

When thinking hurts: Attachment, rumination, and post-relationship adjustment

by

Colleen Saffrey  
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Supervisor: Dr. Marion F. Ehrenberg

### ABSTRACT

The current study used an attachment framework to explore the association between rumination and adjustment in individuals who experienced a recent relationship break up. Two hundred and thirty-one young adults who were involved in a romantic relationship that (1) was of 3 months duration or longer, and (2) ended in the last 12 months, participated in the study. Rumination was assessed at both an individual differences level (general tendencies to ruminate) as well as at a relationship-specific level (tendencies to ruminate about the former relationship). Rumination at the individual differences level included brooding, global regret, and reflection, and rumination at the relationship-specific level included relationship preoccupation and romantic regret. At the individual differences level, results indicated that higher levels of brooding and global regret were associated with more negative adjustment and less positive adjustment. The findings for reflection, a potentially more healthful form of rumination, differed across two measures. In one case, reflection was associated with more negative adjustment and in the other case reflection was associated with more positive adjustment. At the relationship-specific level, both relationship preoccupation and relationship regret were associated with more negative adjustment and less positive adjustment. The previously established link between high attachment anxiety and poor adjustment was replicated in the current study. Mediation models tested at both the general and relationship-specific levels indicated that the association between attachment anxiety and adjustment was largely mediated by rumination. A variety of relationship demographic variables were included, and results

revealed that not having closure on the relationship, hoping to reunite, and not wanting the relationship to end were most strongly associated with negative adjustment and relationship rumination. An in-depth content analysis of the romantic regrets revealed that young adults primarily reported romantic regrets concerning personal attributes and emotional involvement/openness. The origins of a ruminative response style and treatment approaches for reducing ruminative thought are discussed.

Supervisor: Dr. M. F. Ehrenberg, (Department of Psychology)

## TABLE OF CONTENTS

TITLE PAGE.....	i
ABSTRACT.....	ii
TABLE OF CONTENTS.....	iv
LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
ACKNOWLEDGEMENTS.....	x
DEDICATION.....	xi
INTRODUCTION.....	1
Understanding Relationship Dissolution.....	1
The Developmental Course of Relationships.....	3
Attachment Theory.....	5
Attachment and Relationship Dissolution.....	7
Attachment and Coping Styles.....	8
Attachment and Post-Dissolution Distress.....	8
Rumination.....	10
Bereavement and Rumination.....	12
Relationship Break ups and Rumination.....	13
Assessing Rumination.....	14
Regrets.....	15
Regret as a Component of Rumination.....	18
Regrets and Relationship Dissolution.....	19
Current Study and Hypotheses.....	20

METHOD.....	26
Sample.....	26
Participant Recruitment.....	27
Participants.....	27
Procedure.....	28
Measures.....	28
General Attachment .....	28
Romantic Attachment.....	30
General Rumination Measures.....	31
Relationship-Specific Rumination Measures.....	34
General Adjustment.....	35
Relationship-Specific Adjustment.....	37
Relationship Demographics.....	37
In-Depth Regret Approach.....	38
RESULTS.....	39
Overview.....	39
Descriptive Statistics.....	40
Relationship Demographics.....	40
Individual Differences and Relationship-Specific Variables.....	42
Hypotheses.....	44
Attachment and Adjustment.....	44
Individual Differences Rumination and Adjustment.....	46
Relationship-specific Rumination and Adjustment.....	47

Attachment and Rumination.....	47
Reflection and Adjustment—Curvilinear Association.....	48
Mediation Models.....	49
Sex Differences in Mediation Models.....	61
Relationship Demographics, Adjustment, and Rumination.....	62
In Depth Regret Analysis.....	64
Regret Type and Attachment Anxiety.....	64
Structure of Romantic Regrets.....	66
Thematic Content of Romantic Regrets.....	66
DISCUSSION.....	70
Overview.....	70
Interpretative Context.....	71
Findings Related to the Hypotheses.....	72
Attachment and Adjustment.....	72
General Rumination and Adjustment.....	72
Relationship-specific Rumination and Adjustment.....	74
Attachment and Rumination.....	75
Reflection and Adjustment—Curvilinear Association.....	76
Young adulthood: The role of developmental phase.....	76
Mediation Models.....	78
Relationship Demographics, Adjustment, and Rumination.....	80
In-depth Regret Analysis.....	81
Rumination: Origins and Treatment.....	83

Why do people ruminate?.....	83
The Developmental Origins of Rumination.....	84
Coping with Rumination: Distraction Techniques.....	84
Treatment Approaches.....	86
Rumination about the Future.....	89
Strengths and Limitations.....	91
Future Research Directions.....	93
Concluding Comments.....	95
REFERENCES.....	97
APPENDICES.....	106

# LIST OF TABLES

Table 1: Means of Relationship Demographic Variables.....	41
Table 2: Means of Individual Differences and Relationship-Specific Variables .....	43
Table 3: Intercorrelations among Individual Differences Variables.....	45
Table 4: Intercorrelations among Relationship-Specific Variables.....	46
Table 5: Curvilinear Analysis of Reflection and Adjustment.....	49
Table 6: Intercorrelations among Relationship Demographics, Adjustment, and Rumination.....	64
Table 7: Primary Domain in which individuals report experiencing the majority of their regrets.....	65
Table 8: Structure of Romantic Regrets .....	66
Table 9: Descriptions of Romantic Regret Themes.....	67
Table 10: Frequency of regrets across the 10 categories.....	70
Table 11: Intercorrelations among Individual Differences and Relationship-specific Variables .....	130



## LIST OF FIGURES

Figure 1: Model of the mediating role of General Rumination (measured by General Rumination Scale and Global Regret Scale) in the association between Attachment General Anxiety and General Adjustment.....	23
Figure 2: Model of the mediating role of General Rumination (measured by Rumination Responses Scale and Global Regret Scale) in the association between General Attachment Anxiety and General Adjustment.....	24
Figure 3: Model of the mediating role of Relationship Rumination (measured by Relationship Preoccupation Scale and Relationship Regret Scale) in the association between Romantic Attachment Anxiety and Post-Relationship Adjustment.....	25
Figure 4: Results for mediating role of General Rumination (measured by General Rumination Scale and Global Regret Scale) in the association between Attachment General Anxiety and General Adjustment.....	53
Figure 5: Results for mediating role of General Rumination (measured by Rumination Responses Scale and Global Regret Scale) in the association between General Attachment Anxiety and General Adjustment.....	56
Figure 6: Results for mediating role of Relationship Rumination (measured by Relationship Preoccupation Scale and Relationship Regret Scale) in the association between Romantic Attachment Anxiety and Post-Relationship Adjustment.....	59

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This thesis is dedicated to a very special little sister.

When thinking hurts:

## Attachment, Rumination, and Post-Relationship Adjustment

### *Overview*

When romantic relationships end, individuals must adjust to life without their prior partners. The separation process of any relationship—dating, common-law, or marital—can be emotionally and physically challenging. For some the disruption in daily living is debilitating and interferes significantly with work and social commitments (e.g., Choo, Levine, & Hatfield, 1998). For others, adjustment comes with greater ease, and may include feelings of relief or a sense of freedom to explore new opportunities. Although prior research has examined how general factors such as the level of commitment and who terminated the relationship are associated with post-dissolution distress (e.g., Simpson, 1987; Sprecher, 1994), little research has addressed the role individuals' cognitive experiences may play in the intensity and maintenance of emotional distress following a break up. While most individuals spend time considering why the relationship ended (Stephen, 1984), some become consumed with thoughts of the former relationship. Drawing on an attachment theory framework, the current study aims to elucidate the role that reflection and rumination may play in post-break up adjustment difficulties.

### *Understanding Relationship Dissolution*

Researchers in the relationship field stress the importance of viewing relationship dissolution as a process rather than as a static event. Many researchers have devised models to provide an understanding of the emotional and practical challenges encountered by individuals separating from their romantic partners (e.g., Duck, 1982).

These models highlight the number of potential points at which separating individuals may encounter adjustment difficulties. Duck proposed a four-stage model that highlights the various challenges at different stages of the dissolution process. In the first stage, called the *Intrapsychic Phase*, individuals contrast their desired outcomes in the relationship with what has actually transpired. Evaluation of the partner is a key component of this stage, although it is done in an intrapsychic manner and is not shared with the partner. The second stage, named the *Dyadic Phase*, occurs when the couple members communicate their feelings of dissatisfaction regarding the relationship to one another. The “costs and benefits” of the relationship are explored and ultimately a decision is made to repair or dissolve the relationship. If ending the relationship is the outcome, then the third phase, called the *Social Phase*, is thought to occur. At this point, the individuals must make public their decision to separate and make attributions for the loss of the relationship. Finally, in the fourth stage, labeled the *Grave Dressing Phase*, individuals engage in final attributions about the past relationship. The ultimate goal of the fourth stage is to put the previous relationship to rest.

Central to the current study is the tendency of some individuals to ruminate excessively about a lost relationship. From Duck’s (1982) model, it is evident that making accounts for the end of a relationship and ultimately letting go of a relationship are key components of successfully navigating the dissolution process. For some individuals, however, letting go of a relationship is not an easy task. Sometimes a breakup results in an “obsession” to understand what went wrong. In support of Duck’s model, Guttman (1993) found that better adjustment to divorce is associated with an understanding of why the marriage ended. In addition, Weiss (1975) found that

individuals ruminated extensively over divorce, yet once an account or explanation for the relationship dissolution was achieved, distress decreased. Some individuals, however, become mentally “stuck” in a place of dwelling on a terminated relationship. They are not able to account for why the relationship ended and find themselves unable to let go. Such difficulties letting go of a past relationship can interfere with ultimate adjustment.

### *The Developmental Course of Relationships*

Interest in and attraction to the opposite sex typically emerges around early adolescence (Shulman & Seiffge-Krenke, 2001)<sup>1</sup>. Rather than following a specific normative pattern, wide variation exists in adolescents’ early romantic experiences (Furman, 2002). For example, adolescents vary in the specific ages at which they become interested in relationships and also vary in their experiences in these relationships. Approximately 25% of 14 year olds, 50% of 15 year olds, and over 70% of 18 year olds report having had “a special romantic relationship” in the previous 18 months (Carver, Joyner, & Udry, 2003).

Only recently have researchers begun to focus on the importance of these early life relationship experiences. The prior neglect largely stemmed from the assumption that the topic was not important because romances in adolescence tend to be casual and short-term (Feiring, 1996). However, increased focus in the area has yielded a four-phase model which highlights the developmental shift in the nature of romantic experiences across adolescence into young adulthood (Brown, 1999). During the *Initiation Phase*, physical attraction is prominent. However, there is very little interaction with potential

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<sup>1</sup> Romantic interest in and attraction to the same sex often emerges around adolescence as well. However, the current study will solely focus individuals with heterosexual orientations.

partners as this phase focuses more on broadening one's self-concept and becoming aware of the capacity to relate to others romantically. Any opposite-sex interaction takes the general form of "hanging out." During the second phase, called the *Status Phase*, adolescents are conscious of their peers' judgments. At this point, there is much pressure to be involved with individuals of an acceptable popularity status. Near the end of this phase, adolescents develop more confidence in their abilities to interact romantically and often begin to resent peers' influences on their romantic relationships. The third phase, called the *Affection Phase*, shifts to a focus on the romantic relationship itself, rather than the peer context. At this point, relationships become more fulfilling both sexually and emotionally. In the last phase, called the *Bonding Phase*, individuals' relationships become more mature and exclusive. In addition, there is a realization that the relationship could last for a life-time. Brown suggested that this final stage is not reached until early adulthood.

In keeping with Brown's (1999) model, research indicates that young adolescents around 14 years of age experience relationships characterized by low levels of intimacy<sup>2</sup> and affection (Neider & Seiffge-Krenke, 2001). In contrast, by the time adolescents are 17 years of age, their romances are of longer duration and involve more intimacy. Furthermore, they are more concerned with repercussions of the relationship itself (e.g., rejection) rather than peer approval. Also supporting Brown's model, research indicates that early adolescent relationships appear to serve a companionship role, whereas late adolescent relationships are characterized by trust, support, and stability (Shulman &

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<sup>2</sup> Intimacy was measured using three items: How much do you talk about everything with this person?, How much do you share your secrets and private feelings with this person?, and How much do you talk to this person about things that you don't want others to know?

Kipnis, 2001). Highlighting the importance of relationships during late adolescence, young college-aged students perceive romantic relationships among the most supportive kind of relationships in their lives (Furman & Buhrmester, 1992). These findings suggest that the romantic relationships experienced around college-age are of significant importance. Given the meaningful nature of these early love relationships, relationship endings are likely to be difficult, particularly for some individuals who have never experienced such a loss before. Understanding how young adults respond to break ups is important as their coping approaches may carry forward to subsequent relationship endings. In the current study, if young adults excessively ruminate about a relationship loss, they may be more prone to using this coping response in subsequent situations and to struggling with adjustment following relationship dissolution. Therefore, an understanding of how young adults tend to work through or ruminate about relationship losses and the implications of these processes are important considerations.

### *Attachment Theory*

Attachment theory posits that childhood transactions with caregivers give rise to internal representations of oneself and others which guide behavior and feelings in later social relationships (Bowlby, 1973). “Models of self” are internalizations that reflect the extent to which individuals believe they are worthy of others’ love and support. “Models of other” reflect the extent to which individuals feel they can rely upon and trust in others. Although attachment research initially focused on infant-caregiver relationships (Ainsworth, Blehar, Waters, & Will, 1978), Hazan and Shaver (1987) extended the application of attachment theory to romantic relationships during adulthood. Similar to Ainsworth et al., they proposed three primary attachment or relationship orientations an



individual may have towards their romantic partners: Secure, Anxious Ambivalent, and Avoidant. Based on additional research, Bartholomew and Horowitz (1991) went on to expand the three-category model to a four-category model. Their model depicts four attachment orientations defined by the two main dimensions which are thought to underlie attachment: model of self and model of other.

Individuals showing a *secure* attachment pattern have internalized a positive sense of themselves (model of self) and a positive view of others (model of other). They enjoy both personal autonomy and satisfying intimate relations. *Preoccupied* individuals (negative model of self and positive model of others) are overly preoccupied with intimate relationships and are excessively reliant on others for support and self-esteem. *Fearful* individuals (negative models of self and others) avoid intimacy due to fear of rejection and see themselves as undeserving of the love and support of others. Finally, *dismissing* individuals (positive model of self and negative model of others) are compulsively self-reliant and defensively deny attachment needs. The primary distinction between the three and four category models of attachment is that the four category model distinguishes between fearful and dismissing attachment patterns, whereas the three category model refers only to avoidant attachment.

Much research on attachment has focused on prototype approaches, but attachment research also often employs a dimensional approach to assessment. One of the dimensions is termed *attachment anxiety* (or model of self) and reflects rejection and abandonment fears. Attachment anxiety distinguishes preoccupied and fearful individuals from secure individuals and dismissing individuals. The other dimension is defined as *attachment avoidance* (or model of other) which reflects a tendency to avoid social

closeness. Attachment avoidance distinguishes dismissing and fearful individuals from secure and preoccupied individuals.

*Attachment and relationship dissolution.*

Although parents typically serve as primary attachment figures early in life, Hazan and Shaver's (1987) seminal work introduced the notion that romantic partners serve as primary attachment figures in adulthood. Since relationship dissolution signifies the loss of an important attachment relationship, an attachment framework is ideal to investigate the responses of individuals following a relationship breakup. The loss of a close bond activates the attachment system and sets into motion a series of reaction phases: Protest, despair, and finally reorganization (Bowlby, 1980). Protest reactions involve actions targeted to reduce the likelihood the attachment figure will leave, such as crying. When protest behaviors fail, and the individual realizes that the attachment figure is unattainable, feelings of despair arise including sadness, depression, and loneliness. In the final detachment phase, individuals are able to open themselves up to new relationship experiences. While most individuals are able to progress through these stages and ultimately adjust to the loss of an attachment figure, some experience more struggle with the process. Bowlby stressed that those who are insecurely attached have a much harder time recovering from the loss of a relationship. He identified chronic mourning and the absence of conscious grieving as two forms of disordered mourning. Chronic mourning is evidenced by difficulty overcoming depression and despair, resulting in preoccupation with the lost relationship. An absence of conscious grieving following the loss of a primary relationship involves minimal display of affect and is considered to reflect a "pathological" or excessive need to be self-reliant. This absence of conscious

grieving is related to avoidant attachment styles.

*Attachment and coping styles.*

In keeping with Bowlby's theory, research indicates that securely attached individuals are capable of regulating their emotions in distressing circumstances and are likely to seek out support to cope with trauma (e.g., Mikulincer, Florian, & Weller, 1993). In contrast, individuals with insecure attachment orientations employ less adaptive techniques. For example, those with preoccupied attachment tend to use emotion-focused strategies such as wishful thinking and self-defeating thoughts, whereas those with avoidant attachment orientations may use distancing methods or deny distress altogether (Birnbau, Orr, Mikulincer, & Florian, 1997). These findings from the coping and attachment literature suggest that those with preoccupied attachment may be at greatest risk for ruminating about their ended relationship long after it is over. It is difficult to assess the extent to which fearful individuals (also high on attachment anxiety) might employ coping tactics such as rumination as Birnbau et al. (1997) used the three-categorical model of attachment in their research.

*Attachment and post-dissolution distress.*

Some research has investigated the association between attachment orientation and affective responses to relationship dissolution (e.g., Feeney & Noller, 1992; Simpson, 1990). Findings indicate that avoidant individuals tend to report significantly less post-dissolution distress than do securely attached and anxiously attached individuals (e.g., Feeney & Noller, 1992). Although some studies fail to document a significant association between ambivalent attachment and post-dissolution distress (e.g., Simpson, 1990), the majority of research indicates that an ambivalent / preoccupied orientation is negatively

correlated with self-reported distress (e.g. Feeney & Noller, 1992). Although avoidant attachment does not predict post-dissolution distress in the context of the three-categorical model, it is likely that a distinction between fearful and dismissing attachment will yield different findings. Those with a fearful orientation are characterized by high anxiety, which makes intense distress a likely experience following an attachment loss, compared to dismissing individuals who are characterized by low anxiety. In support of this, Pistole (1995) found that both preoccupied and fearful individuals tend to experience the most difficulties following a break up. More specifically, individuals with these attachment orientations report being more tense, more depressed, more confused, more “cheated”, more attached to their former partners, and less alert compared to individuals with secure and dismissing attachment orientations. Finally, research considering dimensional qualities of attachment orientation has also documented a significant positive association between attachment anxiety and emotional distress (e.g., Davis, Shaver, & Vernon, 2003; Sprecher, Felmlee, Metts, Fehr, & Vanni, 1998).

Building on these findings, the current study will also consider whether attachment anxiety may be associated with poor adjustment to a relationship break up. However, attachment avoidance will not be considered. From the literature discussed earlier, it is evident that individuals with avoidant attachment tendencies use more distraction oriented techniques (Birnbaum et al., 1997) and are thereby less likely to focus repeatedly on their feelings and thoughts surrounding the relationship breakup. Although fearful attachment is a form of avoidant attachment, the attachment anxiety dimension captures the high level of anxiety that characterizes both preoccupied and fearful individuals. Thus the attachment anxiety dimension is ideal for the current study's

focus on rumination and post-dissolution distress, whereas the attachment avoidance dimension is not as relevant.

### *Rumination*

As seen with Duck's (1982) model, making sense of why a relationship ended is an important and necessary part of the dissolution process. For some, however, creating an account for the end of a relationship is an insurmountable task. These individuals experience persistent ruminative thoughts about the terminated relationship. Duck would suggest that these individuals have not successfully "put the relationship to rest."

Rumination is typically considered a maladaptive and excessive focus on negative thoughts about one's past. Importantly, rumination can also be an adaptive response to coping with life events (Sanna, Stocker, & Clarke, 2003). Rumination can be a useful component of problem solving and encourage a person to persist in achieving a goal. For example, a strong desire to marry may motivate an individual to actively meet new people and explore the dating scene. In this sense, focusing on thoughts of meeting a partner may have a functional and adaptive basis. Even in situations following loss or trauma, rumination can have benefit. Meaning making is a critical part of adjusting to trauma because it allows us to develop coherent accounts of what happened and reach some understanding of an event. Attachment theory expects that part of the initial reaction to the loss of an attachment figure is to be preoccupied with thoughts of the relationship (Zeifman & Hazan, 1997). In the short term, *reflection* on the past relationship can be adaptive and help promote adjustment by allowing an individual to account for and make sense of the loss. Sometimes, however, reflections on the past

relationship may be excessive, persistent, and overly-focused on negative feelings. Such reflections are *ruminations*, which are maladaptive and interfere with ultimate resolution.

Nolen-Hoeksema and colleagues have developed an extensive research program investigating the links among rumination, depression, and anxiety. Nolen-Hoeksema defines “rumination” as dwelling on depressed mood, one’s feelings, and the implications of the feelings (e.g., Nolen-Hoeksema, 1998). Although some studies focus only on depressive symptoms and feelings as the focus of rumination, other studies more broadly include aspects such as regrets and concerns about coping as components of rumination (e.g., Nolen-Hoeksema, McBride, & Larsen, 1997). In the current study, rumination will be considered in two ways: As an individual differences variable and as a specific response to a romantic breakup. That is, *rumination* is conceptualized as an individual’s general tendency towards intrusive and regret-oriented thoughts, as well as specific ruminative and regret oriented thoughts about a recent relationship break up. Since the majority of research in the rumination area does not include a regret-oriented component, findings from the general ‘rumination’ literature will be discussed first. Subsequently, research specifically on regrets, another component of rumination in the current study, will be reviewed.

