathway IV: Link between attachment to best friend and depression

Adolescents who had more negative working models of self and/or other in relation to best friend were hypothesized to (a) make more negative stable-global attributions about the self and other in response to stress, (b) use a ruminative coping strategy, and (c) as a result, report increased depressive symptoms. However, as for father, models of self and of other in relation to best friend were not predictive of depression when entered in the regressions with models of attachment with the other figures. As well, models of self and of best friend, when considered independently, were not significantly correlated with depression. As such, models of self and of other in relation to best friend were not directly associated with depression. However, there may be indirect effects between attachment and depression through negative attributions and ruminative coping used in response to stressors with best friend. Several hierarchical regressions were conducted to test for possible indirect effects.

Two hierarchical regressions were performed to evaluate whether attachment to best friend predicted negative attributions and rumination. Controlling for sex at step 1 ($\Delta R^2 = .02$, *ns*), the attachment models, entered together at step 2, significantly predicted negative attributions ($\Delta R^2 = .16$, $p < .001$). Model of self with best friend ($s_r^2 = .11$, $p < .001$), but not model of other ($s_r^2 = .02$, *ns*), was a unique predictor. Hence, the more negative the model of self in relation to best friend, the more negative attributions endorsed. After controlling for sex at step 1 ($\Delta R^2 = .09$, $p < .001$), model of self and of other, entered at step 2, failed to significantly predict rumination ($\Delta R^2 = .04$, *ns*). Thus, there could not be an indirect effect through rumination.

A final regression was conducted to investigate the relation between negative attributions, made in response to stress involving best friend, and depression. After

controlling for sex at step 1 ($\Delta R^2 = .11, p < .001$), negative attributions, entered at step 2, significantly predicted depression ($\Delta R^2 = .05, p < .01$). That is, the more negative attributions endorsed, the more depressive symptoms reported. See Figure F1. A follow-up test of the significance of the indirect effect (Kline, 1998) indicated that the path from model of self ($z = -2.24, p < .05$) to depression through attributions was significant.

In summary, there seemed to be an indirect effect from attachment to best friend to depression through negative attributions. Specifically, adolescents who had more negative models of self in relation to their best friend were likely to make negative stable-global attributions in response to stress involving this figure, and these attributions were associated with depressive symptoms.

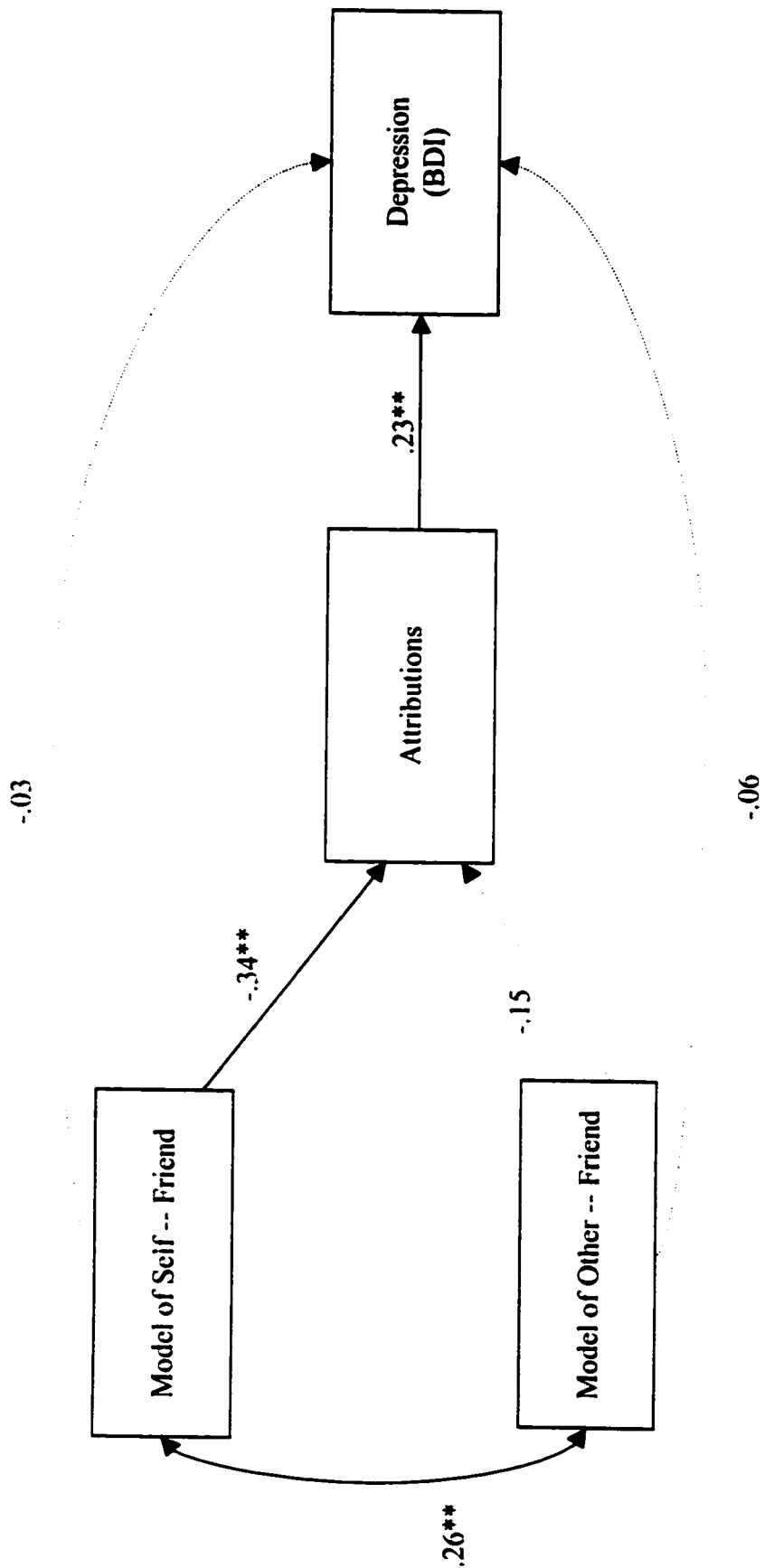


Figure F1. Processing relationship stress involving best friend: Prediction from models of attachment to attributions and depression¹

¹The beta weights shown are based on hierarchical regression analyses.

$N = 133$; $R^2 = .17$, $p < .01$

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

Appendix G

Table of Partial Correlations Between Attachment Dimensions, Models of Attachment to Specific Target Figures, and Depression

Table G1.

Partial Correlations, Controlling for Sex, Between Attachment Dimensions, Models of Attachment to Specific Target Figures, and Depression

Attachment Dimension	Depression
Anxiety (ECR)	.44**
Avoidance (ECR)	.31**
Self with Mom	-.30**
Other with Mom	-.31**
Self with Dad	-.12
Other with Dad	-.19*
Self with Best Friend	-.05
Other with Best Friend	-.08
Self with Partner ($n = 106$)	-.24*
Other with Partner ($n = 106$)	.09

Note. $N = 133$; * $p < .05$ ** $p < .01$

^a Attachment dimensions for general orientation are based on the Experiences in Close Relationships Questionnaire. Scores for the anxiety and avoidance dimensions range from 1 to 7 with high scores indicating high levels of anxiety or avoidance, respectively.

^b Models of self and of other are based on continuous ratings from the Relationship Questionnaire. Scores for the models can range from -12 to 12 with a high positive score indicating a more positive and a high negative score indicating a more negative model.