

WORRY AND COPING: AN ATTACHMENT PERSPECTIVE

by

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ABSTRACT

In this study, I proposed a path model of the associations between individual differences in adult attachment orientations, the tendency to worry, and coping behaviours. I hypothesized that attachment anxiety would be associated with the tendency to worry. A secondary hypothesis was that attachment anxiety would be associated with particular worry content including: worry about relationships, lack of confidence, and concerns about the future. I further hypothesized an association between attachment avoidance and four patterns of coping theoretically linked to attachment avoidance: emotional venting, social support-seeking, instrumental support-seeking, and turning to religion. Three hundred and forty-three members of the Simon Fraser University community completed measures of attachment, worry, and coping behaviours via the internet. Findings were generally consistent with expectations. Attachment anxiety was associated with the tendency to worry and with particular worry content. Moreover, attachment avoidance was related to the four coping patterns. The discussion focuses on future directions and the value of an attachment perspective in considering the etiology and maintenance of worry, and in treatment planning.

DEDICATION

This thesis is dedicated to my husband, Mark Christie, whose unfailing love and support has made the pursuit of my dream possible, and to my parents, Bill and Lorraine Allison, who have loved me so well.

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INTRODUCTION

Worry involves negative appraisals of uncertain future events or outcomes which are accompanied by feelings of distress. In our society, worry is ubiquitous: Most people worry some of the time and some people worry most of the time. In fact, over 10% of the population report being chronically worried to the extent that they experience impairment in their lives (Kessler, Keller, & Wittchen, 2001). Moreover, excessive worrying is associated with numerous negative outcomes, including depression and most of the anxiety disorders. However, Generalized Anxiety Disorder (GAD) is the anxiety disorder most closely associated with worry because its core feature is excessive worry, lasting for at least six months. The pervasiveness of worry in our society is further highlighted by the high lifetime prevalence rates of four to seven percent for GAD.

Recent research into outcomes for GAD following cognitive-behavioural treatment (CBT) has revealed that only 50% of individuals treated with CBT achieve high endstate functioning (e.g., Borkovec & Costello, 1993; Ladouceur et al., 2000). Furthermore, Pincus and Borkovec (1994) found that GAD clients had more interpersonal problems than a control group. Borkovec and colleagues (Borkovec, Newman, Pincus, & Lytle, 2002) found that particular interpersonal problems were associated with poorer post-therapy outcomes following treatment of GAD with CBT. They suggest that “worry and anxiety may develop and/or be maintained because of problems in one’s relationships with others and/or failures in having one’s interpersonally mediated needs met” (Borkovec, et al., 2002, p. 13).

Given that worry may be rooted in, and maintained by, poor interpersonal relationships, an attachment perspective may be relevant to the study and

understanding of worry. Attachment theory proposes that humans have a drive to form intimate relationships with others (attachment bonds), and that the formative basis of these attachment bonds can be found in our relationships with our first caregivers, our parents (Bowlby, 1969/1997). Individual differences in adult attachment orientations are hypothesized to arise, in part, in response to differing childhood experiences of parental responsiveness. Adults differ in their degree of attachment anxiety which arises out of a hypervigilant concern with separation from close others (attachment figures). Adults also differ in their degree of attachment avoidance: the preferred level of proximity to caregivers and tendencies to approach others when experiencing stress. These individual differences in adult attachment orientations may shed light on the tendency to experience worry and the coping strategies used when worry is experienced. To investigate this proposition, I looked at the associations between the two dimensions of attachment (anxiety and avoidance) and worry in a university sample. I hypothesized that attachment anxiety would be associated with the tendency to worry, whereas attachment avoidance would be associated with how individuals cope with worry. I also tested a model linking attachment, worry, and coping strategies.

In this introduction, I review relevant literature on worry, attachment, and coping patterns. I also elaborate the possible links between attachment, worry, and coping patterns. Finally, I propose a path model of the associations between individual differences in adult attachment orientations, the tendency to worry, and coping behaviours.

Worry

MacLeod, Williams, and Bekerian (1991) reviewed definitions of worry and concluded that: "Worry is a cognitive phenomenon, it is concerned with future events where there is uncertainty about the outcome, the future being thought about is a negative one, and this is accompanied by feelings of anxiety" (1991, p. 478). As such, worry is a ubiquitous phenomenon, common to both normal and clinical populations. For instance, most people report worrying at least everyday for five to ten minutes about real problems, and roughly 75% of individuals report that worrying makes things worse in general (Tallis, Davey, & Capuzzo, 1994). On the other hand, worriers also typically claim benefits of worrying that include the perception of worry as a motivator, a planning tool (allowing preparation for the worst case scenario), or a distraction from other difficulties (e.g., Borkovec & Roemer, 1995; Cartwright-Hatton & Wells, 1997; Davey, Tallis, & Capuzzo, 1996).