Typical questions that individuals with strong ruminative tendencies may pose to themselves include “What do my feelings mean?” and “Why are things happening this way?” (Nolen-Hoeksema, 2000). Findings across both lab-based and field studies indicate that individuals who focus on their negative feelings experience more severe and frequent distress than individuals who do not ruminate (e.g., Lyubomirsky & Nolen-Hoeksema, 1993; Nolen-Hoeksema & Davis, 1999). Furthermore, the implications of a

ruminative response style are more pervasive than maintaining distress: Dysphoric ruminators have poor problem solving strategies (Lyubomirsky & Nolen-Hoeksema, 1995), recall more negative memories from their past (Lyubomirsky, Caldwell, & Nolen-Hoeksema, 1998), and anticipate negative future outcomes (Lyubomirsky & Nolen-Hoeksema, 1995). Ruminators may also be at a disadvantage, because they are apt to seek social support to a point where others may feel annoyed. Feeling unsupported may further prolong the depressive responses that often characterize ruminative individuals following trauma (Nolen-Hoeksema, 2001).

*Bereavement and rumination.*

Although Nolen-Hoeksema and colleagues have not conducted research specifically about rumination following relationship break ups, they have focused on a related area: rumination in the context of bereavement. Nolen-Hoeksema et al. (1997) investigated the ruminative tendencies of men following the loss of their partner to AIDS. They found that those who ruminated excessively about the loss experienced more physical and psychological distress than those who did not ruminate excessively. In this case, the ruminations were not adaptive (i.e., focused on how to attain a future goal), but rather were maladaptive as they just maintained awareness of the lost partner. Furthermore, research indicates that bereaved individuals who ruminate on their negative emotions following loss are more pessimistic and, in turn, experience more distress and difficulty adjusting (Nolen-Hoeksema, Parker, & Larson, 1994). Highlighting the importance of being able to ascribe meaning to loss, Davis and Nolen-Hoeksema (2001) report that people who are unable to account for or make sense of the loss of a loved one six months after the fact are typically unable to do so at a later point.

*Relationship break ups and rumination.*

Relationship loss through bereavement and relationship loss through breakup are similar in that both result in the end of a close relationship. Consequently, both kinds of endings set into motion a number of responses including attachment protest and grief. However, there are important distinctions between the two forms of relationship losses. First, in loss through bereavement, there is no hope of reunion. By contrast, in loss through breakup, an individual can cling to hopes of becoming involved again with the former partner. A second important distinction between relationship loss through bereavement versus breakup is that loss through breakup is voluntary—at least for the leaver (Hazan & Shaver, 1992).

Few studies have directly addressed ruminative tendencies following relationship loss through breakup. In one study, Collins and Clark (1989) investigated how two relationship based factors—interpretive control and relationship investment—are associated with general ruminative tendencies following a relationship breakup. Interpretive control referred to having obtained a sense of understanding about why the relationship ended. Investment was conceptualized as who put more effort into maintaining the relationship. They found that those who did not understand the breakup and perceived their partners as responsible for the breakup engaged in more rumination. Beyond the Collins and Clark study, little focus has been explicitly given to the link between rumination and distress following a relationship ending. In a related area, Davis et al. (2003) assessed the link between rumination tendencies and attachment orientation following a breakup. Their results indicated that individuals with more attachment anxiety were more likely to be preoccupied with their former partners. Thus, attachment



serves as a useful framework in understanding ruminative tendencies. It is surprising that little research has focused on those individuals who struggle with repeated thoughts of a lost relationship. A sense of the extent to which excessive post-break up rumination predicts distress has important implications for understanding the processes which compromise long-term adjustment.

*Assessing rumination.*

Previous research has assessed rumination in two primary forms: as a general individual differences variable and as a situation specific response. In former case, the majority of research conducted in the field by Nolen-Hoeksema and colleagues, as well as others, has employed the 22-item Ruminative Responses Scale (RRS) of the Response Styles Questionnaire (RSQ). This scale assesses a variety of ruminative aspects, including focus on depressive symptoms and negative feelings (but not regret). While a general scale score has been predominantly used in most studies, more recent research has questioned using the measure as a global index of rumination. Some researchers expressed concern about the depression related items of the RRS as it is frequently used to predict depression (e.g., Treynor, Gonzalez, & Nolen-Hoeksema, 2003). Factor analyses on the entire 22-item measure tend to yield a three factor response including Symptom Based Rumination, Introspection, and Self-Blame (Roberts, Gilboa, & Gotlib, 1998). More recent work with the RRS has eliminated the Symptom Based items altogether and has yielded a two factor solution—reflection and brooding—across a number of studies (e.g., Fresco et al., 2003; Treynor et al., 2003). Results indicate that brooding tends to be more strongly related to depression and anxiety than reflection (Fresco et al., 2003). Longitudinal research indicates that reflection is associated with

higher levels depressive symptoms shortly after a trauma, but fewer depressive symptoms with more time after the trauma (Treynor et al., 2003). However, it is important to note that the effect size for the association between reflection and depression immediately following a trauma is very low (e.g.,  $r = .12$ ) compared to the effect size for the association between brooding and depression (e.g.,  $r = .44$ ). These findings suggest that brooding may be a more negative, detrimental form of rumination, whereas reflection may be a more adaptive way of working through past events. In the proposed study, brooding and reflection will comprise two components of rumination at the general individual differences level. A third component, regret, will be discussed below.

Research that has assessed ruminative tendencies in light of a specific experience, as opposed to a general trait, tends not to distinguish between brooding and reflection (e.g., Davis et al., 2003; Nolen-Hoeksema & Morrow, 1991). At the relationship-specific level, the current study is most interested in the extent to which individuals are consumed by thoughts of their former partners and relationships, rather than more general ‘brooding’ tendencies which will be tapped by the individual differences approach to rumination assessment. Therefore, ruminative tendencies specific to the lost relationship will only include two components: relationship preoccupation (a tendency to dwell on thoughts of the lost relationship) and regret-oriented thoughts (a tendency to conjecture alternative outcomes).

### *Regrets*

Although brooding and reflection are two forms of rumination, they are not the only ways in which individuals may focus their attention on past events. Another way individuals may ruminate is through focusing on general regrets or more specifically,

regrets about the ended relationship. Counterfactual thinking involves conjecturing alternatives to reality (Roese, 1997) and regrets are one form of counterfactual thinking. Counterfactuals can refer to thoughts that focus on altering aspects or behavior of either oneself (e.g., If only I...) or others (e.g., If only he...). Regrets, however, are only self-focused in their content. In addition, counterfactuals can be either upward or downward. Upward counterfactuals tend to evoke negative feelings and center on comparison to a better alternative (e.g., If only I had been more thoughtful, maybe she'd still like me). Downward counterfactuals elicit positive feelings and center on comparison to a worse alternative (e.g., At least I had the opportunity to experience a relationship). Regrets are created using only the upward counterfactual structure—how things might have been better. Downward counterfactuals do not involve a regretful action or inaction; they simply involve awareness of how a situation could have turned out worse. Thus, regrets can be viewed as a subform of counterfactual thinking.

Although some feel dwelling on possibilities that never were will only lead to further despair, there are beneficial aspects of generating regrets. Considering an alternate outcome is a process that can aid an individual by providing inferential benefit on how to achieve success in the future. For example, consider an individual who fails to express her feelings to a potential romantic interest. She may conjecture “If only I had told him how I felt, then maybe we could have been together.” This reconstruction of reality can provide her with a prescription for future behavior, helping her realize for the future “If I tell someone how I feel, things may work out better.” Ultimately, regrets involve a balance of harmful and beneficial effects: Thinking of what might have been done

differently can evoke unpleasant feelings, yet at the same time much can be learned for future interactions.

Counterfactual thinking, and more specifically, regret generation, is considered a normative and essential part of healthy functioning (Landman, 1993). For some individuals, however, regret generation can produce long-term difficulties through the experience of chronic negative affect. In such cases, regrets themselves are not the problem, but rather an inability to inhibit the frequency of their occurrence. Individuals with depression are susceptible to experiencing a vicious cycle of negative affect through an inability to suppress regrets and accompanying negative emotion (Wenzlaff, Wegner, & Roper, 1988). Therefore, rumination reflects a disruption of the activation and inhibition processes of regret-oriented thinking.

Individuals experience two primary types of regrets: Regrets of action (commission) and regrets of inaction (omission) (Gilovich & Medvec, 1995). A general finding in the literature is that in the short-term people tend to regret negative outcomes that result from actions and in the long-term regret negative outcomes that arise from a failure to act (Kahneman & Tversky, 1982). At the time, distress is associated with an immediately regrettable action (e.g., If only I hadn't hurt him, then maybe he would still talk to me). Individuals may identify "silver linings" to help ease the distress of their regrettable action. In other words, they focus on how much they have learned from the experience. In contrast, the open-ended nature of regrets of inaction can lead to long-term distress (e.g., If only I had married her, then my life would have been great). In regrets of inaction, the conjectured consequences of failing to act are infinite and may grow with time (Gilovich & Medvec, 1995). Regrets of inaction may also be more troublesome

because with time it is easier to imagine engaging in the activity (Gilovich, Kerr, & Medvec, 1993).

Both regrets of action and inaction are plausible following relationship endings. One individual may conjecture “If only I hadn’t cheated on him, then maybe we’d still be together,” whereas another might think “If only I had been more open, then I would have known where the relationship could go.” There are also other aspects of regrets that may differ among individuals who are experiencing separation. Regrets can vary in frequency (how often they are experienced), intensity (the emotional charge), and duration (how long they are present in thought) (Sanna & Turley-Ames, 2000). It is likely that individuals who struggle with rumination will experience regrets that are more frequent, intense, and of a longer duration than those who do not ruminate.

*Regret as a component of rumination.*

While most of the rumination literature fails to include regret oriented thoughts in the assessment of rumination, as mentioned above, some studies have included regrets as part of the definition of rumination (e.g., Nolen-Hoeksema et al., 1997). Furthermore, Davis et al. (1995) assessed both regret and rumination tendencies in parents who lost either their spouse or child in a car accident. Their results indicated that regret accounted for additional variance in adjustment beyond general ruminative thoughts. Thus, regret-oriented thoughts appear to be another important component of ruminative processes that individuals may engage in following a negative life event. Similar to the body of work on general ruminative tendencies, studies indicate that the more time individuals spend mentally undoing a traumatic event, the more distress they experience (Davis et al., 1995).

*Regrets and relationship dissolution.*

To date, a substantial portion of regret research has presented participants with hypothetical scenarios involving other people where the participants are asked to imagine what regrets the person might generate and how strong their associated feelings might be (e.g., Roese & Olsen, 1995). More personally relevant research has focused on extreme events such as the death of a child (e.g. Davis, Lehman, Wortman, Cohen Silver, Thompson, 1995) and daily life stressful events. In the latter instance, approximately 25% of stressful events reported by undergraduate students are romantically oriented (e.g., Mandel, 2003; Roese, 1994). However, these events are combined with other interpersonal regrets, or with any kind of general regret in the analyses. Thus, no research has specifically examined regret generation solely in the context of romantic relationships. Focusing on how things might have been different in the relationship may prevent ultimate adjustment following the breakup. Thus, specific attention to this component of rumination is important in understanding the cognitive experiences of individuals following a breakup. Regrets following relationship losses are particularly important to investigate in young adults as the causal link between action and outcome may help shape future behavior, thereby avoiding experience of similar regrets.

In addition to investigating the links between regrets, attachment, and distress, the current study will also investigate the nature of regrets that individuals generate following their relationship breakups. More specifically, the content and form (regret of action or inaction) of relationship regrets will be explored to provide insight into the regret experiences of post-dissolution individuals.

Individuals who are high in attachment anxiety may tend to focus on more interpersonally oriented regrets in their day to day life (e.g., If only I hadn't fought so much with my sister, maybe we would be friends today) as opposed to non-interpersonally oriented regrets (e.g., If only I had gone to university right away, then I wouldn't be graduating later than my friends). From a theoretical standpoint, individuals high in attachment anxiety may have unresolved attachment issues which may lead them to report having more interpersonal than non-interpersonal regrets in their life to date. Thus, the current study will explore whether individuals who report more attachment anxiety also report experiencing the majority of their life regrets in an interpersonal realm (e.g., romantic relationships, family relationships, friendships) rather than a non-interpersonal realm (e.g., work, academics, sports, personal choices).

#### *Current Study and Hypotheses*

The purpose of the current study is to elucidate the role of general ruminative tendencies—including brooding, reflection, and regret—in young adults' daily adjustment as well as the role of relationship-specific ruminative tendencies—including preoccupation and regret—in reactions to romantic relationship endings. Thus, both an individual differences approach and relationship-specific approach will be employed in the current research. Drawing on attachment theory, the current research will provide a much-needed look at how rumination may contribute to daily adjustment and to healthy resolution or maladjustment following a break up. Based on previous literature, the current study will test the following hypotheses:

##### *Attachment and adjustment.*

- 1) It is expected that attachment anxiety (measured both as a general and a

relationship-specific orientation) will predict more negative adjustment and less positive adjustment following a breakup.

*General rumination and adjustment:*

In light of the current trend to distinguish between two forms of rumination at the general level, the current study will assess both brooding and reflection separately.

- 2) It is expected that brooding will predict negative adjustment and less positive adjustment.
- 3) Given the low correlations between reflection and distress in previous research, it is expected that reflection could prove to be an adaptive form of focusing on a past experience, thereby predicting better positive adjustment and less negative adjustment.
- 1) It is expected that individuals who report higher levels of general regret (experiencing tendencies to think about how things might have been different in their lives) will experience more negative adjustment and less positive adjustment.

*Relationship-specific rumination and adjustment:*

- 2) It is expected that relationship preoccupation (relationship-specific rumination about the lost partner and relationship) will predict more post-break up negative adjustment and less post-break up positive adjustment.



- 3) It is expected that individuals who report greater intensity, duration, and frequency of romantic regrets will also experience more post-break up negative adjustment and less post-break up positive adjustment.

*Attachment and rumination:*

From an attachment perspective it is common to see rumination during adjustment to the loss of an attachment figure.

- 4) At the individual differences level, it is expected that individuals higher in attachment anxiety will experience higher levels of general brooding and global regret and lower levels of reflection.
- 5) At the relationship-specific level, romantic attachment anxiety will be associated with higher levels of preoccupation and relationship regret.

*Reflection and adjustment: A curvilinear association?*

Although reflection may be an adaptive form of focusing on past experiences, there may be a point at which too much reflection is detrimental to adjustment. Therefore, I will also explore whether reflection has a curvilinear relationship with adjustment.

*Mediation models.*

Although findings indicate that attachment anxiety is associated with poorer adjustment following a break up, little research has focused on the mechanisms which may explain the link. Figures 1, 2, and 3 integrate the predictions described above into a mediation model. It is expected that ruminative tendencies will partially or fully mediate the association between attachment anxiety and post-dissolution distress/adjustment. In other words, one reason that individuals with high attachment anxiety may experience poorer daily adjustment or struggle following a breakup is due to a tendency to ruminate.

Figure 1  
*Individual Differences Model*  
(General Rumination Scale)

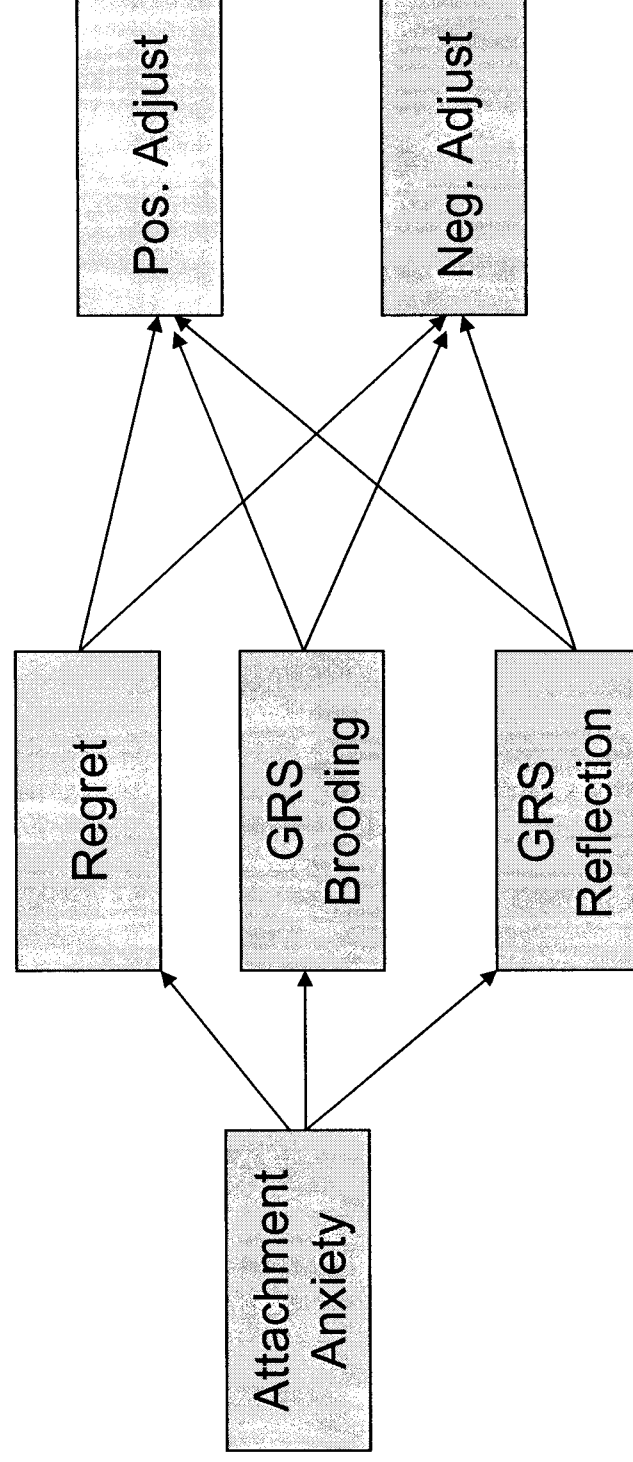


Figure 2  
*Individual Differences Model*  
(*Rumination Response Scale*)

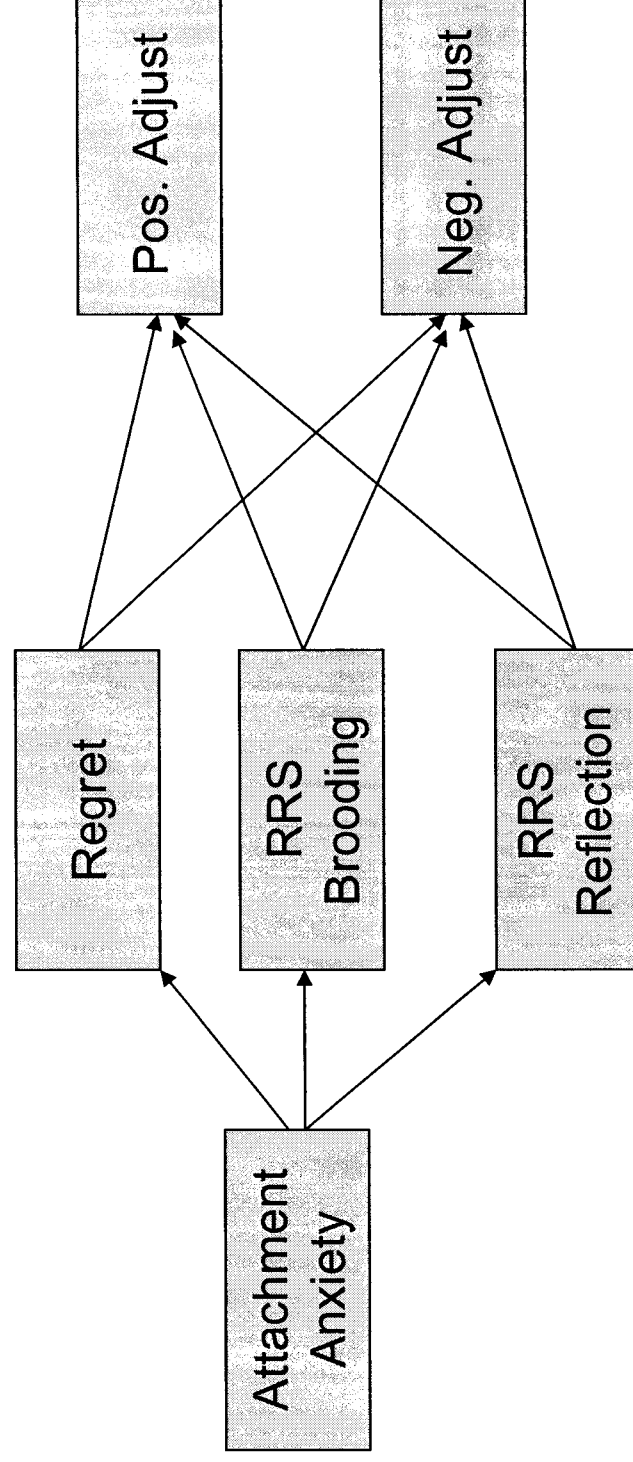
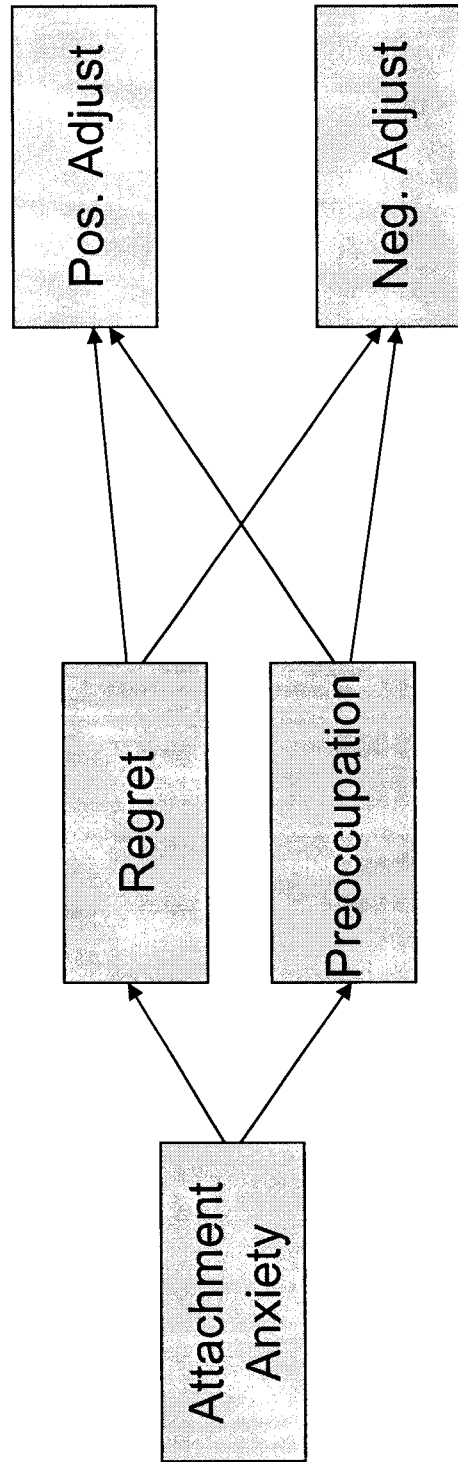


Figure 3  
*Relationship-Specific Model*



*General relationship demographics and distress.*

This research will also explore the associations among various general relationship factors, post-dissolution adjustment, and relationship rumination. For example, the study will explore the extent to which relationship length and who terminated the relationship are associated with post-dissolution adjustment and rumination.