Despite its possible benefits, worry has been linked to a variety of negative outcomes including: muscle tension, decreased concentration, insomnia, poorer attention and memory retrieval, depression, impaired social functioning, and reduced cardiac vagal tone (e.g., Brown & Barlow, 1992; Borkovec, Robinson, Pruzinsky, & DePree, 1983; Chelminski & Zimmerman, 2002; Kelly, 2002; Mathews & MacLeod, 1986; Provencher, Freeston, & Dugas, 2000; Thayer, Friedman, & Borkovec, 1996, 2000). It is also a component of many of the anxiety disorders, including panic disorder, panic disorder with agoraphobia, social phobia, specific phobia, and obsessive-compulsive disorder (American Psychiatric Association, 2000; Barlow, 1988). The

clearest link between worry and an anxiety disorder is to Generalized Anxiety Disorder which may be considered the most extreme form of worry.

Historically, the anxiety that typifies Generalized Anxiety Disorder (GAD) has been referred to as existential, free-floating, and pervasive. However, this more general form of anxiety did not appear as a primary diagnostic criterion until the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (DSM-III-R; American Psychiatric Association, 1987). As research clarified the symptomatology of the disorder, changes were made to the diagnostic criteria. For example, although most anxiety disorders are known to involve autonomic arousal (e.g., accelerated heart rate, sweaty palms), it was discovered that such symptoms are less prevalent in GAD (e.g., Marten et al., 1993). Furthermore, researchers now believe that the worry and fear associated with GAD is similar to the worry and fear felt by most people (Ruscio, Borkovec, & Ruscio, 2001). In the *DSM-IV-TR* (APA, 2000) worry is the core feature of GAD and diagnosis requires the existence of generalized and excessive worry or anxiety occurring on the majority of days in a six-month period. The focus of this criterion is on separating non-clinically anxious individuals from those with GAD. According to the *DSM-IV-TR*, individuals with GAD also feel unable to control their worry and, as a result of excessive worrying, experience clinically significant impairment in their lives.

Research has shown that, for high worriers, worry seems to serve primarily an emotionally avoidant function that may be self-maintaining. For instance, worry is associated with a decrease in physiological arousal in response to anxiety-producing stimuli (e.g., Borkovec & Hu, 1999). This decrease in arousal may be negatively reinforcing because it reduces uncomfortable physiological arousal. It also encourages

future anxiety responses and prevents anxious individuals from learning new responses to anxiety-provoking stimuli. Thus high worriers can be expected to have difficulty learning new responses to threat.

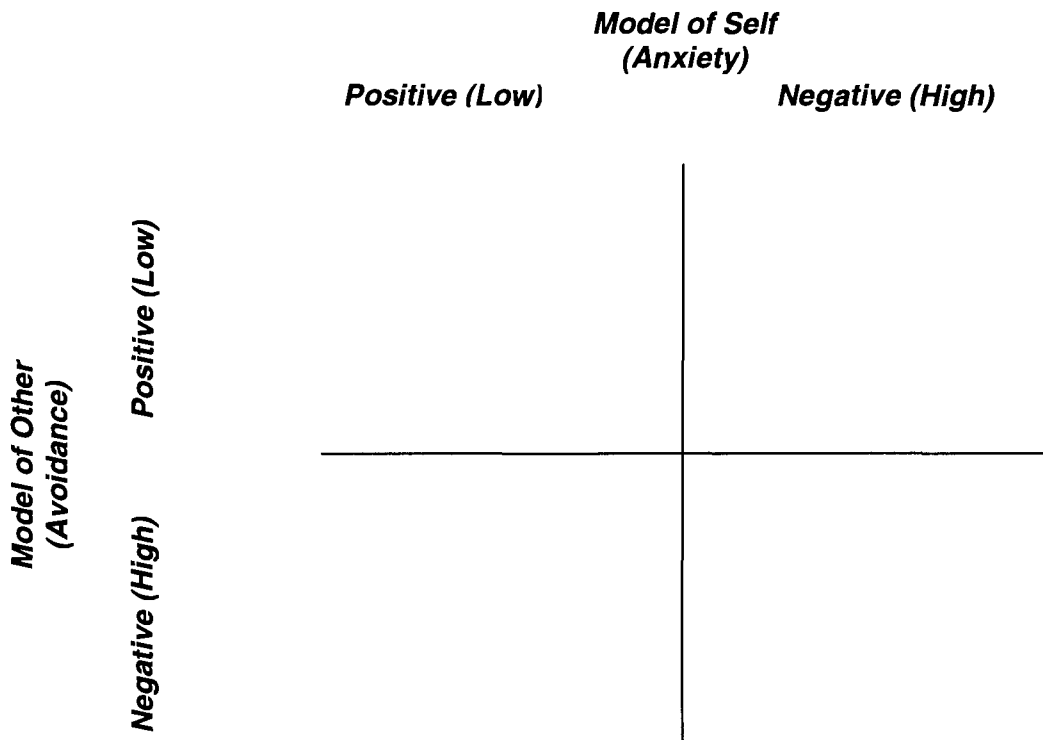
In addition, Borkovec and associates have demonstrated that worry is correlated most highly with social evaluative concerns on a fear schedule and very little with non-social items (Borkovec, et al., 1983). For instance, worriers specifically feared making mistakes, being criticized, and meeting people, and ranked these events as provoking high levels of anxiety (Borkovec et al., 1983). Furthermore, Ladouceur and colleagues found that social concerns were the first factor extracted from a measure of worry and that this factor was most predictive of the global tendency to worry in adolescent and college samples (Ladouceur, Freeston, Fournier, Dugas, & Doucet, 2002). Finally, Borkovec has suggested that worry is a verbal-linguistic activity and that, developmentally, worry may have its roots in children's attempts to express their anxious feelings to their caregivers (1994).

Attachment

Drawing on ethological theory, Bowlby (1969/1997) proposed attachment theory to explain the human drive to form relationships with others and to maintain a desired level of accessibility to close others, referred to as *attachment figures*. He hypothesized that infant attachment behaviour, such as crying, clinging or seeking contact is regulated by an innate motivational system called the *attachment behavioural system*. The evolutionary purpose of these behaviours is to promote infant and childhood survival by maintaining proximity between an infant or child and the attachment figure, particularly in

threatening situations. The primary caregiver, frequently the mother, provides a *secure base* from which the child can venture out to explore the world. If the caregiver is responsive to the child's needs, attachment behaviours cease and the child learns that the attachment relationship provides a *safe haven*. Childhood expectations about the availability and helpfulness of primary attachment figures are internalized as *working models* of attachment guiding subsequent interactions with others. These working models can be conceptualized as schemas, through which all later relevant social experiences are filtered and integrated. In adulthood, primary attachment shifts from the child-to-caregiver relationship to reciprocal attachment relationships with peers, most notably adult romantic relationships (Hazan & Zeifman, 1999). Although the attachment process is universal, there is considerable variability across individuals as to the preferred level of accessibility to an attachment figure.

Central to individual variability in attachment is the notion that individuals with different attachment tendencies differ in the strategies they use to regulate anxiety. Recently, attachment researchers have begun to conceptualize attachment in terms of two dimensions proposed by Bowlby (1969/1997): positivity of the view of self and positivity of the view of others. Figure 1 shows the intersection of these two dimensions yielding four attachment prototypes: secure (positive views of self and others), preoccupied (negative view of self and positive view of others), fearful (negative views of self and others), and dismissing (positive view of self and negative view of others) (Bartholomew, 1990; Bartholomew & Horowitz, 1991).

Figure 1:**Bartholomew's Two-dimensional Model of Attachment**

The attachment dimensions can be reconceptualized as anxiety, the degree of anxiety or dependence experienced in close relationships, and avoidance, the tendency to either seek out or avoid closeness in relationships (e.g., Bartholomew, 1990; Griffin & Bartholomew, 1994). Fraley and Shaver (2000) argue that it may be preferable to frame the two underlying dimensions in terms of the dynamics of the attachment system rather than in terms of working models of the self and others because previous literature has not always confirmed that the attachment patterns are associated with positivity of self and other models as theoretically expected (e.g., Collins, 1996; Simpson, Rholes, &

Phillips, 1996). In addition, the distinction between anxiety and avoidance allows researchers to place individual differences in infancy and adulthood within the same framework.

The Link Between Attachment and Worry

If social evaluative concerns are central to the anxious expectations associated with worry, then attachment theory may shed light on the development of excessive worry. Attachment theory proposes that when caregivers are inconsistently available, unavailable, overly protective, or intrusive in their caregiving, a child may develop one of the insecure patterns of attachment characterized by high levels of anxiety. High attachment anxiety reflects the tendency to be hypervigilant to potential signs of separation from, loss of, and rejection by attachment figures. Given the important social component of worry, I would expect attachment anxiety to be associated with the tendency to worry. In terms of the views of self and other, those individuals with a negative self-view would doubt their ability to deal effectively with perceived threats on their own and would therefore be prone to worry.

On the other hand, I would not expect attachment avoidance, which represents individuals' attempts to regulate their attachment anxiety and their positive or negative perceptions of others, to be related to worry. Rather, I would expect attachment avoidance to be related to coping strategies. When the attachment behavioural system is activated under threat or alarm, individuals attempt to regulate their anxiety through approaching or avoiding close others. Given that worry involves perceived threat, attachment behaviours are expected to be activated during times of worry.

Although no one has specifically looked at the associations between adult attachment orientations and worry, there is some evidence suggestive of such a link. For instance, Cassidy (1995) has suggested that the diffuse nature of worry in GAD is similar to attachment anxiety. She has also reported preliminary findings indicating that individuals with GAD retrospectively reported greater role reversal and enmeshment along with greater feelings of anger and vulnerability toward their mothers than did individuals without GAD. Pincus and Borkovec (1994) found converging evidence that individuals with GAD had more interpersonal problems specifically with over-nurturance and intrusiveness in their relationships. Finally, Muris and colleagues (1998, 2000) found that children who classified themselves as ambivalent (high attachment anxiety, low attachment avoidance) or avoidant (high attachment anxiety, high attachment avoidance) displayed higher levels of worry than did children who classified themselves as securely attached. Thus, evidence to date is suggestive of a link between attachment orientation and worry.