*In-depth regret analysis.*

The current study will also examine whether individuals who experience more insecure attachment also report the majority of their life regrets that are interpersonal rather than non-interpersonal in nature. Furthermore, the relationship-specific regrets that participants generate will be coded as either inaction regrets (If only I had...) or action regrets (If only I had not...) to assess the general structure of regrets that are generated in the relationship break up domain. Finally, a content analysis of the romantic regrets that individuals generated will be conducted to lend insight into the nature of post-break up regret experience in young adults.

## Method

*Sample*

All of the above hypotheses were investigated with a young adult sample. Individuals in this developmental phase typically become involved in romantic relationships that are more intimate and long-term than those experienced during early adolescence. How individuals come to terms with early yet meaningful relationship

losses is important for understanding young adults' current interpersonal functioning as well as patterns that may be carried forward into future relationships.

### *Participant Recruitment*

Following approval by the University of Victoria's (UVIC's) Human Research Ethics Committee, the current study was posted on a website that allowed UVIC Psychology 100 (Introduction to Psychology) and 201 (Introduction to Research Methods) students to sign up for the study in exchange for bonus credits. To be eligible for participation, young men and women must have been involved in a romantic relationship that (1) ended in the previous twelve months, and (2) lasted for at least three months.

### *Participants*

Two hundred and thirty-one participants (147 women and 84 men) who met the inclusion criteria were recruited from the UVIC psychology participant pool. The participants' ages ranged from 17 to 24 years, with a mean of 19.12 years ( $SD = 1.72$ ). All participants reported a heterosexual orientation with the exception of three participants who were dropped from the analyses given the current study's focus on heterosexual relationships. The length of the former relationships ranged from 3 to 72 months, with a mean of 14.15 months ( $SD = 11.53$ ,  $Mdn = 11.00$ ), and time since the relationship ended ranged from < 1 month to 12 months, with a mean of 4.98 months ( $SD = 3.70$ ,  $Mdn = 5.00$ ). Thirty-two percent of individuals reported being involved in a new relationship, of which the average length was 4.45 months ( $SD = 3.24$ ,  $Mdn = 4.00$ ). Seventy-seven and a half percent were Caucasian, 10% Asian, 5.2% Mixed Ethnicity, 1.7% Hispanic, 0.9% Black/African, 0.4% First Nations, and 4.3% Other.

### *Procedure*

First, participants were asked to read an informed consent form (see Appendix A) and sign it if they agreed to proceed with the study. The consent form stated that the study was designed to look at people's responses to ended relationships. Participants were also informed that they could withdraw from the study at any point without penalty. After signing the informed consent form, participants completed general and relationship-specific measures of attachment, rumination, and adjustment in the following order: 1) a general measure of adjustment, 2) measures of general rumination tendencies, 3) general regret measure, 5) general attachment orientation, 6) romantic attachment orientation, 7) generation of relationship-specific regrets, 8) relationship-specific adjustment, 9) relationship-specific rumination, and finally 10) general relationship demographics. All measures are detailed in the 'Measures' section and copies of the measures are available in Appendices C-K. Following completion of the study, participants were fully debriefed about the specific nature of the study (see Appendix B).

## Measures

### *Attachment*

#### *General Attachment Orientation*

*The Relationship Questionnaire* (RQ; Bartholomew & Horowitz, 1991) is an adaptation of the original attachment measure developed by Hazan and Shaver (1987) (see Appendix F). The measure assesses a general attachment orientation and is not specific to romantic relationships. Participants are asked to rate brief paragraph descriptions of each of the four attachment patterns (secure, preoccupied, fearful, and

dismissing) on a 7-point scale corresponding to the degree to which they feel they resemble each pattern (1 = not at all like me to 7 = very much like me). Typically the RQ is scored to provide a continuous rating for each attachment pattern or to yield scores on the two attachment dimensions—anxiety and avoidance. The anxiety dimension, relevant to the current study, distinguishes the fearful and preoccupied prototypes (high in anxiety) from the secure and dismissing prototypes (low in anxiety). Thus, the anxiety dimension is calculated by subtracting the sum of the continuous ratings for the secure and dismissing prototypes from the sum of the continuous ratings for the fearful and preoccupied prototypes. Consequently, ratings on the anxiety dimension could range between -12 and +12, where higher positive values indicate a higher degree of attachment anxiety. In the current study, values ranged between -9 and +10. The RQ attachment ratings show moderate stability over eight months (Scharfe & Bartholomew, 1994). Furthermore, the RQ attachment ratings evidence convergent validity with interview ratings (Griffin & Bartholomew, 1994a) as well as with ratings from various self-report measures including the Adult Attachment Scale (Simpson, Rholes, & Phillips, 1996) and the Relationship Styles Questionnaire (Griffin & Bartholomew, 1994b). Convergent validity of the RQ dimensions is further evidenced by high correlations for across methods ratings of the same individual using self-reports, partner reports, and expert raters' reports (Griffin & Bartholomew, 1994a). There is also evidence of discriminant validity of the attachment dimensions. First, there are low correlations between the anxiety and avoidance dimensions (Griffin & Bartholomew, 1994a). Second, the anxiety dimension is related to positivity of self-concept whereas the avoidance dimension is related to the positivity of interpersonal orientation (Griffin & Bartholomew, 1994a).



Finally, the anxiety dimension is highly associated with neuroticism and moderately associated with extroversion, agreeableness, and conscientiousness whereas the avoidance dimension is only moderately associated with extroversion (Griffin & Bartholomew, 1994b).

#### *Romantic Attachment Orientation*

*The Experiences in Close Relationships Questionnaire* (ECR; Brennan, Clark, & Shaver, 1998) is a 36-item self-report measure designed to assess individuals' attachment orientations in romantic relationships (see Appendix G). Participants rate each item on a 7-point scale (1 = disagree strongly to 7 = agree strongly). The measure assesses the two dimensions that underlie attachment: attachment anxiety and attachment avoidance. Eighteen items correspond to each dimension and the item ratings are averaged to create possible dimension scores between 1 and 7. Due to the focus of the current study, only the attachment anxiety dimension was included in the current study. Sample items of attachment anxiety include "I worry a fair amount about losing my partner" and "When romantic partners disapprove of me I feel really bad about myself." For the purposes of this study, participants were asked to rate each statement specifically in light of their experiences with their former partners, not just romantic partners in general. In previous research, alpha coefficients for the anxiety dimension ranged from .85 to .91 (e.g., Brennan et al., 1998; Alonso-Arbiol, Shaver, & Yarnoz, 2002; Bradford, Feeney, & Campbell, 2002). In keeping, the alpha coefficient for the anxiety dimension in the current study was .87. Relatively little construct validation of the ECR has been conducted. Convergent validity across similar measures is supported by research

indicating high positive correlations between RQ anxiety and ECR anxiety, and between RQ avoidance and ECR avoidance (Feeney & Collins, 2001).

### *Rumination*

#### *General Rumination Orientation*

*Rumination Response Scale of the Response Styles Questionnaire* (RRS of RSQ; Nolen-Hoeksema & Morrow, 1991) is a 22-item measure that assesses self-focused (e.g., Think about how sad you feel) and symptom-focused (e.g., Think about feelings of fatigue and achiness) responses to depression (see Appendix D). Participants rate each item on a 4-point scale (1= never or almost never to 4= always or almost always). Recent work (e.g., Treynor et al., 2003) has eliminated the symptom-focused items<sup>3</sup> and includes separate scores for two subscales of the RRS: Brooding and Reflection (based on 10 or 11 items). In the current study, the symptom-based items were not administered; instead, the 11 items that tap brooding and rumination were included in the current study. Instead of asking people to think about situations where they feel “sad, blue, or depressed,” instructions indicated “Everyone gets upset—sad, blue, nervous, some of the time...” Furthermore some items were slightly modified—where applicable, the word ‘depressed’ was replaced with ‘bothered.’ These changes were made based on research that indicates high scorers on the RRS do not differ on reported levels of depression and anxiety and the highest scores are seen for a combined depression/anxiety group (Nolen-Hoeksema & Jackson, 2001). A principal components analysis with varimax rotation was conducted on the 11 items to confirm the two factor structure obtained in recent studies. Two items were dropped—“Analyze your personality to understand why you are bothered” and

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<sup>3</sup> Because depression is frequently used as an outcome in rumination research, it has been suggested that the inclusion of symptom-focused items in the RRS inflates the true association between rumination and depression.

“Write down what you are thinking and analyze it” because for the former item, the item loading was identical on both dimensions, and for the latter item, the item loading was less than  $|.4|$  on both dimensions. Although two items were dropped, this is not surprising since there has been variability in the brooding and reflection scale items included in previous studies. The principal components analysis was run a second time without the above two items and all remaining items loaded greater than  $|.4|$  on the appropriate dimension. The final brooding scale was comprised of six items and the final reflection scale was comprised of three items. The brooding and reflection subscale scores were calculated by averaging the relevant items. Alternatively, brooding and reflection component scores could have been used. Component scores are based on optimal item weighting from the principal components analysis. However, principal components analysis tends to move results closer to the characteristics of the sample which compromises generalizability. Marascuilo and Levin (1983) suggest that unit weighting is better (summing/averaging all individual items rather than applying unique weightings to each) as the results will cross validate better. Brooding and reflection were correlated  $.27$  ( $p < .001$ ), which is similar to other studies that report correlations in the vicinity of  $.30$  (Fresco et al., 2003; Roberts et al., 1998). The coefficient alphas for the brooding and reflection scales typically range from  $.60$  to  $.85$ , lowered in part due to low item content. In keeping with these findings, the alpha coefficient for the reflection subscale (based on three items) was  $.65$  and for the brooding subscale (based on six items) was  $.72$ . Previous research indicates that brooding and reflection are positively related to current depressive symptoms measured by the Inventory to Diagnose Depression (IDD; Roberts et al., 1998) and the Beck Depression Inventory (BDI; Treynor et al., 2003); however, the magnitude

of association between reflection and depression is consistently lower than between brooding and depression. Test-retest reliabilities for the reflection and brooding scales over one year are .60 and .62 respectively.

*General Rumination Scale* (Saffrey & Ehrenberg, 2004) is a new 12-item scale designed to include face-valid items of the brooding and reflection forms of rumination (see Appendix D). Twelve items were generated, of which six items were believed to tap brooding (e.g., How often do you... “Think you spend too much time focusing on things that bother you”) and six items were believed to tap reflection (e.g., How often do you... “Reflect on your experiences to learn from them”). Participants rate the items on the same scale as the RRS ranging from ‘1’ denoting ‘never or almost never’ to ‘4’ indicating ‘always or almost always.’ A principal components analysis with varimax rotation was conducted on the 12 items and two factors emerged with eigenvalues greater than 1. Two of the reflection items—“Try to make sense of events that happened which you don’t fully understand” and “Consider how you might handle a past event differently now”—had similar loadings on the two factors and were thus dropped from the scale. The principal components analysis was re-run without these two items and in all cases each item loaded greater than  $|.4|$  on the appropriate factor. Thus, the brooding scale was comprised of six items and the reflection scale was comprised of four items. For the same reasons listed above, component scores were not used and instead the brooding and reflection subscales were created by averaging the relevant items. Brooding and reflection were correlated  $-.45$  ( $p < .001$ ). Given the low number of items comprising each scale, internal consistency was good with alpha coefficients of .85 and .82 for brooding and reflection respectively.

*Global Regret Scale* (Roese, 2003) is a new 8-item measure that assesses the extent to which individuals experience regret-oriented thinking in their daily lives (see Appendix E). Participants rate the extent to which each item is self-characterizing on a 7-point scale (1=Disagree to 7=Agree). Sample items include “I regret a lot of my actions” and “I think ‘if only’ a lot.” A principal components analysis with varimax rotation was conducted on the 8 items to assess dimensionality. Two factors emerged with eigenvalues greater than 1. However, only one item loaded on the second factor—“Dwelling on the past is pointless.” The principal components analysis was re-run with this item was dropped. One factor emerged with all items loading greater than |.4|. The alpha coefficient based on the 7-item version in the current study was .84, higher than an alpha coefficient of .75 found in previous research using the same 7-item version (Saffrey & Roese, 2005). In light of its early stage of development, there is no other psychometric information currently available for this scale.

#### *Relationship-specific Rumination*

*Relationship Preoccupation Scale* (Davis et al., 2003). The RPS is a 9-item scale that assesses the extent to which individuals focus on their lost partners and relationships (see Appendix J). Participants provide ratings on a 7-point scale (1=Not at all like me to 7=Very much like me). Sample items include “I think about him/her constantly,” and “Everything seems to remind me of him/her.” Although the original scale’s instructions required participants to look back in time to rate the items, the current study presented the items in the present tense. In keeping with previous research that demonstrated good internal consistency of the scale with an alpha coefficient of .91 (Davis et al., 2003), the scale demonstrated an alpha of .94 in the current study. Given its relatively recent

development, there is not other psychometric information currently available for this measure.

*Relationship Regrets Scale.* The Relationship Regrets Scale was adapted from Roese's (2002) measure (see Appendix H). Participants are asked to recall three regrets regarding their terminated relationship and are provided with blank spaces to record their regrets with the sentence stems "If only..." and "then..." After generating each regret, participants provide ratings of the intensity, frequency, and duration of the regret. For the intensity of regret, participants rate on a 7-point scale how much they regret the behavior (1=very weakly to 7=very strongly). For the frequency of regret, participants rate on a 7-point scale how often they think about the specific regret (1=very rarely to 7=very frequently). For duration, participants rate the amount of time they typically spend thinking about the regret after it comes to mind (1=very briefly to 7=very long time). The assessment of relationship-focused regret was based on an average of these three ratings, across the three regrets (nine ratings in total). Due to the modifications to the original regret scale (Roese, 2002), alpha coefficients from previous research are unavailable. In the current study, the measure demonstrated good internal consistency with an alpha of .86.

### *Adjustment*

#### *General Adjustment*

*The Mood and Anxiety Symptom Questionnaire* (MASQ; Watson & Clark, 1991) is a 90-item questionnaire that assesses depression, anxiety, and positive affect (see Appendix C). Participants rate on a 5-point scale (1=not at all to 5=extremely) the extent to which they experienced each symptom "during the last week, including today." Recent

factor analyses of the scale have yielded a three factor solution: General distress, positive affect, and anxiety (Keogh, 2000; Watson et al., 1995). The current study only included items that loaded on the general distress and positive affect dimensions derived from these factor analyses. A principal components analysis with varimax rotation was conducted on the 46 items to ensure that the two expected factors would emerge. Two clear factors emerged, with eigenvalues greater than one, with each item loading greater than  $|.4|$  on the appropriate factor. Subsequently, an index of negative adjustment was created by averaging the 23 general distress items. Similarly, an index of positive adjustment was created by averaging the 23 positive affect items. The correlation between the two adjustment indices was  $-.58$  ( $p < .001$ ), which is similar to that found for other student and adult samples (Watson et al., 1995). Internal consistency of the scales is very good as previous research revealed alpha coefficients of .95 for the positive affect and distress indices (Keogh & Reidy, 2000). Similarly, high alpha coefficients were found in the current study for positive adjustment and negative adjustment: .95 and .93 respectively. Construct validation information is somewhat limited as research into the best item content is still on-going. Preliminary results indicate that the General Distress subscale demonstrates convergent validity with the BDI (.67), Profile of Mood States—Depression (.85), and the Hopkins Symptom Checklist—Depression (.82) (Watson, Weber, et al., 1995). The positive affect scale, recommended by Keogh and Reidy (2000), did not include the same items as the Anhedonic Depression scale (reverse scored positive affect items) used by Watson, Weber, et al. (1995). Thus, information on the construct validity of this subscale cannot be provided.

*Relationship-Specific Adjustment*

Participants are asked to rate the extent to which they experience positive and negative affect when they think about their lost partners and relationships (see Appendix I). Positive adjectives include happy, satisfied, pleased, delighted, content, relieved, and glad. Negative adjectives include hurt, annoyed, depressed, miserable, sad, disappointed, and frustrated, guilty, lonely (items were taken from the work of Sanna and Turley-Ames, 2000, and Sprecher, 1994). Participants provide responses on a 7-point scale ranging from 1 (not at all) to 7 (very much). A principal components analysis with varimax rotation was conducted on the 16 items to ensure that the two expected factors would emerge. Two clear factors emerged, with eigenvalues greater than 1, with each item loading greater than  $|.4|$  on the appropriate factor. The positive adjectives were averaged to comprise a positive adjustment index and the negative adjectives were averaged to comprise a negative adjustment index. The correlation between the two adjustment indices was  $-.65$  ( $p < .001$ ). The two studies cited above from which the adjectives were drawn did not report alpha coefficients for the positive and negative adjustment indices. In the current study, the alphas for the positive adjustment and negative adjustment indices were  $.93$  and  $.88$  respectively.

*Relationship Demographics**Relationship Demographics Questionnaire*

This questionnaire asks participants a variety of questions about their former relationship (see Appendix K). The following questions were posed to participants: ‘What were your expectations for the relationship?’ (1=short-term involvement to 5=long-term involvement), ‘How emotionally involved were you in the relationship at the



time of the breakup?’ (1=superficially involved to 5=seriously involved), ‘How much did you want the relationship to end?’ (1=not at all to 5=very much), ‘Who terminated the relationship?’ (1=me to 7=my Partner), ‘Do you hope to get back together?’ (1=not at all to 5=very much), ‘Do you understand why the relationship ended?’ (1=not at all to 5=entirely), ‘Do you have closure on the relationship?’ (1=not at all to 5=entirely), ‘How long did the relationship last?’, ‘How long ago did the relationship break up?’, ‘How many people have you dated (any length of time) since the break up?’, and ‘Are you currently involved in a relationship?’ (‘Yes or No’; if yes, length of time).

#### *Additional Regret Information*

Participants were asked to select the one area in their lives in which they have experienced the most regrets (romantic relationships, family relationships, friendships, academics/education, and other). The ‘other’ category was subsequently broken down further to include sports and personal choices as two other key areas. Non-interpersonal regrets (academics/education, sports, personal choices, and other) were coded a ‘1’, and interpersonal regrets (romantic relationships, family relationships, and friendships) were coded a ‘2’.

#### *Structural analysis of romantic regret.*

Participants’ responses about romantic regrets served as the basis for the structure analysis (inaction regrets “If only I had...” versus action regrets “If only I had not...”). Romantic relationship regrets were coded a ‘1’ if they indicated inaction (If only I had...) or coded a ‘2’ if they indicated action (If only I had not...). A second independent coder coded a subset of 150 regrets. Inter-rater agreement was perfect ( $\kappa = 1.0$ ).

*Thematic analysis of romantic regret.*

In addition to a structural analysis, a content analysis of the romantic regrets was conducted to lend insight into the nature of post-break up regrets generated by participants. All regrets were initially read once through. On a second read-through, the first author noted categories on a separate sheet of paper that emerged from the written responses. Ten over-arching themes emerged from the data. On a third read-through, the first author assigned each regret to one of the 10 thematic categories. The first author then read through the regrets again for a fourth time, this time assigning more specific sub-types that fell under each of the 10 over-arching categories. The purpose of this step was to capture the different meanings that the various categories represented. The process of looking for similarities and differences in the data is called the method of constant comparison (Coffey & Atkinson, 1996). A second independent rater coded a subset of 150 regrets. Inter-rater agreement across the 10 thematic categories was good ( $\kappa = .92$ ). Discrepancies were resolved through discussion with the first author.

## Results

*Overview*

The results section is divided into five main sections. The first section presents the descriptive statistics on all relationship demographic, individual differences, and relationship-specific variables. The second section includes tests of the eight hypotheses, and the third section presents the mediation models. The fourth section examines the associations among the relationship demographic variables and relationship adjustment

and rumination. Finally, the fifth section provides an in-depth regret analysis.