The Link Between Worry and Coping

How individuals cope with their worries may have implications for their ability to constructively deal with their concerns and, thereby, their tendencies toward further worry. As Davey noted, the critical differences between pathological worry and constructive worry

“seem to be that: (i) the pathological end appears to be associated with anxiety enhancement and the constructive end with anxiety reduction, and (ii) the pathological end tends to be associated with the exacerbation of problems (and hence perpetuates worrying) and the constructive end with the amelioration of problems” (1994, p. 38).

Thus, as worry increases, individuals are less likely to use coping strategies that lead to successful resolution of the emotion or the problem. There is little objective evidence that worriers are poorer problem-solvers than non-worriers, but they have been shown to have low confidence in their problem-solving abilities (Davey, 1994).

Although early conceptions of coping differentiated between two types of coping, problem-focused and emotion-focused, more recently researchers have come to view this distinction as overly simplistic (Carver, Scheier, & Weintraub, 1989). Whereas researchers had typically seen coping strategies other than problem-focused coping as variations on emotion-focused coping, the diversity of these strategies may have different implications for effectively coping with life events. For example, the seeking of social support had been seen as an emotion-focused coping strategy. However, Carver et al. (1989) differentiated between seeking of instrumental social support (i.e., seeking advice or input to the problem-solving process), which they saw as being a problem-focused strategy, and seeking emotional social support (i.e., gaining moral support, sympathy, or understanding), which they saw as being an emotion-focused strategy. Although Carver and his associates saw the seeking of instrumental social support as a constructive strategy, they hypothesized that seeking emotional support was a “double-edged sword” (Carver et al., 1989, p. 269) because it could lead to reassurance and support for more adaptive coping or to focusing on and venting of feelings. Since excessive worry implies a failure to successfully cope with concerns, I would expect worry to be negatively associated with constructive coping strategies, such as instrumental support-seeking, and positively associated with less constructive coping, such as focus on and venting of emotions.

The Link Between Attachment and Coping

Anxiously attached individuals, like worriers, are hypervigilant to potential danger and are consequently prone to experience fears. Anxiously attached individuals are predisposed to be hypervigilant in their assessment of environmental danger because of their fear of abandonment. In turn, this hypervigilance may lead them to over-detect threats causing them to experience even greater levels of fear and anxiety. Such hypervigilance may be further subdivided into primary and secondary appraisals of possible threats (Lazarus & Folkman, 1984). Primary appraisals relate to those appraisals that catalogue the degree of threat implicit in a situation (e.g., irrelevant, benign, or stressful), whereas secondary appraisals involve individuals' assessments of their abilities to deal effectively with a threatening situation. Not only may individuals high in attachment anxiety be prone to appraise ambiguous situations as threatening, they may also believe they are unable to effectively manage threatening situations. This conceptualization of secondary appraisals maps onto the *internal working* models of attachment. For example, in one study, individuals who were high in anxiety reacted more quickly to neutral words than those who were low on anxiety, indicating hypervigilance (Mikulincer, Birnbaum, Woddis, & Nachmias, 2000).

These beliefs or appraisals of threat motivate a range of coping behaviours (e.g., Lazarus & Folkman, 1984). From an attachment perspective, attachment avoidance involves the attempt to regulate emotion resulting from threat. Thus, preferred coping strategies should vary depending on an individual's standing on the avoidance dimension of attachment.

Avoidant individuals are expected to distance themselves when under threat so that they can remain in felt proximity to an attachment figure without the fear of rejection. In contrast, non-avoidant individuals are expected to approach their attachment figures for support when under threat. Consistent with these expectations, high avoidance has been associated with less support-seeking under stress (Simpson, Rholes, & Nelligan, 1992) and more indirect support-seeking (i.e., hinting or complaining or sulking or pouting; Collins & Feeney, 2000). On the other hand, low avoidance has been associated with greater expression of anger, sadness, and anxiety (Feeney, 1995), greater support-seeking under stress (Collins & Feeney, 2000), and greater support-seeking and “confrontive” coping (Obnigene & Collins, 1998). Interestingly, experimental activation of the secure base concept was more effective in reducing negative evaluations of neutral stimuli in individuals with high attachment anxiety and low attachment avoidance than in individuals with high anxiety and high avoidance (Mikulincer, Hirschberger, Nachmias, & Gillath, 2001). Thus, the avoidance dimension seems to shape the expression of worry in the anxiously attached.

Attachment, Worry, and Coping

My first hypothesis was that attachment anxiety would be positively associated with worry because both concepts reflect emotional reactions to perceived threat, though attachment anxiety stems from a specific class of threat (fear of loss, separation, rejection). Moreover, the negative self-model associated with high attachment anxiety is expected to be reflected in a lack of confidence in dealing with threatening situations, an important aspect of worry. A secondary question was to establish the association

between attachment anxiety and worry controlling for trait anxiety. This was done to rule out the possibility that the link between attachment anxiety and worry may simply reflect their joint associations with trait anxiety. I also expected positive associations between attachment anxiety and those worry domains which would seem to be clearly linked to attachment-related concerns (worry about relationships, lack of self-confidence, and concerns about the future).