### *I. Descriptive Statistics*

#### *Relationship Demographics*

The means and standard deviations for the relationship demographic variables are presented in Table 1. Women reported that their former relationships ended longer ago than men's relationships did. Following from this finding, women reported dating more people since the break up than men, and women were more likely to be involved in a new relationship than men. Finally, women reported higher expectations for the former relationship than men.

Table 1  
Means for Relationship Demographics

	Overall		Men		Women		<i>t</i>
	M	SD	M	SD	M	SD	
Time since relationship ended	4.98	3.70	4.16	3.47	5.45	3.75	-2.59*
# people dated since relationship	1.04	1.24	.74	1.01	1.21	1.33	-2.84*
Currently in new relationship?	1.32	.47	1.23	.42	1.37	.48	2.23*
Want relationship to end?	2.61	1.35	2.49	1.36	2.69	1.35	-1.08
Who ended the relationship?	3.48	2.00	3.42	2.01	3.52	1.99	-.37
Hope to reunite?	2.31	1.38	2.32	1.29	2.30	1.43	.12
Understand why relationship ended?	4.04	1.02	4.05	1.01	4.04	1.03	.05
Closure on relationship?	3.23	1.34	3.29	1.32	3.19	1.35	.52
Expectations for the relationship	3.76	1.03	3.57	1.02	3.87	1.03	-2.13*
Emotional Involvement	4.03	1.10	3.95	1.03	4.07	1.15	-.77

*Note.* N = 231. 'Time since the relationship' ended is the number of months since the relationship ended, '# people dated since relationship' was the number of people participants indicated, and 'Currently in a new relationship?' was coded as 1 for no and 2 for yes. All other variables ranged from 1 to 5, with the exception of 'Who ended the relationship?' which ranged from 1 to 7.

\*  $p < .05$ .

*Individual Differences & Relationship-Specific Variables*

The means and standard deviations for the individual differences and relationship-specific variables are presented in Table 2. At the individual differences level, women reported higher levels of general attachment anxiety compared to men, and women reported higher levels of general negative adjustment compared to men. There were no significant sex differences found for any of the relationship-specific variables.

Table 2  
Means of Individual Differences and Relationship-Specific Variables

	Overall		Men		Women		<i>t</i>
	M	SD	M	SD	M	SD	
Individual Differences Variables							
RQ Anxiety	-.19	4.13	-1.07	4.14	.32	4.04	-2.49*
Global Regret	3.94	1.16	4.11	1.01	3.84	1.24	1.66
General Brooding (RRS items)	2.26	.57	2.17	.50	2.31	.60	-1.78
General Reflection (RRS items)	2.54	.75	2.46	.77	2.59	.73	-1.35
General Brooding (GRS items)	2.34	.71	2.29	.61	2.37	.77	-.85
General Reflection (GRS items)	2.77	.69	2.73	.65	2.79	.71	-.67
General Pos. Adjustment	3.39	.70	3.36	.67	3.40	.71	-.46
General Neg. Adjustment	2.09	.64	1.97	.55	2.15	.69	-2.04*
Relationship-specific Variables							
ECR Anxiety	3.82	1.05	3.79	.98	3.85	1.09	-.42
Relationship Regret	4.33	.99	4.31	.99	4.34	1.00	-.20
Relationship Preoccupation	3.26	1.44	3.34	1.28	3.21	1.54	.63
Relationship Pos. Adjustment	3.74	1.60	3.47	1.41	3.89	1.68	-1.89
Relationship Neg. Adjustment	3.53	1.34	3.65	1.19	3.46	1.42	1.03

*Note.* N = 231. RQ = Relationship Questionnaire (Bartholomew & Horowitz, 1991), RRS = Rumination Response Scale (Nolen-Hoeksema & Morrow, 1991), GRS = General Rumination Scale (Saffrey & Ehrenberg, 2004), and ECR = Experiences in Close Relationships Questionnaire (Brennan et al., 1998). RQ Anxiety ranges from -9 to +10, Global Regret ranges from 1 to 7, General Brooding and General Reflection range from 1 to 4, General Positive and General Negative Adjustment range from 1 to 5. All relationship variables range from 1 to 7. Further descriptions of the variables can be found in the Methods section.

\*  $p < .05$ .

## *II. Hypotheses*

The intercorrelations among the individual differences variables are presented in Table 3 and the intercorrelations among the relationships specific variables are presented in Table 4.

### *Attachment and Adjustment (Hypothesis 1)*

*Hypothesis 1* predicted that attachment anxiety would be associated with higher levels of negative adjustment and lower levels of positive adjustment at both the individual differences and relationship-specific levels. At the individual differences level, the first hypothesis was supported as general attachment anxiety was associated with higher levels of general negative adjustment and lower levels of general positive adjustment (see Table 3). At the relationship-specific level, the first hypothesis was also supported as romantic attachment anxiety was associated with higher levels of relationship negative adjustment and lower levels of relationship positive adjustment (see Table 4).

Table 3  
*Intercorrelations among Individual Differences Variables*

	RQ Anxiety	Global Regret	Brooding (GRS Items)	Reflection (GRS Items)	Brooding (RRS Items)	Reflection (RRS items)	General Pos Adjust	General Neg Adjust
RQ Anxiety	--							
Global Regret	.38***	--						
Brooding (GRS Items)	.37***	.60***	--					
Reflection (GRS Items)	-.21**	-.41***	-.45***	--				
Brooding (RRS Items)	.48***	.53***	.66**	-.26***	--			
Reflection (RRS Items)	.14*	.14*	.23***	.06	.27***	--		
General Pos. Adjust	-.39***	-.41***	-.41***	.32***	-.47***	-.11	--	
General Neg. Adjust	.36***	.43***	.56***	-.27***	.57***	.18**	-.58***	--

*Note.* N = 231. I did not correct for type I error because I was using evidence from the correlation table to tell me what to include in the mediation models. I did not want to exclude any variables solely because they did not pass a type I error correction.  
\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .



Table 4

*Intercorrelations among Relationship-Specific Variables*

	ECR Anxiety	Rel'p Regret	Rel'p Preoccupation	Rel'p Pos. Adjust	Rel'p Neg. Adjust
ECR Anxiety	--				
Relationship Regret	.39***	--			
Rel'p Preoccupation	.46***	.43***	--		
Rel'p Pos. Adjust	-.28***	-.33***	-.55***	--	
Rel'p Neg. Adjust	.47***	.51***	.71***	-.65***	--

N = 231.

\*\*\*  $p < .001$ .*Individual Differences Rumination and Adjustment (Hypotheses 2, 3, & 4)*

Rumination at the individual differences level was conceptualized as general tendencies to brood (RRS and GRS brooding scales), reflect (RRS and GRS reflection scales), and think about regrets (global regret scale). *Hypothesis 2* predicted that higher levels of brooding would be associated with higher levels of general negative adjustment and lower levels of general positive adjustment. The results supported the second hypothesis and the findings were consistent across the two measures of brooding tendencies (RRS and GRS; see Table 3).

*Hypothesis 3* predicted that reflection would be associated with higher levels of general positive adjustment and lower levels of general negative adjustment. In keeping with the third hypothesis, GRS reflection was associated with higher levels of general

positive adjustment and lower levels of general negative adjustment (see Table 3). By contrast, the findings for RRS reflection did not support the third hypothesis.

Specifically, RRS reflection was not associated with higher levels of positive adjustment and it was associated with higher, rather than lower, levels of general negative adjustment.

Finally, *hypothesis 4* predicted that global regret would be associated with higher levels of negative adjustment and lower levels of positive adjustment. The findings were in keeping with the hypothesis (see Table 3).

#### *Relationship-Specific Rumination and Adjustment (Hypotheses 5 & 6)*

Relationship-specific rumination was conceptualized as preoccupation with the past relationship (preoccupation scale) and regret about the past relationship (romantic regrets scale). *Hypothesis 5* predicted that relationship preoccupation would be associated with higher levels of relationship negative adjustment and lower levels of relationship positive adjustment. In support of hypothesis 5, relationship preoccupation was associated with less relationship positive adjustment and more relationship negative adjustment (see Table 4). Of note is that relationship preoccupation accounted for approximately 50% of the variance in relationship negative adjustment.

*Hypothesis 6* predicted that higher levels of relationship regret would be associated with higher levels of negative adjustment and lower levels of positive adjustment. Supporting hypothesis 6, experience of more relationship regret was related to lower levels of relationship positive adjustment and higher levels of relationship negative adjustment.

#### *Attachment and Rumination (Hypotheses 7 & 8)*

*Hypothesis 7* predicted that general attachment anxiety would be associated with higher levels of brooding and global regret, and with lower levels of reflection at the individual differences level. In support of hypothesis 7, higher general attachment anxiety was associated with higher rates of brooding (both GRS and RRS) and global regret (see Table 3). However, the results for reflection did not fully support hypothesis 7 as the findings differed across measures. In keeping with the hypothesis, general attachment anxiety was associated with lower levels of GRS reflection. By contrast, general attachment anxiety was associated with higher, rather than lower, levels of RRS reflection (see Table 3).

*Hypothesis 8* predicted that romantic attachment anxiety would be associated with higher levels of preoccupation and relationship regret at the relationship-specific level. In support of the hypothesis, romantic attachment anxiety was associated with higher levels of relationship preoccupation and relationship regret (see Table 4).

#### *Reflection and Adjustment: A Curvilinear Association?*

Hierarchical multiple regression was used to test for a curvilinear association between reflection (both GRS and RRS) and general adjustment (positive and negative). Rumination was entered at step 1, and then the square of rumination was entered at step 2. The analysis was run twice with both positive and negative adjustment as the dependent variables. There was no support for a curvilinear relationship between GRS reflection and adjustment, as results indicated that after controlling for GRS reflection (linear), GRS reflection squared (curvilinear) was not significantly related to positive or negative adjustment (see Table 5). The finding was similar for RRS reflection, where RRS reflection squared (curvilinear) did not significantly predict adjustment after

controlling for RRS reflection (linear) (Table 5). Therefore, there was no evidence of a curvilinear relationship between reflection and adjustment.

Table 5  
*Curvilinear Analysis of Reflection and Adjustment*

	General Positive Adjustment	General Negative Adjustment
GRS Reflection		
Step 1		
GRS Reflection	.32***	-.27***
R <sup>2</sup> Change	.100	.075
Step 2		
GRS Reflection	.89	-.70
GRS Sq'd	-.58	.43
R <sup>2</sup> Change	.007	.003
Total R <sup>2</sup>	.107	.078
RRS Reflection		
Step 1		
RRS Reflection	-.11	.18**
R <sup>2</sup> Change	.012	.033
Step 2		
RRS Reflection	-.66	.73
RRS Reflection Sq'd	.56	-.55
R <sup>2</sup> Change	.008	.008
Total R <sup>2</sup>	.02	.041

N = 231.

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

### III. Mediation Models

It was expected that ruminative tendencies would partially mediate the association between general attachment anxiety and general adjustment, as well as between romantic attachment anxiety and relationship adjustment. Three different mediation models were run: (1) an individual differences model using the GRS (Figure 1 from above), (2) an individual differences model using the RRS (Figure 2 from above), and (3) a relationship-specific model (Figure 3 from above).

According to Baron and Kenny (1986), three criteria must be met in order to run a mediation model. First, the independent variable (attachment anxiety) must be significantly related to the dependent variable (adjustment). Second, the independent variable (attachment anxiety) must be significantly related to the mediator (rumination). Finally, the mediator (rumination) must be significantly related to the dependent variable (adjustment). Mediation is said to occur when the association between the independent variable (attachment anxiety) and dependent variable (adjustment) is reduced after controlling for the mediator (rumination). For the individual differences model measuring rumination with the GRS, all three criteria were met. For the individual differences model measuring rumination with the RRS, one criteria was not fully satisfied in that one mediator (RRS reflection) was not significantly related to one dependent variable (positive adjustment). Therefore, in the individual differences RRS mediation model, the path between RRS reflection and positive adjustment was deleted from the model. Finally, for the relationship-specific model, all three criteria were met.

Structural equation modeling (SEM) was used to evaluate the three mediation models. SEM was carried out in LISREL 8.71. The chi-square index is often used to assess the fit of the model to the data. The chi-square value is based on the discrepancy between the observed covariance matrix and the fitted covariance matrix. In other words, the hypothesis is that the observed covariances among observed variables arose because of the relationships between variables specified in the model. Because the goal in structural modeling is to find a model that fits the data, a nonsignificant chi square is desired which means the hypothesis, that the observed covariances arose because of the specified relationships, is retained. However, as sample size increases, trivial differences

often cause the  $\chi^2$  to be significant. Thus, in large samples, the chi-square may misleadingly suggest that the model does not fit the data well. Consequently, more than one index of model fit is provided. Another way of assessing fit is to examine the Goodness of Fit Index (GFI). The GFI is less sensitive to sample size and assesses how closely the model reproduces the observed variances and covariances (Diamantopoulos & Siguaw, 2000). The maximum value of the GFI is 1.0, and when the GFI is equal or greater than .90, the model is considered to fit the data well. The Comparative Fit Index (CFI) assesses how much better the model fits compared to a baseline model—usually the independence model (where variables are presumed unrelated) (Tabachnick & Fidell, 2001). Values greater than .90 represent a good fit. Finally, the root mean square of approximation (RMSEA) assesses the lack of degree of model fit compared to a perfectly saturated model (Tabachnick & Fidell, 2001). Values around .10 indicate an excellent fit.

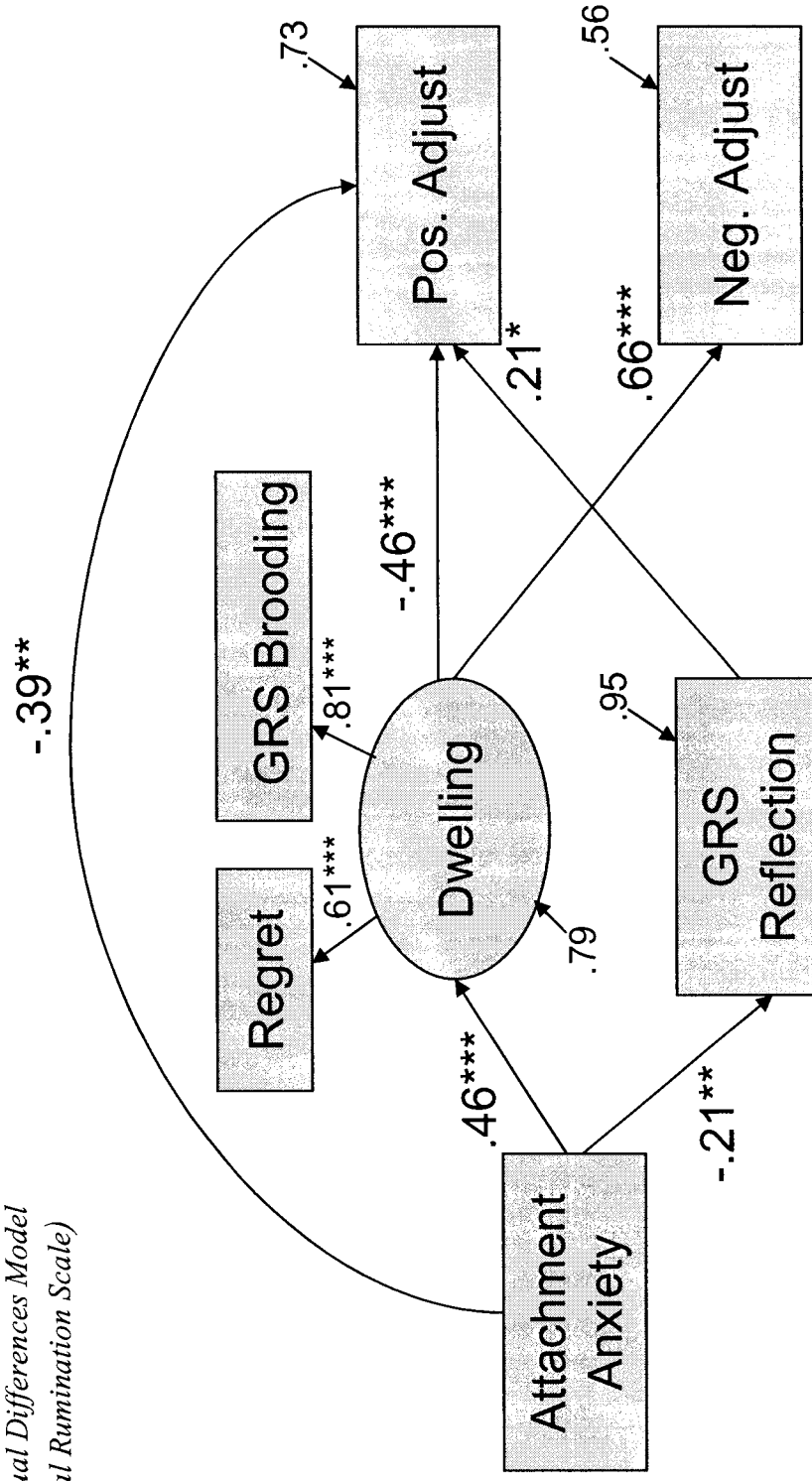
The path values in the models from Figures 4, 5, and 6 represent standardized path coefficients. Although presented in a common metric, the significance of the path coefficients is determined by corresponding *t* values, which reflect both the magnitude of association and the standard errors of the variables. Consequently, path coefficients of similar magnitude may not always share the same significance level. Only significant paths are presented in the models.

#### *Individual Differences Mediation Model (GRS)*

The GRS individual differences mediation model is presented in Figure 4. Unlike Figure 1, which depicted the three rumination components (regret, brooding, and reflection) separately, the current model combines regret and brooding into a latent variable called ‘dwelling.’ The decision was made to combine these variables primarily

because the two variables represent negative forms of rumination and the correlation between regret and brooding was .60. Although positive and negative adjustment were also quite highly associated (-.58), the variables were not combined to create a single adjustment index as it was hypothesized that brooding and regret (dwelling) and reflection would be differentially associated with the two adjustment indices. However, the error terms for the two variables were allowed to correlate. This means that although the variables were modeled separately in the current model, all of the unmodelled causes of positive and negative adjustment were allowed to correlate. In other words the variance not explained in positive and negative adjustment by attachment and rumination was allowed to correlate. The model fit the data reasonably well,  $\chi^2(4) = 56.02, p < .001$ , GFI = .93, CFI = .91, RMSEA = 0.23.

Figure 4  
*Individual Differences Model*  
 (General Rumination Scale)





General attachment anxiety significantly predicted higher levels of dwelling, and dwelling significantly predicted poorer general positive adjustment. Thus, there was evidence of an indirect effect of general attachment anxiety on general positive adjustment through dwelling. In addition, general attachment anxiety significantly predicted lower levels of GRS reflection, and GRS reflection significantly predicted higher levels of general positive adjustment. Thus, there was evidence of an indirect effect of general attachment anxiety on general positive adjustment through GRS reflection. However, dwelling and GRS reflection did not fully mediate the association between general attachment anxiety and general positive adjustment as there also was a significant direct effect of general attachment anxiety on general positive adjustment. Therefore dwelling and GRS reflection partially mediated the link between general attachment anxiety and general positive adjustment.

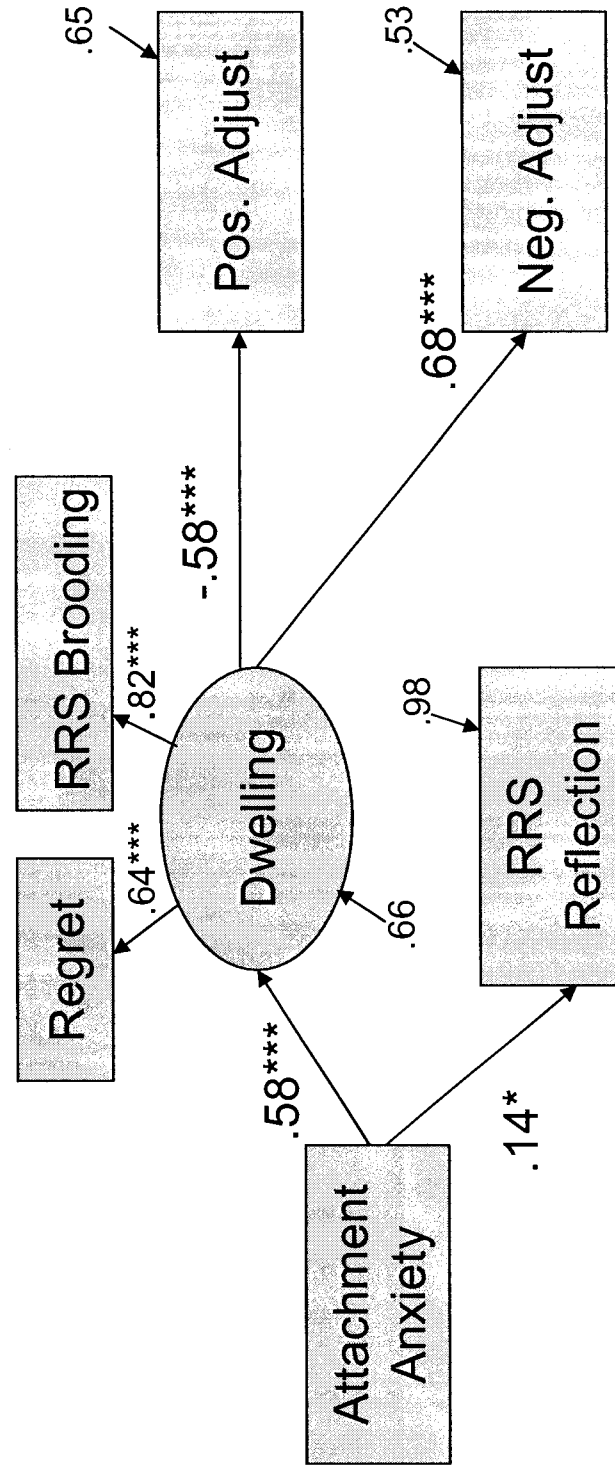
General attachment anxiety significantly predicted higher levels of dwelling, and dwelling significantly predicted higher levels of general negative adjustment. Thus, there was evidence of an indirect effect of general attachment anxiety on general negative adjustment through dwelling. Although general attachment anxiety significantly predicted lower levels of GRS reflection, GRS reflection was not significantly associated with general negative adjustment after controlling for general attachment anxiety and dwelling. Therefore, there was no evidence of an indirect effect of general attachment anxiety on general negative adjustment through GRS reflection. Furthermore, there was no significant direct effect of general attachment anxiety on general negative adjustment, indicating that dwelling entirely mediated the link between general attachment anxiety and general negative adjustment.

The numeric values that point to dwelling, reflection, positive adjustment, and negative adjustment are the error terms for the variables. More specifically, general attachment anxiety explained 21% of the variance in dwelling ( $1 - .79$ ) and 5% of the variance in GRS reflection. General attachment anxiety, dwelling, and GRS reflection explained 27% of the variance in general positive adjustment and 44% of the variance in general negative adjustment.

*Individual Differences Model (RRS)*

The RRS individual differences mediation model is presented in Figure 5. Similar to the model using the General Rumination Scale, regret and brooding were combined into a latent variable termed ‘dwelling.’ Because the correlation between the two variables was .53, sufficient overlap was present to combine the variables into one latent variable. Note that as stated above, the path from RRS reflection to positive adjustment was removed in the current model because reflection was not significantly related to positive adjustment—a necessary requirement for testing mediation. Once again, the error terms of positive and negative adjustment were allowed to correlate. The model fit the data reasonably well,  $\chi^2(5) = 13.48, p < .05$ , GFI = .98, CFI = .98, RMSEA = .08.

Figure 5  
*Individual Differences Model*  
*(Rumination Response Scale)*



General attachment anxiety significantly predicted higher levels of dwelling, and dwelling significantly predicted poorer general positive adjustment. Thus, there was evidence of an indirect effect of general attachment anxiety on general positive adjustment through dwelling. There was no indirect effect of general attachment anxiety on general positive adjustment through RRS reflection as the path from RRS reflection to general positive adjustment was not included in the model (the zero-order correlation between RRS reflection and general positive adjustment was non-significant). Additionally, there was no significant direct effect of general attachment anxiety on general positive adjustment, indicating that dwelling entirely mediated the association between general attachment anxiety and general positive adjustment.

General attachment anxiety significantly predicted higher levels of dwelling, and dwelling predicted higher levels of general negative adjustment. Thus, there was evidence of an indirect effect of general attachment anxiety on general negative adjustment through dwelling. Although general attachment anxiety significantly predicted higher levels of RRS reflection, RRS reflection was not significantly associated with general negative adjustment after controlling for general attachment anxiety and dwelling. Thus, there was no evidence of an indirect effect of general attachment anxiety on general negative adjustment through RRS reflection. Additionally, there was no significant direct effect of general attachment anxiety on general negative adjustment, indicating that dwelling entirely mediated the association between general attachment anxiety and general negative adjustment.

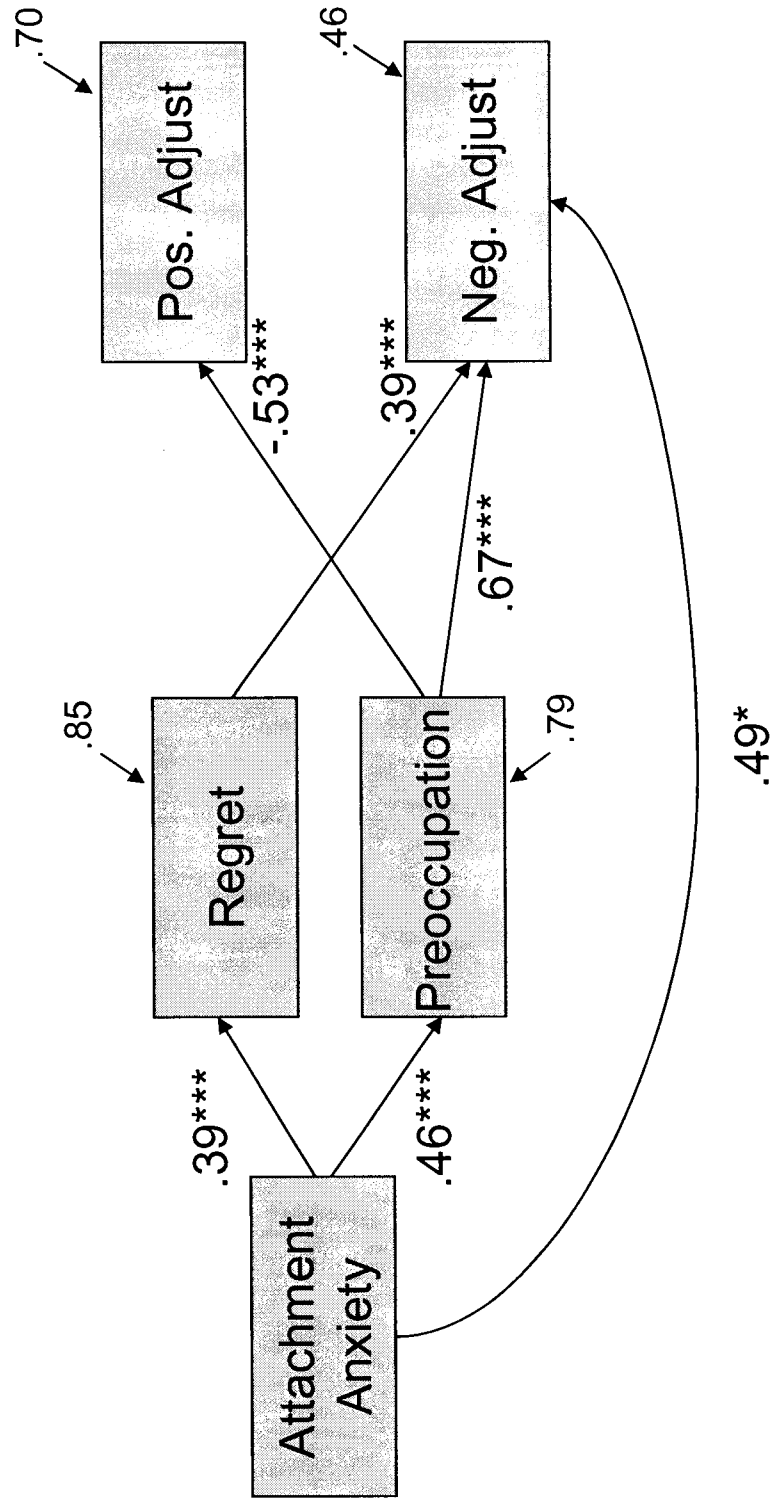
General attachment anxiety explained 34% of the variance in dwelling and 2% of the variance in RRS reflection. General attachment anxiety, dwelling, and RRS reflection

together accounted for 35% of the variance in general positive adjustment and 47% of the variance in general negative adjustment.

#### *Relationship-Specific Model*

The relationship-specific mediation model is presented in Figure 6. Unlike the individual differences models, preoccupation and regret were not combined to form the latent variable 'dwelling' as the variables were only correlated .40. Since the variables only shared 16% of their variance, it was not considered appropriate to merge the variables into a single construct. Similar to the individual differences models, the error terms of positive and negative adjustment were allowed to correlate. The model fit the data reasonably well,  $\chi^2(1) = 23.15, p < .01$ , GFI = .96, CFI = .96, RMSEA = .30.

Figure 6  
*Relationship-Specific Model*



Romantic attachment anxiety significantly predicted higher levels of relationship regret, but relationship regret did not significantly predict higher levels of relationship positive adjustment after controlling for romantic attachment anxiety and preoccupation. Thus, there was no evidence of an indirect association of romantic attachment anxiety on relationship positive adjustment through relationship regret. Romantic attachment anxiety significantly predicted higher levels of preoccupation, and preoccupation significantly predicted poorer relationship positive adjustment. Thus, there was evidence of an indirect effect of romantic attachment anxiety on relationship positive adjustment through preoccupation. There was no evidence of a significant direct effect of romantic attachment anxiety on relationship positive adjustment, indicating that preoccupation entirely mediated the association between romantic attachment anxiety and relationship positive adjustment.

Romantic attachment anxiety significantly predicted higher levels of relationship regret, and relationship regret significantly predicted higher levels of relationship negative adjustment. Thus, there was evidence of an indirect effect of romantic attachment anxiety on relationship negative adjustment through regret. Romantic attachment anxiety significantly predicted higher levels of preoccupation, and preoccupation significantly predicted higher levels of relationship negative adjustment. Thus, there was evidence of an indirect effect of romantic attachment anxiety on relationship negative adjustment through preoccupation. Finally, there was also evidence of a significant direct effect of romantic attachment anxiety on relationship negative adjustment, suggesting that preoccupation and relationship regret only partially mediated

the association between romantic attachment anxiety and relationship negative adjustment.

Romantic attachment anxiety accounted for 15% of the variance in relationship regret and 21% of the variance in preoccupation. Romantic attachment anxiety, relationship regret, and preoccupation accounted for 30% of the variance in relationship positive adjustment and 54% of the variance in relationship negative adjustment.

#### *Sex Differences in the Mediation Models*

A multiple groups approach was used to test for potential sex differences. The null hypothesis tested is that the data from both groups are from the same population. The procedure involves comparing a model constraining all paths to be equal across both sexes with a model that allows all paths to be freely estimated across both sexes. For the GRS individual differences model, the model with constrained paths ( $\chi^2(24) = 84.54$ ) did not differ significantly from the model with freely estimated paths ( $\chi^2(14) = 75.93$ ),  $\chi^2_{\text{diff}}(10) = 8.61, p > .05$ . Similarly, for the RRS individual differences model, the model with constrained paths ( $\chi^2(25) = 42.23$ ) did not differ significantly from the model with freely estimated paths ( $\chi^2(16) = 28.84$ ),  $\chi^2_{\text{diff}}(9) = 13.39, p > .05$ . Thus, there was no evidence of sex differences in the individual differences models. However, for the relationship-specific model, there was a significant difference between the model with constrained paths ( $\chi^2(15) = 55.35$ ) and the model with freely estimated paths ( $\chi^2(6) = 30.83$ ),  $\chi^2_{\text{diff}}(9) = 24.52, p < .001$ , indicating that sex differences existed for one or more paths in the model. In order to determine where any significant path differences lay, multiple models were run where a model estimating all paths freely across the sexes was compared to a model estimating all paths freely except for one specific path constrained



to be equal across sexes. If the chi-square difference test was significant, it would mean that there was a significant sex difference for that specific path. Out of all 8 paths in the relationship-specific model, only the paths between regret and positive adjustment ( $\chi^2(7) = 38.38$  when the path was constrained across the sexes) and between preoccupation and positive adjustment ( $\chi^2(7) = 36.66$  when path was constrained across the sexes) differed significantly across the sexes. The  $\chi^2$  value above for the model with freely estimated paths,  $\chi^2(6) = 30.83$ , was subtracted from each of the two  $\chi^2$  values with constrained paths, providing the  $\chi^2$  diff. for the regret path,  $\chi^2_{\text{diff}}(1) = 7.55, p < .01$  and for the preoccupation path,  $\chi^2_{\text{diff}}(1) = 5.83, p < .05$ . In other words, the association between regret and positive adjustment differed for men and women, and the relationship between preoccupation and positive adjustment differed for men and women. To get a sense of the nature of the difference, separate path models were then run for men and women. The standardized path coefficient for the regret to positive adjustment path was  $-.09$  for women and  $-.47$  for men. This finding indicated that the association between regret and positive adjustment was stronger for men than for women. The standardized path coefficient for the preoccupation to positive adjustment path was  $-.59$  for women and  $-.35$  for men. This finding indicated that the association between preoccupation and positive adjustment was stronger for women than for men.

#### *IV. Relationship Demographics, Adjustment, and Rumination*

The associations among the relationship demographics, post-breakup adjustment, and relationship rumination are presented in Table 6. The three strongest associations with negative adjustment were (1) not wanting the relationship to end, (2) hoping to reunite, and (3) not having closure on the relationship. These three variables were also the

three strongest associations with relationship preoccupation and were 3 of the 4 strongest correlations with relationship regret. By contrast, more traditional relationship demographic variables evidenced correlations of much smaller magnitude. For example, relationship length was not associated with relationship adjustment, nor with relationship rumination. Moreover, being involved in a new relationship was not a key factor in predicting adjustment and rumination. Although being in a new relationship was significantly related to lower levels of relationship negative adjustment and relationship preoccupation, the magnitude of these correlations is small in comparison to the magnitude of effects seen for some of the other demographic variables. Similarly, time since the relationship ended, although significantly related to adjustment and preoccupation, was of small magnitude in comparison to some other demographic variables.

Table 6  
*Intercorrelations among Relationship Demographics, Adjustment, and Rumination*

	Rel'p Pos. Adjustment	Rel'p Neg. Adjustment	Rel'p Preoccupation	Rel'p Regret
Expectations for the relationship	-.13	.29***	.18**	.15*
Emotional Involvement	-.27***	.33***	.33***	.25***
Want relationship to end?	.54***	-.36***	-.43***	-.22**
Who ended the relationship?	-.32***	.26***	.29***	.13
Hope to reunite?	-.45***	.46***	.61***	.27***
Understand why relationship ended?	.22**	-.26***	-.26***	-.18**
Closure on relationship?	.41***	-.50***	-.55***	-.34***
Relationship Length	.03	.09	.16*	.13
Time since relationship ended	.21**	-.26***	-.21**	-.04
Number people dated since relationship	.22**	-.22**	-.21**	-.17*
In a new relationship?	.13	-.21**	-.22**	-.04

*Note.* N = 231. *Who ended the relationship:* Higher values indicate that the partner ended the relationship; *In a new relationship:* Higher values indicate currently involved in a new relationship. Descriptions for the other variables can be found in the Methods section if needed.

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

### *V. In-depth Regret Analysis*

#### *Regret Type and Attachment Anxiety*

When participants were asked to select the one area in which they experienced most of their regrets, the majority reported the romantic relationship domain or the

academic/education domain (see Table 7). Overall, about two-thirds of participants reported experiencing primarily interpersonal regrets, whereas one-third of participants reported experiencing primarily non-interpersonal regrets. Men ( $M = 1.56$ ,  $SD = .50$ ) and women ( $M = 1.66$ ,  $SD = .48$ ) did not differ significantly in their generation of interpersonal versus non-interpersonal regrets,  $t(194) = -1.47$ ,  $p > .05$ .

Table 7

*Primary Domain in which individuals report experiencing the majority of their regrets*

Regret Area	Percent of Individuals
Romantic Relationships	38.27
Academics/Education	25.00
Friendships	12.76
Family Relationships	11.22
Sports	4.08
Work	2.55
Personal Choices	2.55
Other	3.57
Interpersonal <sup>a</sup>	62.25
Non-Interpersonal <sup>b</sup>	37.75

*Note.*  $n = 196$  as some individuals marked multiple domains. Only those who selected one domain were included in this analysis.

<sup>a</sup> Interpersonal regrets included romantic relationships, friendships, and family relationships

<sup>b</sup> Non-Interpersonal regrets included academics/education, sports, work, personal choices, and other.

Correlations were run to test whether individuals reporting higher levels of attachment anxiety also reported more interpersonal regrets (based on  $n = 196$ ). The correlation between general attachment anxiety and regret type (higher values indicating interpersonal regrets) was not significant,  $r = .05$ ,  $p > .05$ , nor was the association between romantic attachment anxiety and regret type,  $r = .09$ ,  $p > .05$ .

*Romantic Regret Analysis**Structure of romantic regrets.*

Regrets can be of either inaction (If only I had...) or action (If only I had not...). Just under two-thirds of the regrets participants reported were regrets of inaction whereas a little over one-third of the regrets participants reported were regrets of action (Table 8). Men and women did not differ significantly in their generation of action and inaction regrets,  $t(229) = -0.39, p > .05$ .

Table 8  
*Structure of Romantic Regrets*

Structure	Percent of Individuals		
	Total	Male	Female
Inaction	62.05	63.10	61.45
Action	37.95	36.90	38.55

N = 231.

*Thematic content of romantic regrets.*

The ten emergent themes along with descriptions are presented in Table 9.

Table 9  
*Descriptions of Romantic Regret Themes*

Regret Category	Description	Examples
1. Personal Attribute	Centered on a personal quality or characteristic such as strength, trust, patience, understanding, self-respect, will power, jealousy, maturity, dependence, attractiveness, honesty, etc.	<p>"If only I stood up for myself a little more then I would have come out of the relationship with more self-respect"</p> <p>"If only I hadn't been so needy, then he would have had more space"</p> <p>"If only I wasn't such a jealous person, then we would not have got into so many fights and arguments over stupid issues"</p>
2. Emotional Openness/Involvement	Centered on the extent of emotional openness as well as the level of emotional involvement. Includes giving more of self, never getting involved in the first place, expressing feelings sooner, taking longer to get involved, not getting so attached, etc.	<p>"If only I hadn't pushed him into an intense relationship, then he wouldn't have thought of me as more a job than a pleasure"</p> <p>"If only I showed him and told him how much I cared, then maybe he would have shown his feelings too"</p> <p>"If only I hadn't gotten so attached, then it would have been easier to let him go"</p>
3. Interactions with Partner	Centered on actions related to the partner or prior relationship. Includes a wide variety of behaviors, ranging from arguments, interactions with partner's friends, extent of common interests, living together, traveling together, lack of compatibility, etc.	<p>"If only I didn't argue about stupid things, then we would have spent more time enjoying ourselves"</p> <p>"If only we laughed more, then maybe we could have had a funner relationship than a love one"</p> <p>"If only I had not been so upset with him hanging out with his friends, then his friends may have liked me for giving them time with him"</p>

Regret Category	Description	Examples
4. Circumstances surrounding the break up	Centered on the nature of the break up. Includes wishing had broken up earlier, relationship had ended better, break up was not so drawn out, remained friends, didn't break up with the partner, not taken so long to get over the partner, etc.	<p>"If only I would have ended our relationship sooner, then it wouldn't have been so brutal and I would not have been so hurt in the end"</p> <p>"If only we hadn't ended on a bad note, then we could have maintained contact"</p> <p>"If only our break up was not so long and drawn out, then it would not have been so painful and ugly"</p>
5. Time/Effort investment	Centered on the amount of time or effort that was put into the relationship. Includes giving one another more space, spending more time together, making more time, focusing more on school, trying harder, etc.	<p>"If only I gave him more space, then we might be together"</p> <p>"If only we spent more time together, then we might have had a closer relationship"</p> <p>"If only I had spent more time separate from my partner, then I would have been able to balance my life more"</p>
6. Geographic location	Centered on geographic location as a primary reason for no longer being together. Includes moving away, going to school elsewhere, wishing to live closer together, etc.	<p>"If only I had chosen to go to a closer university, then we might still be together"</p> <p>"If only I didn't move, then we would still be together and happy"</p> <p>"If only I didn't move away this year, then we would probably still be together"</p>
7. Treatment of partner	Centered on how the partner was treated. Includes appreciating the partner more, listening more/paying more attention, more accepting of faults, playing less mind games, treating him/her better, etc.	<p>"If only I had paid more attention to her needs/feelings, then we would have been a lot closer"</p> <p>"If only I treated her better, then I wouldn't feel so guilty"</p> <p>"If only I had been more accepting of his faults, then he could have turned to me more often for comfort/advice"</p>

Regret Category	Description	Examples
8. Communication	Centered on the nature of communication in the relationship. Includes talking when concerns arose, responding to partner when angry, reading partner better, communicating more, etc.	<p>"If only I made more effort to communicate with him, then we would have been closer and would have understood each other better"</p> <p>"If only there was better communication between us, then we would probably not have broken up"</p> <p>"If only I hadn't pushed him away when I got mad at him, then maybe he would be able to understand me better"</p>
9. Cheating	Centered on cheating. Includes feeling badly about cheating on the partner, upset about partner cheating, wishing had or had not told partner about cheating, etc.	<p>"If only I told him about kissing another guy, then I would have been able to stay with him and not feel guilty"</p> <p>"If only I hadn't cheated, then he wouldn't be vengeful and we would both be on equal terms"</p> <p>"If only I had been faithful to her, then I wouldn't have to deal with such an extreme weight on my conscience"</p>
10. Sexual involvement	Centered on the level of sexual involvement. Includes regretting having sex too early, hooking up again after the break up, wishing had sex sooner, etc.	<p>"If only I had not slept with him so soon, then I wouldn't have gotten as attached so quickly"</p> <p>"If only I let him have sex with me, then he wouldn't have cheated on me"</p> <p>"If only I hadn't slept with him, then I wouldn't feel so dirty"</p>



A content analysis of the 10 themes is presented in Table 10.

Table 10  
*Frequency of Regrets across the 10 categories*

Regret Content	Percent of Regrets		
	Overall	Men	Women
1. Personal attribute	21.21	19.44	22.22
2. Emotional openness/involvement	18.18	19.84	17.23
3. Interactions with partner	14.00	13.89	14.06
4. Circumstances surrounding the break up	12.27	9.13	14.06
5. Time/Effort investment	10.82	12.70	9.75
6. Geographic location	6.64	7.14	6.35
7. Treatment of partner	5.92	7.54	4.99
8. Communication	4.76	5.56	4.31
9. Cheating	3.32	2.78	3.63
10. Sexual involvement	2.89	1.98	3.40

Nearly one quarter of romantic regrets were centered on a personal attribute. The second and third most frequently generated regrets involved emotional openness/involvement and interactions with the partner. Participants reported regrets about sexual involvement (either with the partner or extra-relationship) the least frequently. Overall, the relative frequencies of regret contents for men and women were fairly similar. Specific sub-types of each regret category are listed in Appendix L.