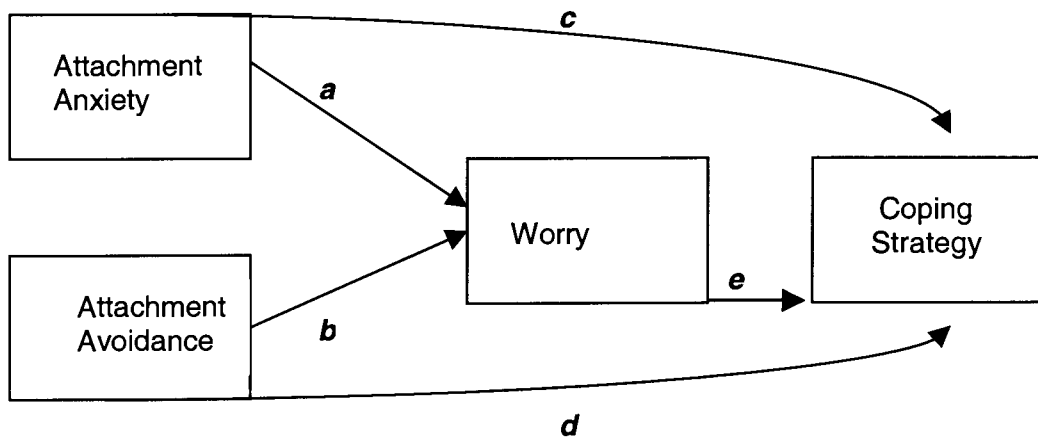
Second, I hypothesized that attachment avoidance would be associated with particular coping strategies. Whereas attachment anxiety reflects the emotional reaction to relationship threats, attachment avoidance reflects the attempt to regulate attachment anxiety, either through approaching others for support (low avoidance) or by withdrawing from others (high avoidance). I expected attachment avoidance to be negatively associated with venting of emotion because individuals who are higher in attachment avoidance tend to suppress the expression of emotion. I also expected attachment avoidance to be negatively associated with the seeking of emotional support, instrumental support, and religious coping because individuals who are higher in attachment avoidance tend to withdraw from others when threatened. In the case of religious coping, God is seen as a potential close other to approach or avoid.

Figure 2 presents a model of the hypothesized associations between the attachment dimensions, worry, and coping strategies. A positive independent association was expected between attachment anxiety and worry (path a in the model). However, there was no reason to expect an association between attachment avoidance and worry (path b) given that attachment avoidance is directed towards the regulation of affect rather than to the phenomenology of affect. Similarly, there was no reason to expect an association between attachment anxiety and coping strategy (path c).

However, attachment avoidance was expected to independently predict the coping strategies individuals engage when faced with threat or stress (path d).

Figure 2:

Hypothesized Model of the Relationships Between the Attachment Dimensions, Worry, and Coping Strategies



METHOD

Procedure

Participants were solicited via a notice in the Simon Fraser University Departmental News on the university's intranet. Additional participants were solicited through open e-mail lists for clubs and departments. University intranet log-ins were used to indicate informed consent and to ensure that each individual participated in the study on only one occasion. An e-mail containing the debriefing and informed consent was automatically generated for participants when they completed the study and submitted their data *or* when they logged off prematurely. To protect participant confidentiality, connections were terminated after 30 minutes of inactivity. The study ran from October 4, 2002 to December 9, 2002, at which time the survey was withdrawn from the intranet. Participants were entered for a chance to win a \$100 lottery for their participation. The winner was drawn using a randomized table in January, 2003, and awarded \$100.

Participants

In total, 498 participants logged into the study. Of these, 34 completed the study but elected to withdraw their data, 79 timed out before completing the study, 41 quit prematurely and two were eliminated due to the incompleteness of their data, yielding a completion rate of 69%. The final sample consisted of 344 participants. Of these, 244 (71%) were women and 98 (29%) were men (one participant did not identify a gender).

They ranged in age from 17 to 51 years of age ($M = 22.37$; $SD = 5.10$); 56% were Caucasian, 37% Asian, and 7% other. Two hundred and eighty-six participants (83%) were single, thirty-two (9%) were cohabiting, twenty (6%) were married, and five (2%) were either divorced or separated.

Measures

The Relationship Questionnaire

The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) consists of four short paragraphs describing each of the attachment patterns defined by the two-dimensional model of attachment. Individuals are asked to make ratings on a 7-point scale of the degree to which they resemble each of the four patterns. Although the measure does not include a direct measure of the two underlying dimensions, the dimensional ratings can be derived by linear combinations of the four prototype ratings (Griffin & Bartholomew, 1994). The anxiety dimension is derived by adding together ratings of the patterns defined by high anxiety (the preoccupied and fearful) and subtracting the ratings of the patterns defined by low anxiety (the secure and dismissing). The avoidance dimension is derived by adding together ratings of the patterns defined by high avoidance (the fearful and dismissing) and subtracting the ratings of the patterns defined by low avoidance (the secure and preoccupied).

Trimodal Anxiety Questionnaire

The Trimodal Anxiety Questionnaire (TAQ; Lehrer & Woolfolk, 1982) is a 36-item measure of trait anxiety. Individuals are asked to respond to items that correspond to three domains of anxiety: somatic (e.g., My neck feels tight), cognitive (e.g., I am concerned that others might not think well of me), and behavioural (e.g., I have to be careful not to let my real feelings show). Each item is followed by a Likert-type response scale ranging from 0 (Never) to 8 (Extremely often). A total score is derived from the score on all items ($\alpha = .90$).

The Worry Domains Questionnaire - Revised

The Worry Domains Questionnaire – Revised (WDQ-R; van Risoort, Emmelkamp, & Vervaeke, 1999) is a 30-item measure based on the Worry Domains Questionnaire (WDQ; Tallis, Eysenck, & Mathews, 1992). It is designed to measure non-pathological levels of worry by assessing specific worry content (referred to as worry domains). Individuals are asked to respond to items representative of six worry domains: relationships (e.g., “I worry that I am not loved”, $\alpha = .79$); lack of confidence (e.g., “I worry that I cannot be assertive or express my opinions”, $\alpha = .85$); aimless future (e.g., “I worry I have not achieved much”, $\alpha = .82$); work (e.g., “I worry that I make mistakes at work”, $\alpha = .86$); financial (e.g., “I worry that I can’t afford to pay my bills”, $\alpha = .87$); health (e.g., “I worry that I sense strange pains in my body”, $\alpha = .80$). Each item is followed by a Likert-type response scale ranging from 1 (Not at all) to 5 (Extremely). A total score is derived from the score on all items ($\alpha = .93$).

The Penn State Worry Questionnaire

The Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) is a 16-item measure designed to assess the tendency to worry excessively (e.g., “I am always worrying about something” and “My worries overwhelm me”). Each item is followed by a Likert-type response scale ranging from 1 (Not at all) to 5 (Absolutely true). A total score is derived from the score on all items ($\alpha = .94$).

Combined Worry Score

Given the strong correlation between the total scores on the WDJ-R and the PSWQ ($r(341) = .66, p < .01$), and the parallel Likert-type scales, a combined worry score was derived by adding the standardized scores for each measure. This combined worry score is the score used for all analyses in this study except those specifically relating to the worry domains.

COPE

The COPE (Carver, Scheier, & Weintraub, 1989) is a 60-item measure designed to assess trait coping responses. Participants are asked to indicate the frequency with which they engage in certain behaviours, responding to each item using a Likert-type scale ranging from 1 (I usually don't do this at all) to 4 (I usually do this a lot). Although this measure consists of 15 subscales (each consisting of four items), only the four subscales which were hypothesized to be associated with attachment avoidance were included in this study. These were focus on and venting of emotions (e.g., “I feel a lot of emotional distress and I find myself expressing those feelings a lot”, $\alpha = .84$), use of

instrumental social support (e.g., “I talk to someone to find out more about the situation”, $\alpha = .84$), use of emotional social support (e.g., “I try to get emotional support from friends or relatives”, $\alpha = .92$), and religious coping (e.g., “I seek God’s help”, $\alpha = .96$).

RESULTS

First, I examined the intercorrelations between the subscales of the worry and coping measures. Then I considered the zero-order associations between the attachment dimensions and worry, between worry and coping, and between the attachment dimensions and coping. Finally, I tested the hypothesized model linking attachment anxiety and avoidance, worry, and coping behaviours.

Subscale Intercorrelations

Intercorrelations Between Worry Domain Subscales

Table 1 contains the intercorrelations for the worry domain subscales. All were positively correlated and ranged from $r(341) = .32, p < .01$, between finances and health (two subscales that are conceptually different) to $r(341) = .73, p < .01$, between relationships and lack of confidence (two subscales that are conceptually more similar). The correlations between each of the worry domains and the combined worry scores were also strongly positive, ranging from $r(341) = .53, p < .01$, between combined worry and finances to $r(341) = .80, p < .01$, between combined worry and lack of confidence. The strength of these correlations is to be expected given that the Worry Domains subscales make up, in part, the combined worry score.

Table 1:***Intercorrelations Between Worry Domain Subscales***

Domains	1	2	3	4	5	6	7
1. Relationships	1.00	.73**	.69**	.54**	.36**	.44**	.74**
2. Lack of Confidence		1.00	.67**	.61**	.33**	.47**	.80**
3. Aimless Future			1.00	.68**	.46**	.46**	.78**
4. Work				1.00	.36**	.47**	.74**
5. Finances					1.00	.32**	.53**
6. Health						1.00	.60**
7. Combined Worry							1.00

** $p < .01$

Intercorrelations Between Coping Subscales

Table 2 contains the intercorrelations for the four COPE subscales which were used in the study. There were positive associations between seeking social support for instrumental reasons, seeking social support for emotional reasons, and focusing on and venting of emotions. However, consistent with previous findings, turning to religion was not significantly correlated with any of the other three subscales (Carver, Scheier, & Weintraub, 1989).

Table 2:
Intercorrelations Between COPE Subscales

	1	2	3	4
1. Seeking social support for instrumental reasons	1.00	.79**	.48**	.10
2. Seeking social support for emotional reasons		1.00	.65**	.10
3. Focusing on and venting of emotions			1.00	.03
4. Turning to religion				1.00

** $p < .01$

Attachment and Worry

Attachment Anxiety, Combined Worry, and Worry Domains

As expected, attachment anxiety was positively associated with combined worry, $r(341) = .50, p < .01$. Moreover, this association remained significant after controlling for trait anxiety, $pr(341) = .29, p < .01$.