## Discussion

### *Overview*

This section will begin with a review and discussion of the findings from the current study. Focus will then shift to exploring the reasons people ruminate as well as the developmental origins of a ruminative style. Exploration of some coping strategies that ruminators use will also be explored, along with current treatment approaches

designed to reduce rumination frequency and associated poor adjustment. In addition, rumination as a future-oriented activity will be discussed. Finally, in closing, strengths and limitations of the current study will be highlighted and future research directions will be recommended.

### *Interpretative Context*

The current study included 147 women and 84 men who experienced a relationship break up in the previous 12 months that was of 3 months duration or longer. The participants were university aged and they reported an average former relationship length of 14 months. Roughly one-third of the participants were currently involved in a new relationship, of which the average length was four to five months. The majority of participants were of Caucasian ethnicity. Although social economic status (SES) information was not collected in the current study, levels are likely similar to those found for other undergraduate samples. Recently using the Psychology Participant Pool at the University of Victoria (UVIC), Luedemann (2004) found that 53% of young women from divorced families classified themselves as coming from a middle to upper middle class background, 31% classified themselves as coming from a lower middle class background, and 16% classified themselves as coming from a working class background. Similarly, in a sample comprised of both male and female undergraduates, Ehrenberg et al. (2004) found that 60% of participants classified themselves as coming from a middle to upper middle class background, 24% from a lower middle class background, 14% from a working class background, and 4% from an upper class background. Using an alternate method to assess SES, Sengsouvanh and Runtz (2004) found that 35.9% of undergraduates from the UVIC psychology participant pool reported gross annual family

incomes between \$40,000 to \$79,999, and 43.6% reported family incomes of \$80,000 or higher. It is expected that the SES for participants from the current sample would be similar to the reported frequencies in these studies.

### *Findings Related to the Hypotheses*

#### *Attachment and adjustment.*

As hypothesized, young adults with high levels of attachment anxiety in their romantic and other relationships tended to report more negative adjustment and fewer positive adjustment signs. These findings are in keeping with previous research, including studies of relationship break ups. Specifically, Carnelley, Pietromonaco, and Jaffe (1994) found that undergraduates with fearful and preoccupied attachment orientations, both high in attachment anxiety, were more likely to be depressed. Davis et al. (2003) found that individuals high in romantic attachment anxiety experienced compromised adjustment following a break up. Thus, the findings from the current study are consistent with the attachment literature that suggests insecure attachment is associated with poorer adjustment in general and particularly in the face of relationship break ups. In the current study women reported more general negative adjustment than did men, which is consistent with prior research demonstrating that women, on average, tend to report higher levels of depression than men (e.g., Treynor et al., 2003).

#### *General rumination and adjustment.*

As expected, individuals reporting more brooding and global regret also reported more negative adjustment and less positive adjustment. The strong association between brooding and negative adjustment is consistent with prior research (e.g., Treynor et al., 2003). Although no prior research has examined the association between global regret

tendencies and adjustment, findings from studies of post-trauma experiences suggest regret-oriented thinking is associated with negative adjustment (e.g., Davis et al., 1995).

The hypothesis that reflection would be associated with more positive adjustment and less negative adjustment was only partially supported as findings differed across the two measures of reflection. More specifically, reflection measured by the Rumination Response Scale (RRS) was associated with more negative adjustment (although more weakly than brooding) and reflection assessed with the General Rumination Scale (GRS) was associated with more positive adjustment. However, the finding that RRS reflection was correlated with negative adjustment, as well as the magnitude of association, is consistent with prior research (e.g., Treynor et al., 2003). These findings suggest that the GRS reflection items may tap a more healthful form of general reflection than the reflection items on the RRS. Importantly, from Table 12 (see Appendix M), it is clear that RRS reflection is not associated or only weakly associated with all general and relationship specific variables. By contrast, GRS reflection is consistently associated with both general and relationship specific variables in the expected directions. Furthermore, the associations for GRS reflection are of considerable magnitude. These findings considered together suggest that GRS reflection may be a better measure of a more healthful form of rumination than RRS reflection.

Notably, young men and women did not differ on any of the three components of general rumination (brooding, reflection, and regret). Since the GRS is a new scale that was developed for the current research, comparison to previous research is not possible. The RRS has traditionally been scored as a uni-dimensional measure of rumination, on which women consistently scored higher than men (e.g., Nolen-Hoeksema & Jackson,

2001). However, recent research that argues for a two-dimensional model has revealed mixed findings regarding sex differences. Treynor et al. (2003) found that women scored higher than men on both the reflection and brooding components of the RRS. By contrast, Roberts et al. (1998) found no evidence of sex differences on RRS brooding, but found women scored higher than men on RRS reflection. Taken together, these findings suggest that the previously accepted notion that women ruminate more than men is up for contention in light of improved measurement approaches. Finally, young men and women did not differ in their reports of general regret-oriented thought. This is consistent with prior research that also found no significant sex differences the general experience of regret using the same measure (Saffrey & Roese, 2005).

*Relationship-specific rumination and adjustment.*

As expected, young adults who reported more relationship preoccupation and relationship regret also reported less positive adjustment and more negative adjustment post- break up. The magnitude of association between relationship preoccupation and negative adjustment was particularly strong at .71, suggesting repeated thoughts about former relationships and partners are key in predicting poor adjustment following a break up. These findings are in keeping with Collins and Clark's (1989) finding that rumination is positively associated with depression (.42) and negatively associated with positive emotion (-.40). The associations found in the current study were stronger, which may be due to the fact that Collins and Clark did not restrict participation in any way. In their study, participants were asked to report on a past love relationship, but the procedure section did not indicate that the relationship was required to be of a minimum length, or to have ended within a reasonably recent time period. Furthermore, the preoccupation

measure used in the current study was more specific to the former relationship and partner than the measure used in the Collins and Clark study. Similar to the results found at the individual differences level, young men and women did not differ in their levels of preoccupation or regret about the former relationships. Neither of the previous studies investigating rumination in the context of a break up (Collins & Clark, 1989; Davis et al., 2003) reported on sex differences; thus, a comparison is not possible. Furthermore, there is no known work to date that has examined sex differences in the intensity, frequency, and duration of romantic regret experience.

*Attachment and rumination.*

It was expected that young adults reporting more attachment anxiety would report more brooding and regret and less reflection. This hypothesis was partially supported. As expected, attachment anxiety was positively related to brooding across both measures used. However, the findings for GRS and RRS reflection differed. More specifically, attachment anxiety was negatively associated with GRS reflection and positively associated with RRS reflection. These findings are in keeping with the results that indicated RRS reflection is a more negative form of rumination as it is positively associated with negative adjustment, whereas GRS reflection is a more positive form of rumination as it is associated with positive adjustment. The only known research to date that has examined the association between attachment and rumination (either general or relationship specific) is Davis et al.'s (2003) study which also found that young adults who report more relationship preoccupation (same measure used in the current study) also report more romantic attachment anxiety (same measure used in the current study).

As expected, both general attachment anxiety and romantic attachment anxiety were positively associated with general and romantic regret. The current study is the first known to have examined the association between regret and attachment. Therefore, it is not possible to contrast these findings with prior research. Overall, the findings from the current study highlight that young adults who experience heightened attachment anxiety are also prone to ruminating.

*Reflection and adjustment: A curvilinear association?*

There was no evidence of a curvilinear relationship between reflection and adjustment. Particularly for GRS reflection, where associations with adjustment indicate that it may be a positive form of rumination, the lack of a curvilinear association suggests that there is not a point past which reflection becomes excessive and compromises adjustment. Importantly, the findings from the current study represent the average levels of positive and negative adjustment in individuals who experienced a break up anywhere from less than one month to twelve months ago. Longitudinal data would better inform whether or not reflection over the long term is maladaptive. In other words, it may not be the amount of reflection that compromises adjustment, but perhaps the persistence of reflection across time that compromises adjustment.

*Young adulthood: The role of developmental phase.*

As mentioned in the opening, young adulthood marks a time when individuals begin to experience early, yet meaningful romantic relationships. The findings from the current study highlight how the use of different coping methods in day to day life, as well as after romantic relationship break ups, can initiate individuals along different adjustment trajectories. Not all young adults who reported negative ruminative tendencies

following break ups may persist with such response patterns throughout life. The relationship rumination variables only shared up to 20% of the variance with the individual differences rumination variables (see Appendix M). This suggests that ruminative responses following a break up do not solely reflect a pervasive pattern of rumination across life domains. Perhaps with more dating experiences, and more break up experiences, some individuals will better handle the stresses surrounding break ups and respond with less preoccupation about ended relationships.

Conversely, it is also possible that future break up experiences will lead young adults to become further entrenched in a negative ruminative response style. In such cases, subsequent relationship endings may reinforce to young adults that their romantic experiences are doomed to fail. Additionally, if some young adults have difficulty letting go of ended relationships, they may also experience a re-awakening of negative thoughts and feelings about previous break ups as they attempt to come to terms with a current break up. Such an occurrence may lead to even more rumination as individuals try to account for multiple relationship endings.

Although the current study did not assess reflection at the relationship-specific level, a healthful meaning making approach to relationship break ups likely benefits young adults. Making sense of and learning from relationship break ups may help young adults gain self insight and increase the likelihood they will make better relationship choices in the future. However, in some cases, gaining insight through reflection may not be sufficient to initiate individuals along healthy relationship pathways. Learning about aspects of previous relationships that did not work does not necessarily mean that young adults will successfully avoid similar relationship experiences in the future.



In summary, a tendency toward rumination following a break up in young adulthood does not necessarily mean that young adults will persist in employing such a coping strategy in response to future relationship losses. The trajectory individuals follow will likely depend on an interaction of both individual factors (e.g., beliefs about one's worthiness of others' love and support) and situational factors (e.g., extent of break up experience). As the current study only focused on young adults, it would be interesting to contrast early break up experiences with marital break up experiences to determine if the intensity and nature of ruminative experience differs across the life span.

*Mediation models.*

Three mediation models were run to test whether rumination mediated the association between attachment anxiety and adjustment. Two models were run at the individual differences level and one model was run at the relationship specific level. At the individual differences level, brooding and global regret were combined to form the latent variable 'dwelling.' Dwelling captures a general tendency of individuals to focus repeatedly and excessively on past events. This construct highlights that in day to day life there are different ways to mull over the past. Notably, individuals who tend to engage in one form (brooding) also tend to engage in another form (thinking about regrets). In the GRS model, reflection and dwelling partially mediated the link between general attachment anxiety and general positive adjustment, and dwelling fully mediated the link between general attachment anxiety and general negative adjustment. In the RRS model, dwelling fully mediated the association between general attachment anxiety and both general positive and negative adjustment. Finally, in the relationship-specific model, preoccupation fully mediated the link between romantic attachment anxiety and

relationship positive adjustment, and both regret and preoccupation partially mediated the link between romantic attachment anxiety and relationship negative adjustment.

Importantly, attachment anxiety and rumination together explained approximately 50% of the variance in negative adjustment across all three models. Overall, the findings suggested that rumination largely mediated the association between attachment anxiety and adjustment. This finding is important as it lends insight into the factors that explain the link between attachment anxiety and poor adjustment. Knowing that rumination partially accounts for the link between attachment anxiety and adjustment provides a starting point for intervention approaches designed to promote healthy adjustment following a break up.

A multiple groups approach revealed no significant sex differences in the GRS and RRS individual differences models. By contrast, in the relationship specific model, the association between regret and positive adjustment was stronger for men than for women, and the association between preoccupation and positive adjustment was stronger for women than for men. This finding suggests that young men who tend to think about things they did or did not do during relationships experience poorer positive adjustment compared to women, whereas young women who tend to repeatedly think about the former relationship experience poorer positive adjustment compared to men. Thus, the way that men and women ruminate about the lost relationship (regretting actions versus simply thinking about the former relationship) may have different implications for each sex's positive adjustment following a break up. Despite this possibility, I am somewhat hesitant to interpret the sex differences. First, the findings were not consistent across both measures of relationship adjustment. In other words, the paths did not differ for both

regret/preoccupation and positive adjustment as well as regret/preoccupation and negative adjustment. Furthermore, the findings were not consistent across the general and relationship specific models which would have lent further support for sex differences. It will be important for future research to replicate these findings in another sample.

*Relationship demographics, adjustment, and rumination.*

People frequently assume that the length of relationships, time past since relationships ended, and being in new relationship are key variables that predict post-break up adjustment. However, the current findings suggest otherwise. Relationship length was not correlated with adjustment and rumination. Furthermore, although time since the relationship ended and being in a new relationship were associated with adjustment and rumination, the magnitude of the associations was relatively weak compared to other relationship demographics.

The three factors that were most strongly related to negative adjustment included not wanting the relationship to end, hoping to reunite with the partner, and experiencing a lack of closure on the relationship. Notably, these three variables were also most strongly related to relationship rumination. These findings speak to the importance of including such variables in studies on relationship break up in addition to more traditional measures of relationship characteristics such as relationship length and time since the break up. Some research has begun to include a wider variety of relationship demographics. For example, Davis et al. (2003) included emotional involvement and Collins and Clark (1989) included understanding why the relationship ended. However, this is the first known study to have included such a broad range of demographic variables to gain insight into the relative importance of each.

Not wanting a relationship to end, hoping to reunite with a former partner, and not having closure on a former relationship all reflect a high level of ongoing investment in the former relationship and a failure to ‘let go.’ Thus, these findings highlight that account making and moving on are integral aspects to achieving positive adjustment following a break up. Duck’s (1982) model emphasizes that the fourth and final stage of the dissolution process, called “Grave-Dressing,” involves making accounts for the end of a relationship and ultimately letting go of a relationship. In support of his theoretical conceptualization, the current findings emphasize that individuals who are unable to move forward and ‘lay their relationships to rest’ are also those who ruminate excessively about the former relationship, and experience compromised post-break up adjustment.

*In-depth regret analysis.*

When asked to select the primary area in which life regrets are experienced, the majority of individuals reported romantic relationships and academics/education. Overall, most individuals reported experiencing primarily interpersonal regrets. The hypothesis that attachment anxiety might be associated with the tendency to report interpersonal versus non-interpersonal regrets was not supported.

Roughly two-thirds of the sample generated romantic regrets that were regrets of inaction—generally structured as “If only I had.” Action regrets—generally structured as “If only I had not”—were relatively less frequent. The greater frequency of inaction regrets is consistent with prior research (e.g., Roese et al., 2004). Moreover, research over the long term suggests that the most intense regrets are those of inaction (e.g., Roese & Olsen, 1993).

A qualitative analysis of the romantic regrets revealed ten reliably codable content areas: Personal attributes, emotional openness/involvement, interactions with partner, circumstances surrounding the break up, time/effort investment, geographic location, treatment of partner, communication, cheating, and sexual involvement. Of these ten content areas mentioned by participants, regrets about past relationships involving personal attributes, such as jealousy, dependency, and honesty with self, were the most frequent. This suggests that how one's personality influences interactions with romantic partners is a key consideration for young adults coping with relationship break ups. The perception that aspects of one's personality may lead to undesirable consequences may set into motion a process of self-analysis and attempts at constructive changes in future relationships. On the other hand, attributions of relationship losses to personal attributes may also increase vulnerability to unconstructive dwelling on aspects of oneself that are viewed as unchangeable.

The second most common regret area was emotional openness and involvement where individuals wished they had expressed or shown more clearly their true feelings. Thus it appears that young adults may experience some difficulty conveying their thoughts and feelings clearly to their partners and tend to link the failure to do so with undesirable relationship outcomes. Individuals who were hurt by the end of their relationships may regret their own level of emotional involvement in the opposite direction and wish it had been less. Such individuals may be at risk for unsatisfying romantic relationships as in the future they may be less apt to express their feelings out of fear of being hurt once again. Overall, early romantic relationships may provide young

adults with emotional experiences from which they can profit and better their future romantic involvements.

In contrast to the high frequency of regrets regarding emotional involvement, regrets surrounding physical involvement were the least frequent. Although some participants may not have felt comfortable disclosing such information, it is also possible that regrets that are related to emotional involvement are simply more salient to young adults following a relationship break up.

#### *Why Do People Ruminate?*

Given the strong associations found in the current study between both general and relationship specific rumination and negative adjustment, what is it that motivates individuals to ruminate? One line of research suggests that individuals induced to ruminate report gaining insight into themselves and their problems (Lyubormirsky & Nolen-Hoeksema, 1993). However, ruminators are actually poorer at generating solutions to general life problems (Lyubormirsky & Nolen-Hoeksema, 1993), and show more uncertainty when devising solutions to social problems (Ward, Lyubormirsky, Sousa, & Nolen-Hoeksema, 2003).

When considering the motivation behind rumination, it is interesting to note that individuals may simultaneously hold both positive and negative beliefs about rumination. Watkins and Baracaia (2001) found that 80% of participants reported at least one perceived advantage of rumination. Common advantages included increasing insight and understanding, learning from past mistakes, and preventing future mistakes. Furthermore, 70% of individuals reported at least one perceived disadvantage of *stopping* rumination. Individuals reported that ceasing rumination might result in a lack of understanding, loss

of control, and repetition of mistakes. A total of 98.2% of participants reported at least one disadvantage to rumination. Common disadvantages included social withdrawal, and reduced participation in pleasurable activities. Thus, it is clear that individuals experience substantial ambivalence about rumination (Watkins & Baracaia, 2001).

*What are the Developmental Origins of Rumination?*

Given research that suggests general rumination is a stable individual-differences variable (e.g., Nolen-Hoeksema & Davis, 1999), what gives rise to such a tendency in the first place? Some research suggests that mothers who are critical and intrusive have children who become passive when distressed (Spasojevic et al., 2004). Furthermore, individuals who report having parents who were more controlling also tend to ruminate (Spasojevic et al., 2004). Nolen-Hoeksema (2004) suggests that children may learn a ruminative response style, if they are not explicitly taught active coping strategies. She also suggests that biological factors may contribute to ruminative tendencies in that children who respond physiologically to stress may focus on such states. Finally, some research suggest that a history of childhood emotional abuse for both men and women and sexual abuse for women is associated with rumination (Spasojevic & Alloy, 2002).

*Coping with Rumination: Distraction Techniques*

Although individuals may engage in rumination quite regularly, they may alternate between rumination and attempts to distract themselves from the unpleasant thoughts (Wenzlaff, 2004). There are two primary ways in which individuals distract themselves: engaging in distracting activities and suppressing negative thoughts. Distraction activities can be either positive or negative. Positive distraction activities include thinking of pleasant thoughts, going for a run, or seeing movies with a friend, all

of which provide temporary relief from ongoing ruminative thought (Lyubomirsky & Tkach, 2004). Negative distraction activities include self-destructive activities such as alcohol abuse, drug abuse, and reckless driving. Notably, individuals with ruminative tendencies tend to use more negative distraction behaviors than those without ruminative tendencies (Lyubomirsky & Tlach, 2004). The other form of distraction, suppression of negative thoughts, occurs when individuals deliberately try not to think about recurrent thoughts. Importantly, positive distraction predicts improved mood in depressed individuals, whereas thought suppression leads to a rebound of negative thoughts (Wenzlaff & Bates, 2000).

Ironical processes theory (Wegner, 1994) suggests that thought suppression involves two mechanisms. First, there is distraction away from unwanted thoughts, and second, there is a monitoring system that scans for new thoughts that highlight the need to renew distraction (Wenzlaff, 2004). Suppression may be effective in the short-term by warding off unwanted thoughts, but continual distraction is difficult to achieve and therefore suppression is susceptible to disruption. A rebound effect is seen when suppression is disrupted and the unwanted thoughts resurge with greater frequency than they would have if thought suppression had never been attempted (Wenzlaff, 2004). Furthermore, when individuals attempt to suppress a thought, they think of a variety of alternate thoughts. To check whether they are successfully suppressing the unwanted thought, individuals re-activate the undesirable thought. Inadvertently, the alternate thoughts become linked to the suppressed thought, thereby increasing the number of cues for the undesirable thought (Martin & Tesser, 1996).



In sum, distraction in the form of suppression is not an effective approach to managing intrusive thoughts. However, positive distraction is beneficial as it reduces levels of dysphoric mood (Trask & Sigmon, 1999), even if it is not possible to distract all of the time. Notably, individuals who ruminated after they initially distracted themselves experienced lower levels of depressed mood than those who only ruminated (Trask & Sigmon, 1999). This finding suggests that if individuals must ruminate, it is advantageous to do so after engaging in positive distraction first. Nonetheless, despite the benefits of positive distraction, it is important to be aware that it cannot be continually maintained, which means it is not entirely effective in warding off undesirable thought.

#### *Treatment Approaches*

##### *Cognitive Behavior Therapy (CBT).*

The behavioral component of CBT may include the use of positive distractions and thought stopping (the individual shouts or silently says 'Stop' when the unwanted thought comes to mind). However, based on the research literature presented above, it is clear that these approaches will not be sufficient to reduce intrusive thought. CBT for depression typically focuses on negative automatic thoughts and core beliefs (Purdon, 2004). More specific to rumination, the therapist can help the client identify the negative thoughts that are present during rumination and then help the client challenge the validity of the thoughts rather than simply accepting them (Nolen-Hoeksema, 2004). Although CBT is one of the most effective treatments for depression (Purdon, 2004), relapse is still a problem following treatment. Papageorgiou and Wells (2004) suggest that restructuring beliefs about the benefits of rumination may help decrease rumination and depressive symptoms. More specifically, a cost benefit analysis of the benefits of rumination could

be undertaken. In addition, rumination postponement experiments can be used to challenge beliefs that rumination is uncontrollable (Matthews & Wells, 2004).