As shown in Table 3, attachment anxiety was positively and significantly correlated with all six of the worry domains. These correlations ranged from $r(341) = .12, p < .05$, between attachment anxiety and financial worries to $r(341) = .53, p < .01$, between attachment anxiety and relationship worries. After controlling for trait anxiety, three associations remained significant: attachment anxiety and relationship worry, $pr(341) = .37, p < .01$; attachment anxiety and worry about lack of self-confidence

$pr(341) = .33, p < .01$; and attachment anxiety and worry about an aimless future, $pr(341) = .18, p < .01$. These positive partial correlations attest to the strength of these associations.

Table 3:

Correlations Between Attachment Anxiety, Attachment Avoidance, and the Worry Domains

	Relationships	Lack of Confidence	Aimless Future	Work	Finances	Health
Attachment Anxiety	.53**	.52**	.30**	.31**	.12*	.25**
Attachment Avoidance	.11*	.08	.14**	.07	.08	.00

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

Attachment Avoidance, Combined Worry, and Worry Domains

There was a weak association between attachment avoidance and combined worry, $r(341) = .11; p < .05$. Because attachment anxiety and attachment avoidance were positively correlated, $r(341) = .18, p < .05$, attachment anxiety was partialled out of the correlation between attachment avoidance and worry. The resulting partial correlation between attachment avoidance and worry was nonsignificant.

The correlations between attachment avoidance and the worry domains are contained in Table 3. Of these correlations, attachment avoidance was significantly correlated only with relationship worry, $r(341) = .11, p < .05$, and aimless future, $r(341) = .14, p < .01$. However, when attachment anxiety was partialled out, both correlations became nonsignificant.

Combined Worry and Coping

As indicated in Table 4, combined worry was positively associated with focus on and venting of emotions, $r(341) = .29, p < .01$. Worry was not significantly correlated with seeking instrumental social support, seeking emotional social support, or religious coping. Thus, worry was associated only with what might be considered the least adaptive of the coping strategies

Table 4:

Correlations Between Combined Worry and Coping Subscales

	Venting emotions	Instrumental Support-seeking	Emotional Support-seeking	Religious Coping
Combined Worry	.29**	.02	.07	.02

** $p < .01$

Attachment and Coping

Attachment Anxiety and Coping

Table 5 shows the correlations between attachment anxiety and coping strategies. Attachment anxiety was positively and significantly correlated with focus on and venting of emotions, $r(341) = .11, p < .05$, and it was negatively and significantly correlated with seeking instrumental social support, $r(341) = -.11, p < .05$. Attachment anxiety was not significantly correlated with seeking emotional support or with religious coping.

Attachment Avoidance and Coping

Table 5 also shows the correlations between attachment avoidance and coping strategies. As predicted, attachment avoidance was negatively and significantly correlated with focus on and venting of emotions, $r(341) = -.18, p < .01$, seeking instrumental social support, $r(341) = -.21, p < .01$, seeking emotional social support, $r(341) = -.29, p < .01$, and religious coping, $r(341) = -.13, p < .05$.

Table 5:

Correlations Between Attachment Dimensions and the COPE Subscales

	Venting emotions	Instrumental Support-seeking	Emotional Support-seeking	Religious Coping
Attachment Anxiety	.11*	-.11*	-.04	.08
Attachment Avoidance	-.18**	-.21**	-.29**	-.13*

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

Attachment, Worry, and Coping

The model specified in Figure 2, in which attachment anxiety was expected to be predictive of worry and attachment avoidance was expected to independently predict coping responses, was tested via a series of linear regressions. First, the attachment dimensions were regressed onto worry. The resulting model accounted for 25% of the variance in worry. As hypothesized, attachment anxiety was the only significant predictor, $b = .50, p < .01$. Thus, attachment avoidance was not predictive of worry

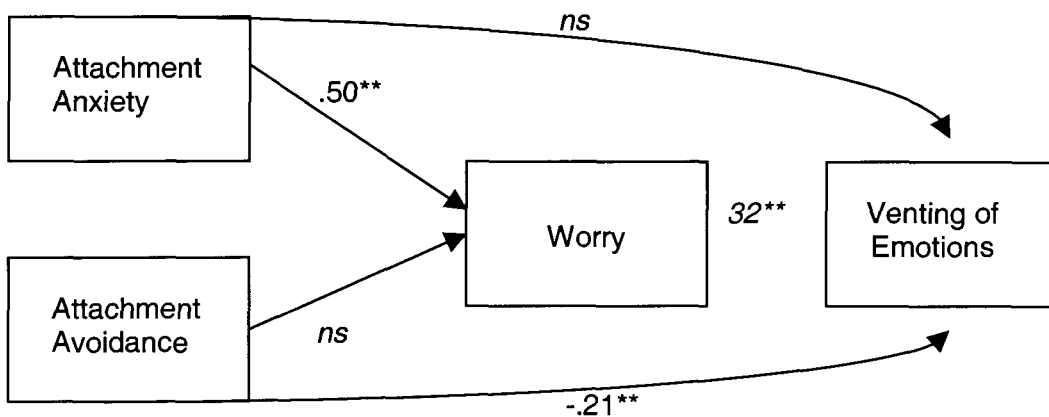
independent of attachment anxiety. Next, attachment anxiety, attachment avoidance, and worry were regressed onto the four COPE subscales hypothesized to be related to attachment avoidance (i.e., focus on and venting of emotions, seeking instrumental social support, seeking emotional social support, and religious coping). Figures 3 through 6 show the results of these analyses.