*Mindfulness Meditation / Mindfulness Based Cognitive Therapy (MBCT)*

Another approach to reducing rumination is to shift the nature of self-focus to mindful self-awareness instead of ruminative self-focus (Watkins & Teasdale, 2004). Whereas ruminative self-focus centers on thinking about experience, mindful self-awareness focuses on awareness of experience in the moment. In other words, in mindful self-awareness, individuals are aware of their current mind state, but do not elaborate on the content of the thoughts as done in ruminative self-focus (Ramel, Goldin, Carmona, & McQuaid, 2004). Thus, in ‘mindful driving,’ individuals are present in each moment, focusing on thoughts, sounds, and bodily sensations. Thoughts are merely treated as “passing mental events” rather than reflection of reality or aspects of oneself (Teasdale et al., 2000). In this sense, ruminative thoughts are observed in a non-judgmental, open manner (Nolen-Hoeksema, 2004).

MBCT was designed to combine components of CBT with aspects of Mindfulness Based Stress Reduction, developed by Kabat-Zinn (1990). Unlike traditional cognitive therapy, the focus in MBCT is not on thought content, but rather on thought process. Therefore, individuals are not expected to challenge the content of their negative thoughts. Instead, they simply learn to become aware of negative thoughts and to disengage from the thoughts (Teasdale et al., 2000). In MBCT, mindfulness meditation is used to help individuals reach a state of mind where thoughts can pass freely through the mind without intention (Wenzlaff, 2004). MBCT was designed as a group approach, involving eight weekly sessions of two hours each, with groups of up to 12 clients

recovering from depression (Teasdale et al., 2000). Additionally, individuals are expected to spend approximately one hour per day doing guided (taped) homework exercises to practice nonjudgmental awareness (Ma & Teasdale, 2004). The overall premise behind MBCT is that providing individuals with the ability to disengage from negative thoughts will decrease individuals' vulnerability to future depressive relapse.

Results regarding the efficacy of MBCT indicate that MBCT (with individuals who had experienced three or more depressive episodes) halved the relapse rates compared with individuals who continued with treatment as usual (Teasdale et al., 2000). In addition, Ramel et al. (2004) found that mindfulness meditation decreased rumination which accounted for reductions in negative affect. More specifically, meditation accounted for 15% of the variance in rumination at follow-up. Interestingly, Ramel et al. (2004) also found that mindfulness meditation was most strongly associated with a reduction in rumination rather than reduction in dysfunctional attitudes which are targeted by traditional CBT.

#### *Attentional Training Treatment (ATT)*

ATT is another approach that incorporates ideas of mindful-awareness (Wells, 2000). Wells believes that increased self-awareness is not sufficient for treatment and individuals must be taught skills for reducing excessive self-awareness. ATT involves five major steps: Socialization, facilitating abandonment of rumination, enhancing flexible control over cognition, modifying negative and positive metacognitive beliefs, and decatastrophizing the emotion. In socialization, the goal is to show how ruminative thought becomes activated during depression. In the abandonment of rumination, the therapist helps the client identify problems with rumination (e.g., it does not often lead to

solutions). In the third step, the client is taught attention training, which is essentially mindfulness where individuals are aware of their thoughts but detached from them. In the fourth and fifth steps, the therapist helps the clients appraise their negative and positive beliefs about rumination, as well as recognize that mood fluctuations are normal. Clients are taught to realize that different feelings will be experienced, but these feelings do not necessarily need to be acted upon (Papageorgiou & Wells, 2004).

In sum, there are a variety of approaches available to counteract ruminative tendencies. Importantly, recent research has demonstrated the efficacy of new approaches such as MBCT and ATT which go beyond traditional CBT approaches. Although most of these interventions target a general, pervasive ruminative style, many of these techniques may be useful in helping individuals disengage from recurrent thoughts following a specific trauma. Early intervention during young adulthood, in particular, may yield the best outcomes as ruminative response tendencies can be targeted before they become entrenched. Service providers most likely to see young adults, such as university counselling centers, would benefit from receiving information on the link between rumination and adjustment, along with recommendations for the best treatment strategies.

#### *Rumination About the Future*

The current study conceptualized rumination as a process that involves dwelling on general negative thoughts and feelings as well as thoughts specifically related to a recent break up. Thus, rumination included both a past and somewhat present orientation. Is it possible to ruminate about events in the future? According to Martin and Tesser (1996) there are various modes of ruminative thought that correspond to different temporal orientations. Negative ruminative thought in the past is called ‘working

through' and in the future it is called 'worry.' Obviously the two constructs differ in their focus—rumination involves thoughts about loss and failure whereas worry is focused on anticipated future difficulties (Nolen-Hoeksema, 2004). Nonetheless, much research indicates that rumination and worry are closely related, as evidenced by the association between the constructs which ranges from .25 to .5 depending on the measures employed (Segerstrom, Tsao, Alden, & Craske, 2000). Rumination and worry are similar in that they are both characterized by repetitive thoughts and images that are unpleasant (Watkins & Baracaia, 2001). Furthermore, worry and rumination are often similarly associated with anxiety and depression (Segerstrom et al., 2000) and longitudinal research indicates that ruminators are equally likely to develop anxiety and depressive symptoms (Nolen-Hoeksema, 2000).

Despite these similarities, rumination and worry are nonetheless distinct cognitive processes (Papageorgiou & Wells, 2004). Although correlated, factor analyses consistently reveal worry and rumination as distinct constructs (Fresco, Frankel, & Mennin., 2002). In addition, rumination is associated with less confidence and effort in problem solving, and is more past oriented than worry (Papageorgiou & Wells, 1999a,b). In summary, worry may be considered a future-oriented form of rumination that is distinct from rumination about prior loss and failure. Thus, these findings suggest that in general, young adults who ruminate about events in the past are also likely to worry about the outcome of events in the future. With regard to romantic relationships, young adults who are consumed with thoughts of former relationships may also experience anxiety about future relationship outcomes.

*Strengths and Limitations*

The strengths and limitations of the current study should be considered when interpreting the findings.

*Strengths.*

- 1) The current study advances the field by using an attachment framework to provide a novel look at the ruminative experiences of individuals who experienced a recent relationship break up.
- 2) The study included a sizable 231 individuals who had experienced a relationship break up in the previous 12 months that was of 3 months duration or longer.
- 3) The sample was comprised of young adult university students which is an important age group to examine in order to gain insight into the post-break up experiences following early, yet meaningful relationship losses.
- 4) The current study provided a broad examination of rumination, including both a general and relationship-specific focus. Thus, multiple measures of attachment, rumination, and adjustment were included in the study.
- 5) The inclusion of both healthful (reflection) and maladaptive (brooding and regret) forms of rumination is useful for gaining insight not only into ruminative forms that predict negative adjustment, but also to those that predict positive adjustment.
- 6) The inclusion of a qualitative regret component provided insight into the nature of post-break up regret experiences that cannot be captured by the quantitative ratings alone.

*Limitations.*

- 1) Although multiple measures were included in the study, all were self-report measures—a within-methods approach. Therefore, it is possible that the associations among variables may be somewhat more inflated than if ratings came from multiple sources.
- 2) A number of measures used in the current study are new: The General Rumination Scale, Romantic Relationship Regrets, and Relationship Adjustment Scale. The reliability and validity of these measures have yet to be established. Of the three scales, the General Rumination Scale is the most novel and experimental. The findings from the current study were encouraging as they indicated that the reflection and brooding subscales were internally consistent and were associated with adjustment in the predicted directions. Some measures were comprised of a relatively small number of items. It will be important for future research to include all 12 of the proposed GRS items to ensure that a six item brooding scale and a four item reflection scale replicate across other samples.
- 3) The current study was listed on the UVIC Psychology participation website under the title “Relationship Break Up.” Selection effects may have occurred as some individuals may have been more willing than others to revisit thoughts of a previous break up. This may particularly be the case for young men who may not be as eager as young women to discuss interpersonal matters. Thus, men who chose to sign up for a study on a recent break up may be different than men who met the criteria but decided against participation.

Although it is not possible to assess the extent to which selection effects occurred, it is worth noting that the study was posted at the beginning of the semester when there were only 3 to 4 other studies available for over 1000 students. Time slots filled very quickly as there were few other studies for students to select from in order to gain bonus points.

- 4) The structural models tested imply a causal relationship among the variables. It is important to note that the ordering of the relationships was theoretically driven. Although the proposed models fit the data well in all cases, it is possible that alternate models may fit the data equally well.

#### *Future Research Directions*

Research discussed earlier highlights that individuals who ruminate are also likely to worry. However, the association between these constructs has only been considered at a general level rather than in response to a specific event. Future research could examine whether individuals who ruminate over a former relationship may also be prone to worrying about future relationship experiences and outcomes.

Rumination is typically characterized as an internal cognitive process. However, in reality, many individuals often seek out support from friends and family to cope with relationship break ups. In fact, research suggests that individuals who ruminate actively seek more support than those low in rumination (Nolen-Hoeksema & Davis, 1999). However, ruminators tend to be dissatisfied with their social support. Beyond support seeking and perceived quality of support, no research has considered whether there is a threshold past which friends or family may maintain maladjustment by providing too much opportunity for discussion of a trauma, which may perpetuate an individual's



ruminative thoughts. Co-rumination refers to a social form of rumination, where ruminative thoughts and negative feelings are excessively shared with another individual (Rose, 2002). Rose's study found that co-rumination of problems was related to depression in adolescents, suggesting discussing problems is not always a constructive coping strategy. Future research could investigate whether a curvilinear relationship might exist between co-rumination and adjustment, in that those who engage in a moderate amount of discussion about the break up will evidence the lowest rates of rumination and the healthiest adjustment.

The qualitative analysis of regret content in the current study provided insight into the nature of post-relationship regret experiences. It would be interesting for future research to examine and contrast regret content from individuals who experienced relationship loss through bereavement with regrets from relationship loss through breakup. In the current study, regrets following a breakup focused, for example, on either too much emotional involvement/openness or not enough emotional involvement/openness, or too much time together or not enough time together. In the context of bereavement it is likely that individuals would not generate regrets regarding over-involvement, but rather would generate regrets focusing on not enough time to express everything or do everything before their partners died.

Furthermore, in the relationship break up area, future research could include a qualitative component on the content of ruminative thought, as well as positive beliefs about post-break up rumination (e.g., it might be a way of holding on to the lost relationship). These findings could then be compared to the literature cited above on the reasons why individuals tend to engage in general rumination.

This research provided a snap-shot perspective of individuals' ruminative experiences and adjustment. Longitudinal data would lend great insight to the trajectory of post-break up experience. Adjustment to a traumatic event takes time, even for those who navigate the difficulty in as healthful a way as possible. Following individuals over a number of months post-break up would provide valuable insight into how the various components of rumination predict both positive and negative adjustment over time.

### *Concluding Comments*

Within its limitations, the current study provided a much needed look at the cognitive experiences of individuals who experienced a recent relationship break up. Specifically, this research is the first known to use an attachment perspective to explore the relationship between rumination and adjustment in post-relationship individuals. Overall, the strongest and most consistent finding was that the negative forms of rumination—general brooding, general regret, relationship preoccupation, and relationship regret—predicted negative adjustment. Notably, preoccupation specific to the lost relationship accounted for nearly half of the variance in negative adjustment. At the individual differences level, reflection, a healthful meaning making process, was related to higher levels of positive adjustment. This finding highlights the fact that there are adaptive ways that individuals can work through past events. At both the individual differences and relationship specific levels, rumination largely mediated the association between attachment anxiety and adjustment. This suggests that rumination is an important starting point in promoting positive adjustment both in day to day life, and following relationship break ups. Interventions that focus on helping individuals step

back from a ruminative style and challenge their positive beliefs about rumination will be important in initiating individuals along healthful adjustment trajectories.

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## APPENDICES

Appendix A: Consent Form.....	107
Appendix B: Debriefing Form.....	110
Appendix C: Mood and Anxiety Symptom Questionnaire.....	111
Appendix D: Rumination Response Scale and General Rumination Scale.....	113
Appendix E: Global Regret Scale.....	114
Appendix F: Relationship Questionnaire.....	115
Appendix G: Experiences in Close Relationships Questionnaire.....	116
Appendix H: Romantic Relationship Regrets.....	119
Appendix I: Relationship-specific Adjustment.....	121
Appendix J: Relationship Preoccupation.....	122
Appendix K: Relationship Demographics.....	123
Appendix L: Sub-types of Romantic Regret Categories.....	125
Appendix M: Intercorrelations for individual differences and relationship specific variables.....	130

## Appendix A: Consent Form

UNIVERSITY OF VICTORIA  
 OFFICE OF THE VICE-PRESIDENT, RESEARCH  
 HUMAN RESEARCH ETHICS COMMITTEE

***Participant Consent Form***


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Response styles, attachment, and post-relationship adjustment

You are being invited to participate in a study entitled “Response styles, attachment, and post-relationship adjustment” that is being conducted by Colleen Saffrey. Colleen Saffrey is a graduate student in the Department of Psychology at the University of Victoria and you may contact her if you have further questions by calling 721-8589 or emailing her at [fmrig@uvic.ca](mailto:fmrig@uvic.ca).

As a graduate student, I am required to conduct research as part of the requirements for a degree in Clinical Life Span Psychology. It is being conducted under the supervision of Dr. Marion Ehrenberg. You may contact my supervisor at 721-8771.

This research is being funded by a Natural Sciences and Engineering Research Council of Canada (NSERC) Masters Fellowship awarded to Colleen Saffrey and is also partially supported by a grant from the Social Sciences and Humanities Research Council of Canada (SSHRC) awarded to Dr. Ehrenberg.

The purpose of this research project is to explore how young adults employ certain response styles following a relationship break-up and how such coping strategies might impact post-break-up adjustment. In addition, the current study looks at young adults’ internalized beliefs about close relationships, and how these beliefs may be related to adjustment and response styles.

Research of this type is important because young adults are at a stage in their lives where they may be experiencing early yet important romantic relationships. How they respond to the ending of such relationships is important as their coping approaches may impact their adjustment and may also carry forward to subsequent relationship endings. Overall, a sense of the extent to which certain coping strategies predict emotional distress or, alternatively, facilitate positive adjustment has important implications for understanding the processes that may compromise long-term adjustment. The more that is known about this topic, the better young persons experiencing relationship break-ups can be understood and, if necessary, supported in working through the ending of a close relationship.

You are being asked to participate in this study because you experienced a relationship break-up in the previous year, that was of 3 months duration or longer. In this research, we are interested in investigating the end of relationships, rather than general dating experiences, hence we are only asking those who were involved in a recent prior relationship for a fair length of time to participate.

If you agree to voluntarily participate in this research, your participation will include completing a variety of questionnaires about your experiences in close relationships, your general response styles, and your feelings about and responses to the ending of your former relationship.

Participation in this study may cause some inconvenience to you, as it takes time and effort to read and respond to the questionnaire items. Because the focus of the current study is on a former relationship, you may experience some mild emotional discomfort when responding to questions about your feelings about your former relationship.

Participation in the current study may pose some potential risks to you. Because thoughts of former romantic relationships can be an emotional topic, you may experience some mild emotional discomfort or unpleasant feelings. Should you become emotional or concerned during the course of the study, you are free to take a break or stop participating at any time. Should you have any questions or concerns about your participation you can speak with me either after participation or during my office hour to ensure more privacy (Thursdays 2:00-3:00, in Cornett A232). In addition, if you desire professional assistance, information on how to contact the UVIC Counseling Centre will be included on a handout everyone takes away from the study. You may choose not to participate at all, or you may withdraw at any point during the course of the study without any penalty or loss of your bonus points. You may also choose not to answer any particular question with which you do not feel comfortable.

A benefit of your participation is that it will provide insight to the processes that both promote and prevent adjustment following relationship break-ups. Another benefit might be that participation in this study might prompt you to follow up with a counselor, because you realize that you wish to discuss your relationship break-up with a supportive and skilled individual in a confidential setting.

As a way to compensate you for any inconvenience related to your participation, you will be given bonus credits for Psychology 100. It is important for you to know that it is unethical to provide undue compensation or inducements to research participants and, if you agree to be a participant in this study, this form of compensation to you must not be coercive. If you would not otherwise choose to participate if the compensation was not offered, then you should decline.

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will not be used in the study.

As you will be completing the study in a group setting, total anonymity is not possible in the data collection process. You may be recognized by a fellow participant who will know that you experienced a relationship break-up in the previous year that was of 3 months or longer. However, anonymity will occur in the questionnaire completion, data management, and reporting of findings. Participants' names will not be indicated on the questionnaire packet; instead, a research number will be assigned to each packet.

Your confidentiality will be protected by storing all questionnaires in a locked filing cabinet to which only Dr. Ehrenberg's lab members have access. Lab members are either Dr. Ehrenberg's graduate students or students completing their honors degree under her supervision. In addition, no identifying information will be on the questionnaires as the consent forms will be stored in a separate location of the filing cabinet.

In keeping with the American and Canadian Psychological Association guidelines, the data (questionnaire packets) will be kept for seven years following publication of any findings in order to answer any potential questions that may arise. Following this time frame, all raw data will be confidentially shredded. Please note that throughout this 7-year period, your questionnaires will be stored separate from your signed consent forms.

It is anticipated that the results of this study will be shared with others in the following ways: class discussions, conference presentations, scholarly articles. However, no identifying information will ever appear in any of these contexts. If you are personally interested in the results of the study you can access summaries of the research findings on the project's website at <http://www.web.uvic.ca/psyc/fmric>

In addition to being able to contact the researcher and the supervisor at the above phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Associate Vice-President, Research at the University of Victoria (250-472-4362).

Your signature below indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

---

*Name of Participant*

---

*Signature*

---

*Date*



## Appendix B: Debriefing Form

**Response Styles, Attachment, and Post-Relationship Adjustment:  
More Information About the Study You Just Completed!**

The consent form you read and signed before completing your questionnaire packet provides information about the study in which you just participated. Thank you for participating! This form includes additional information that may be of interest to you.

The purpose of the current study is to investigate the extent to which young adults focus on thoughts of their former relationships following break-ups and the potential implications it may have for adjustment. I am researching how rumination can be a healthy process where individuals reflect on their experiences in order to make sense of them. I am also interested in how some forms of ruminations can also be hindering when these reflections become more persistent and fail to subside.

You answered some questions about how much you tend to reflect on things that are bothering you as well as your tendency to focus on your former relationship. The questions on regrets are another form of thinking about the past and how things might have been different. In addition to these rumination questions you also responded to questionnaires assessing your daily adjustment and adjustment in light of your former relationship. Finally, you completed two measures that assessed your “relationship style” or, in other words, your general approach to close relationships. Previous research indicates that individuals who are prone to being fearful of rejection and abandonment have more difficulty adjusting to relationship break-ups. The current study is also investigating whether ruminations can partially account for why such individuals experience more adjustment difficulties. I am equally interested in how individuals who tend to feel pretty secure in their close relationships might reflect on a past relationship in way that helps them to “let go” of past relationships.

The questionnaires you completed may have caused you to experience some emotional discomfort or unpleasant feelings. If you have any concerns about your participation whatsoever you can contact me by email ([fmrig@uvic.ca](mailto:fmrig@uvic.ca)) or during my office hour on Thursday from 2:00 to 3:00, located in Cornett A232. If you feel you might benefit from further opportunity to discuss any relationship-related issues that may have arisen for you during your participation, UVIC Counselling Services provides counseling to UVIC students free of charge. Please note that airing your feelings and thoughts about a previous relationship with a skilled counselor in a confidential and supportive setting can be helpful and among the many ways in which young persons cope with a life event. UVIC Counselling Services is located in the Campus Services Building (same building as the bookstore). The website is <http://www.coun.uvic.ca/> and appointments can be made by dropping by or calling 721-8341.

I thank you once again for participating in this study!

Colleen Saffrey, B.A. (Hons), Graduate Student in Clinical Life Span Psychology

## Appendix C: Mood and Anxiety Symptom Questionnaire (MASQ)

**Please indicate the extent to which each of the following statements describe you *during the past week, including today.***

		1 Not at All	2 A little	3 Somewhat	4 Moderately	5 Extremely
1.	Felt confident about myself					
2.	Felt depressed					
3.	Felt really up or lively					
4.	Felt pessimistic about the future					
5.	Felt like being with other people					
6.	Felt nervous					
7.	Was afraid I was going to lose control					
8.	Felt like I had many interesting things to do					
9.	Felt optimistic					
10.	Thought about death or suicide					
11.	Felt like I had a lot to look forward to					
12.	Felt like I was going crazy					
13.	Felt successful					
14.	Was able to laugh easily					
15.	Felt inferior to others					
16.	Felt really happy					
17.	Seemed to move quickly and easily					
18.	Felt keyed up, on edge					
19.	Felt very alert					
20.	Felt dissatisfied with everything					
21.	Felt cheerful					
22.	Felt tense or high strung					
23.	Blamed myself for a lot of things					
24.	Felt sad					
25.	Felt like I was having a lot of fun					

		1 Not at All	2 A little	3 Somewhat	4 Moderately	5 Extremely
26.	Felt really talkative					
27.	Felt hopeless					
28.	Felt like something awful was going to happen					
29.	Felt confused					
30.	Thoughts and ideas came to me very easily					
31.	Felt uneasy					
32.	Felt like I could do everything I needed to do					
33.	Felt worthless					
34.	Felt hopeful about the future					
35.	Felt like I had accomplished a lot					
36.	Felt discouraged					
37.	Looked forward to things with enjoyment					
38.	Felt like a failure					
39.	Felt very clearheaded					
40.	Was proud of myself					
41.	Felt afraid					
42.	Felt like I had a lot of energy					
43.	Was disappointed in myself					
44.	Felt really good about myself					
45.	Felt like crying					
46.	Unable to relax					

Appendix D: Rumination Response Scale (RRS; Items 1-11) and General Rumination Scale (GRS; Items 12-23)

Everyone gets upset—sad, blue, nervous—some of the time. People deal with being upset in many different ways. Please read each of the items below and indicate what you *generally* do when you are upset. Choose the most accurate response for *you*, not what you think most people would say or do. There are no right or wrong answers.

	<b>HOW OFTEN DO YOU:</b>	1 Never or Almost Never	2 Sometimes	3 Often	4 Always or Almost Always
1.	Think "What am I doing to deserve this?"				
2.	Analyze recent events to try to understand why you are bothered				
3.	Think "Why do I always react this way?"				
4.	Go away by yourself and think about why you feel bothered				
5.	Write down what you are thinking and analyze it				
6.	Think about a recent situation, wishing it had gone better				
7.	Think "Why do I have problems other people don't have?"				
8.	Think "Why can't I handle things better?"				
9.	Analyze your personality to try to understand why you are bothered				
10.	Go someplace alone to think about your feelings				
11.	Think about how angry you are with yourself				
12.	Think that others don't have it as hard as you do				
13.	Try to make sense of events that happened which you don't fully understand				
14.	Think you spend too much time focusing on things that bother you				
15.	Try to find benefit from negative experiences				
16.	Reflect on your experiences to learn from them				
17.	Dwell on your feelings following a bothersome event				
18.	Think about every single detail of a bothersome event over and over again.				
19.	Try to accept what happened in the past and move on.				
20.	Think about what can be learned from past mistakes without getting too down on yourself.				
21.	Get irritated with how much you are thinking about an event but find you can't stop yourself from doing so.				
22.	Are so caught up with thinking about a bothersome event that it's hard to focus on what's happening now.				
23.	Consider how you might handle a past event differently now.				

## Appendix E: Global Regret Scale

Read the following items and mark the extent to which you agree or disagree.

		1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Neutral/ Mixed	5 Somewhat Agree	6 Agree	7 Strongly Agree
1	Dwelling on the past is pointless							
2	I regret a lot of my actions							
3	I spend a lot of time thinking about alternative possibilities to past events							
4	I wish I could live parts of my life over again							
5	I think "if only" a lot							
6	"No regrets" is how I like to approach life							
7	I prefer to focus on the future rather than the past							
8	I rarely think about what might have been.							

## Appendix F: Relationship Questionnaire (RQ)

**1. Following are descriptions of four general relationship styles that people often report.**

**Please read each description and CIRCLE the letter corresponding to the style that best describes you or is closest to the way you generally are in your close relationships.**

- A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.
- B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.
- C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.
- D. I am comfortable without close emotional relationships, it is very important to me not to depend on others or have others depend on me.

**2. Please RATE each of the following relationship styles according to the extent to which you think each description corresponds to your general relationship style.**

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

Not at all Like me				Somewhat Like me			Very Much Like Me
1	2	3	4	5	6	7	

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

Not at all Like me				Somewhat Like me			Very Much Like Me
1	2	3	4	5	6	7	

I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Not at all Like me				Somewhat Like me			Very Much Like Me
1	2	3	4	5	6	7	

I am comfortable without close emotional relationships, it is very important to me not to depend on others or have others depend on me.

Not at all Like me				Somewhat Like me			Very Much Like Me
1	2	3	4	5	6	7	

## Appendix G: Experiences in Close Relationships (ECR)

The following statements concern how you feel in romantic relationships. We are interested in how you specifically experienced your **FORMER RELATIONSHIP**. Respond to each statement by indicating how much you agree or disagree with it in light of your experiences with your *former partner*.

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neutral/ Mixed	5 Slightly Agree	6 Agree	7 Strongly Agree
1	I prefer not to show a partner how I feel deep down.							
2	I worry about being abandoned.							
3	I am very comfortable being close to romantic partners.							
4	I worry a lot about my relationships.							
5	Just when my partner starts to get close to me I find myself pulling away.							
6	I worry that romantic partners won't care about me as much as I care about them							
7	I am uncomfortable when my romantic partner wants to be very close.							
8	I worry a fair amount about losing my partner.							
9	I don't feel comfortable opening up to romantic partners.							
10	I often wish that my partner's feelings for me were as strong as my feelings for him/her.							
11	I want to get close to my partner, but I keep pulling back.							
12	I am nervous when partners get too close to me.							
13	I often want to merge completely with romantic partners, & this sometimes scares them away.							

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neutral/ Mixed	5 Slightly Agree	6 Agree	7 Strongly Agree
14	I worry about being alone.							
15	I feel comfortable sharing my private thoughts and feelings with my partner.							
16	My desire to be very close sometimes scares people away.							
17	I try to avoid getting too close to my partner.							
18	I need a lot of reassurance that I am loved by my partner.							
19	I find it relatively easy to get close to my partner							
20	Sometimes I feel that I force my partners to show more feeling, more commitment							
21	I find it difficult to allow myself to depend on romantic partners.							
22	I do not often worry about being abandoned.							
23	I prefer not to be too close to romantic partners.							
24	If I can't get my partner to show interest in me, I get upset or angry.							
25	I tell my partner just about everything.							
26	I find that my partner(s) don't want to get as close as I would like.							
27	I usually discuss my problems and concerns with my partner.							
28	When I'm not involved in a relationship, I feel somewhat anxious and insecure.							
29	I feel comfortable depending on romantic partners.							



		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neutral/ Mixed	5 Slightly Agree	6 Agree	7 Strongly Agree
30	I get frustrated when my partner is not around as much as I would like.							
31	I don't mind asking romantic partners for comfort, advice, or help.							
32	I get frustrated if romantic partners are not available when I need them.							
33	It helps to turn to my romantic partner in times of need.							
34	When romantic partners disapprove of me, I feel really bad about myself.							
35	I turn to my partner for many things, including comfort and reassurance.							
36	I resent it when my partner spends time away from me.							

## Appendix H: Romantic Relationship Regrets

Think about your relationship that ended sometime during the past year. As you look back across your experiences in your former romantic relationship, is there anything in particular that stands out as a regret? In other words, is there something that you wish you had done differently, or some actions you wish you had or had not taken? These can be very minor regrets or more major ones. In the spaces below, please record a few details about THREE different regrets.

**Regret #1**

IF ONLY \_\_\_\_\_

THEN \_\_\_\_\_

**How intensely do you feel regret about this thought?**

Very Weakly	Weakly	Somewhat Weakly	Neutral	Somewhat Strongly	Strongly	Very Strongly
1	2	3	4	5	6	7

**How frequently do you think about this thought?**

Very Rarely	Rarely	Somewhat Rarely	Neutral	Somewhat Frequently	Frequently	Very Frequently
1	2	3	4	5	6	7

**How long do you spend thinking about this "If only" thought when it comes to mind?**

Very Briefly	Briefly	Somewhat Briefly	Neutral	Somewhat long time	Long Time	Very Long Time
1	2	3	4	5	6	7

**Regret #2**

IF ONLY: \_\_\_\_\_

THEN: \_\_\_\_\_

**How intensely do you feel regret about this thought?**

Very Weakly	Weakly	Somewhat Weakly	Neutral	Somewhat Strongly	Strongly	Very Strongly
1	2	3	4	5	6	7

**How frequently do you think about this thought?**

Very Rarely	Rarely	Somewhat Rarely	Neutral	Somewhat Frequently	Frequently	Very Frequently
1	2	3	4	5	6	7

**How long do you spend thinking about this "If only" thought when it comes to mind?**

Very Briefly	Briefly	Somewhat Briefly	Neutral	Somewhat long time	Long Time	Very Long Time
1	2	3	4	5	6	7

**Regret #3**

IF ONLY: \_\_\_\_\_

THEN: \_\_\_\_\_

\_\_\_\_\_

**How intensely do you feel regret about this thought?**

Very Weakly	Weakly	Somewhat Weakly	Neutral	Somewhat Strongly	Strongly	Very Strongly
1	2	3	4	5	6	7

**How frequently do you think about this thought?**

Very Rarely	Rarely	Somewhat Rarely	Neutral	Somewhat Frequently	Frequently	Very Frequently
1	2	3	4	5	6	7

**How long do you spend thinking about this "If only" thought when it comes to mind?**

Very Briefly	Briefly	Somewhat Briefly	Neutral	Somewhat long time	Long Time	Very Long Time
1	2	3	4	5	6	7

## Appendix I: Relationship Adjustment

**Think about your emotional reactions to your relationship break-up and indicate the extent to which you currently experience the following emotions when you think about the lost relationship:**

		1 Not at All	2 Rarely	3 Infrequently	4 Somewhat	5 Moderately	6 A fair bit	7 Very Much
1.	Depressed							
2.	Content							
3.	Delighted							
4.	Annoyed							
5.	Happy							
6.	Relieved							
7.	Miserable							
8.	Pleased							
9.	Disappointed							
10.	Sad							
11.	Glad							
12.	Frustrated							
13.	Hurt							
14.	Satisfied							
15.	Guilty							
16.	Lonely							

## Appendix J: Relationship Preoccupation

When a relationship ends, people often spend time thinking about their lost partner/ relationship. Please read the following items and indicate the extent to which you *currently* experience each one.

		1 Not at all Like me	2 Not like me	3 Somewhat not like me	4 Neutral	5 Somewhat Like Me	6 Like me	7 Very Much Like Me
1.	I think about my lost partner constantly							
2.	I dream about him/her often							
3.	I have extreme difficulty getting him/her out of my mind							
4.	I have trouble thinking about anything but my lost partner							
5.	I am unable to concentrate because of thoughts of my lost partner							
6.	I find it easy to get him/her out of my mind							
7.	Everything seems to remind me of him/her							
8.	I find myself talking about him/her too much							
9.	I can't seem to distract myself from thinking about my lost partner							

# Appendix K: Relationship Demographics

**Take a moment and think back to when you and your partner were together.**

**What were your expectations for the relationship?**

Short Term Involvement	Somewhat Short Term Involvement	Moderate Involvement	Somewhat Long Term Involvement	Long Term Involvement
1	2	3	4	5

**How emotionally involved were you in the relationship at the time of the break-up?**

Superficially Involved	Minimally Involved	Somewhat Involved	Moderately Involved	Seriously Involved
1	2	3	4	5

**How much did you want the relationship to end?**

Not at all	A little	Somewhat	Quite a bit	Very much
1	2	3	4	5

**Who terminated the relationship?**

Me	Mostly me	Somewhat me	Mutual	Somewhat Partner	Mostly Partner	My Partner
1	2	3	4	5	6	7

**Do you hope to get back together?**

Not at All	A little	Somewhat	Quite a bit	Very Much
1	2	3	4	5

**Do you understand why the relationship ended?**

Not at All	A little	Somewhat	Mostly	Entirely
1	2	3	4	5

**Have you gained closure on the relationship?**

Not at All	A little	Somewhat	Mostly	Entirely
1	2	3	4	5

**How long did your relationship last (number of months)?** \_\_\_\_\_

**How long ago did the relationship break-up (number of months)?** \_\_\_\_\_

**How many people have you dated (any length of time) since the break-up?** \_\_\_\_\_

Are you currently involved in a new relationship? Yes No

If yes, how long have you been involved for (number of months)? \_\_\_\_\_

If no, what is the longest time, if any, you have been involved with someone since your former relationship ended (number of months or weeks)? \_\_\_\_\_

Earlier you were asked to report on some regrets that you may have experienced in your former romantic relationship. When you consider any kind of regrets you may have in your life, please indicate which area you feel the majority of your regrets fall in:

☐ Romantic Relationships      ☐ Academics/Education  
☐ Friendships                      ☐ Work  
☐ Family Relationships              ☐ Other (Specify: \_\_\_\_\_)

**General Demographics**

What is your age: \_\_\_\_\_

What is your Sex:              Male  
(circle one)                      Female

What is your sexual orientation:      Heterosexual  
(circle one)                      Gay/Lesbian  
     Bisexual  
     Other (Specify: \_\_\_\_\_)

What is your ethnicity: (circle one)

- 1) White/Caucasian
- 2) Asian
- 3) Black/African
- 4) Hispanic
- 5) First Nations
- 6) Other: \_\_\_\_\_

## Appendix L: Frequency of Regret Category Sub-types

Regret Category	Number of Regrets		
	Overall	Men	Women
<i>1. Personal Attribute</i>			
More honest with self/partner	17	7	10
Less jealous, controlling, possessive	14	5	9
Older in age	9	3	6
Stood up for self more	8	3	5
Less dependent	7	3	4
More easy going / relaxed	8	2	6
More trusting	7	3	4
More understanding	6	1	5
Less needy	6	1	5
More mature	5	3	2
Didn't listen friends	5	2	3
Stronger / More will power	5	0	5
More patient	4	1	3
More forgiving	4	0	4
More confident	4	0	4
More self-respect / self love	4	0	4
More outgoing / fun	4	1	3
Better looking	3	3	0
Less naive	2	0	2
Less worried about rejection	2	2	0
More experience with relationships	2	1	1
Less concerned about others' opinions	2	0	2
Not so easily influenced	2	0	2
Less selfish	2	1	1
Less self-centered	1	0	1
More open-minded	1	1	0
Less stubborn	1	0	1
Less pessimistic	1	0	1
Less flirtatious	1	1	0
Nicer	1	1	0
Control reactions more	1	0	1
Less approval seeking	1	1	0
Not so afraid of commitment	1	0	1
Understanding of others' needs	1	0	1
Less whiny	1	0	1
Could speak mind	1	0	1
Less guilty	1	0	1
More giving	1	1	0
Less sensitive	1	0	1
Didn't dwell on previous rel'p	1	0	1
Better playing hard to get	1	0	1
Taken more responsibility	1	0	1



More caring	1	1	0
Less dedicated	1	1	0
<i>2. Emotional Openness / Involvement</i>			
Opened up more / Given more of self	40	14	26
Didn't get so attached	14	9	5
Took longer getting involved	11	6	5
Showed how much he/she cared	10	3	7
Feelings were mutual	9	3	6
Didn't get involved with the person	8	1	7
Hadn't pushed for a more intense rel'p	4	1	3
Expressed feelings sooner	4	1	3
Didn't let partner get so close	4	3	1
Known each other as friends better	3	1	2
Opened up less / Given less of self	3	1	2
Figured feelings out sooner	3	2	1
Didn't talk of the future	2	1	1
Didn't lead partner on	2	0	2
Not brought so much emotion in	2	0	2
Talked more about the future	1	0	1
Were still close	1	0	1
Let self get more involved sooner	1	1	0
Showed less how much he/she cared	1	1	0
Hadn't been interested in someone else	1	0	1
Not so close with partner's family	1	0	1
More interested	1	1	0
Realized needed partner	1	0	1
<i>3. Interactions with partner</i>			
Time with and getting along with friends	19	5	14
Arguments / Causing fights	8	2	6
More common interests	5	1	4
Knew wanted different things	4	1	3
Didn't have deal with partner's problems	3	2	1
Realized didn't have fix partner's life	3	0	3
Living arrangements	3	1	2
Didn't spend so much \$ on partner	2	2	0
Called partner more	2	1	1
Had parental approval	2	1	1
Kept promise to partner	2	1	1
Laughed more / Had more fun together	2	1	1
Didn't travel together	2	2	0
Didn't make partner such a priority	2	0	2
Didn't talk so much to partner	1	1	0
More responsive to partner	1	0	1
Didn't put up with partner's crap	1	0	1
Noticed changes in partner	1	0	1
Took partner more seriously	1	0	1

Travelled more together	1	0	1
More faith in partner / rel'p	1	0	1
Didn't hide going out with friends	1	0	1
Didn't take same courses	1	1	0
Family conflicts weren't so similar	1	0	1
Didn't meet parents	1	1	0
Didn't spend with partner when on drugs	1	0	1
Parents weren't so superficial	1	0	1
Things happened at a different time	1	0	1
Allowed self to ask partner for help	1	0	1
Didn't tell partner was pregnant	1	0	1
In a different environment	1	1	0
Hadn't let partner be so involved	1	1	0
Didn't have a job to detract from rel'p	1	0	1
Parents knew about the rel'p	1	0	1
Didn't cook all the time	1	0	1
Didn't let prior sex assault affect rel'p	1	1	0
Did own laundry	1	0	1
Never made the team more time for rel'p	1	1	0
Wasn't so distracted by other activities	1	0	1
Talked to partner at a funeral	1	1	0
Hadn't hit partner	1	0	1
Hadn't crashed the car with partner in car	1	1	0
Wanted to party more	1	1	0
Took partner to grad	1	1	0
Stopped making stupid jokes	1	1	0
Didn't ignore partner	1	0	1
Accepted partner wasn't always around	1	1	0
Relationship wasn't so one-way	1	1	0
<i>4. Circumstances surrounding the break-up</i>			
Broken up earlier	30	10	20
Discussed break-up more and told truth	10	3	7
Remained friends after break-up	9	3	6
Didn't end on such a bad note	6	2	4
Didn't take so long to get over partner	5	1	4
Didn't get back together	5	1	4
Hadn't gotten involved with new person	4	1	3
Didn't break-up with partner	3	0	3
Tried to work it out / Given 2 <sup>nd</sup> try	2	0	2
Break-up not so drawn out	2	0	2
Hadn't hurt partner so much	2	0	2
Expressed feelings during break-up	2	1	1
Didn't hook up with partner's friend	1	0	1
Tried to get partner to come back	1	0	1
Worked out the differences	1	0	1
Didn't try so hard to make it work	1	1	0

Handled break-up better	1	0	1
<i>5. Time Dedication / Involvement / Effort</i>			
Spent more time together	31	12	19
Gave each other more space	23	10	13
Made more time for the partner	6	2	4
Tried harder	4	1	3
Been there for friends more	4	3	1
Spent more time on school	3	2	1
Put more effort into relationship	1	0	1
Didn't work at the same place	1	0	1
Wasn't a student would have more time	1	1	0
Didn't put so much effort into rel'p	1	1	0
<i>6. Geographic Location</i>			
Went to school elsewhere / Didn't move	33	13	20
Lived closer together	5	2	3
Didn't go away for the summer	3	1	2
Hadn't gone travelling	2	1	1
Could handle long distance	1	0	1
Didn't stay in same place for school	1	1	0
Came back to school	1	0	1
<i>7. Treatment of Partner</i>			
Treated partner better	9	6	3
Appreciated partner more	7	0	7
More supportive partner's needs/feelings	6	3	3
Listened more / Paid more attention	4	3	1
More accepting partner's faults	4	2	2
Played fewer mind games	3	2	1
Hadn't tried to change partner	2	2	0
Didn't play the blame game	2	0	2
More proud to be with partner	1	0	1
Paid less attention to partner	1	1	0
Didn't push partner away	1	0	1
<i>8. Communication</i>			
Communicated more	17	9	8
Talked with partner with concerns	2	0	2
Talked about probs with rel'p	2	1	1
Read partner better	2	2	0
Told partner uncomfortable with PDAs	1	0	1
Told partner when he was being jerk	1	0	1
Didn't complain to partner about rel'p	1	1	0
Told partner how really felt about actions	1	0	1
Watched words exchanged	1	0	1
Didn't push partner away when mad	1	0	1

Discussed concerns about time together	1	0	1
Didn't read so much into what was said	1	1	0
More clear with partner	1	1	0
<i>9. Cheating</i>			
Didn't cheat on partner	16	7	9
Wished partner didn't cheat	4	0	4
Told partner about cheating	1	0	1
Hadn't told partner about cheating	1	0	1
Wasn't worried about partner cheating	1	0	1
<i>10. Sexual Involvement</i>			
Didn't have sex / Less intimate so early	17	5	12
Had sex sooner	2	0	2
Didn't hook up (sex) after break-up	1	0	1

Appendix M: Intercorrelations among Individual Difference and Relationship-specific Variables (Table 11)

RQ	RQ Anxiety	ECR Anxiety	Global Regret	Rel'p Regret	GRS Brood	GRS Reflect	RRS Brood	RRS Reflect	Rel'p Preocc.	General Pos. Adj.	General Neg. Adj.	Rel'p Pos. Adj.	Rel'p Neg. Adj.
Anxiety	--												
ECR	.49***	--											
Anxiety													
Global	.38***	.47***	--										
Regret													
Rel'p	.26***	.39***	.46***	--									
Regret													
GRS	.37***	.54***	.60***	.45***	--								
Brood													
GRS	-.21**	-.24***	-.41***	-.21**	-.45***	--							
Reflect													
RRS	.48***	.56***	.53***	.46***	.66***	-.26***	--						
Brood													
RRS	.14*	.13	.14*	.18**	.23***	.06	.27***	--					
Reflect													
Rel'p	.17**	.46***	.43***	.43***	.46***	-.27***	.38***	.03	--				
Preocc.													
General	-.39***	-.44***	-.41***	-.35***	-.41***	.32***	-.47***	-.11	-.35***	--			
Pos Adj.													
General	.36***	.47***	.43***	.37***	.56***	-.27***	.57***	.18**	.37***	-.58***	--		
Neg Adj.													
Rel'p	-.20**	-.28***	-.31***	-.33***	-.24***	.27***	-.22**	.06	-.55***	.31***	-.25***	--	
Pos Adj.													
Rel'p	.28***	.47***	.45***	.51***	.40***	-.25***	.37***	-.03	.71***	-.36***	.41***	-.65***	--
Neg Adj.													

\*  $p < .04$ , \*\*  $p < .01$ , \*\*\*  $p < .001$