Focus on and Venting of Emotions

As expected, attachment avoidance was negatively predictive of focus on and venting of emotions, $b = -.21$, $p < .01$. The resulting model, shown in Figure 3, explained 13% of the variance in focus on and venting of emotions.

Figure 3:

Model of Attachment, Worry, and Focus on and Venting of Emotions



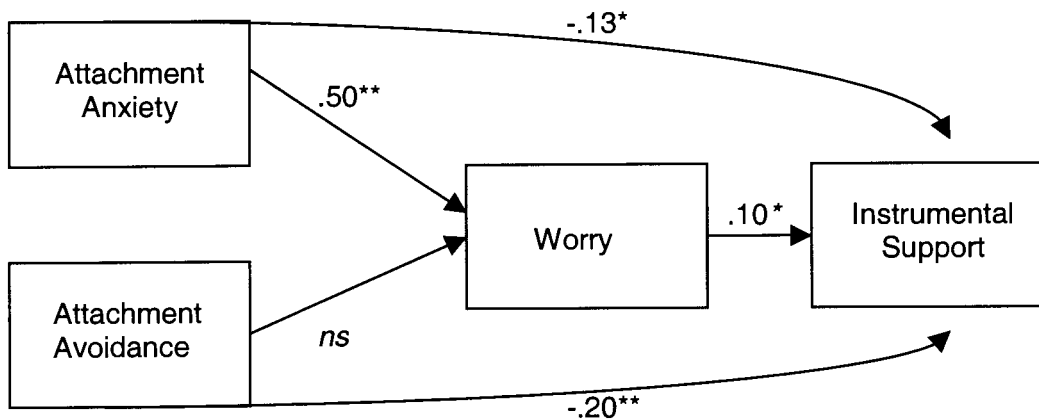
**** $p < .01$.**

Seeking Instrumental Social Support

Attachment anxiety and attachment avoidance each contributed to the prediction of seeking instrumental social support. Attachment anxiety was negatively predictive of seeking instrumental social support, $b = -.13$, $p < .05$, as was attachment avoidance, $b = -.20$, $p < .01$. The resulting model, shown in Figure 4, explained 6% of the variance in seeking instrumental social support.

Figure 4:

Model of Attachment, Worry, and Seeking Instrumental Social Support



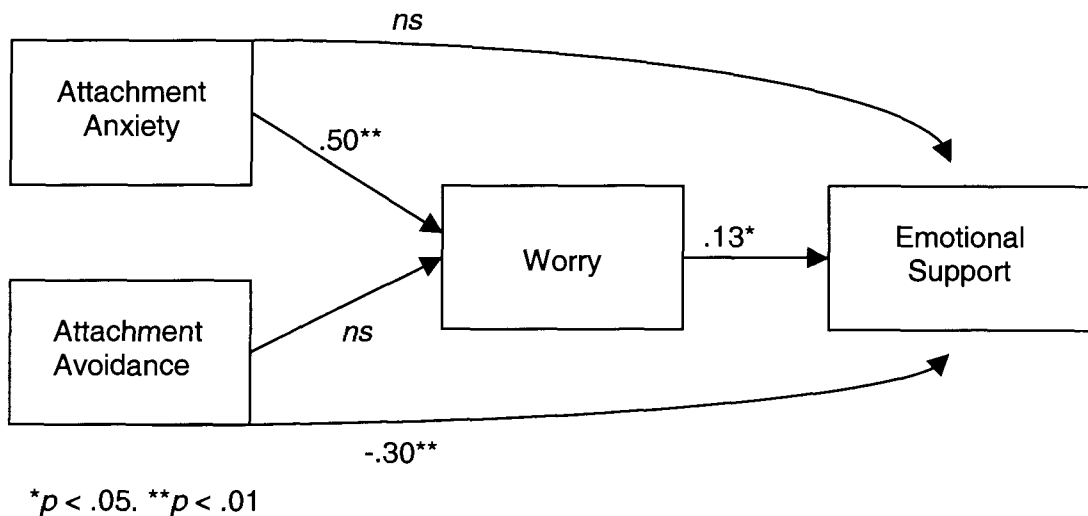
* $p < .05$. ** $p < .01$.

Seeking Emotional Social Support

As expected, attachment avoidance was negatively predictive of seeking emotional social support, $b = -.30$, $p < .01$. The resulting model, shown in Figure 5, explained 10% of the variance in seeking emotional social support.

Figure 5:

Model of Attachment, Worry, and Seeking Emotional Social Support

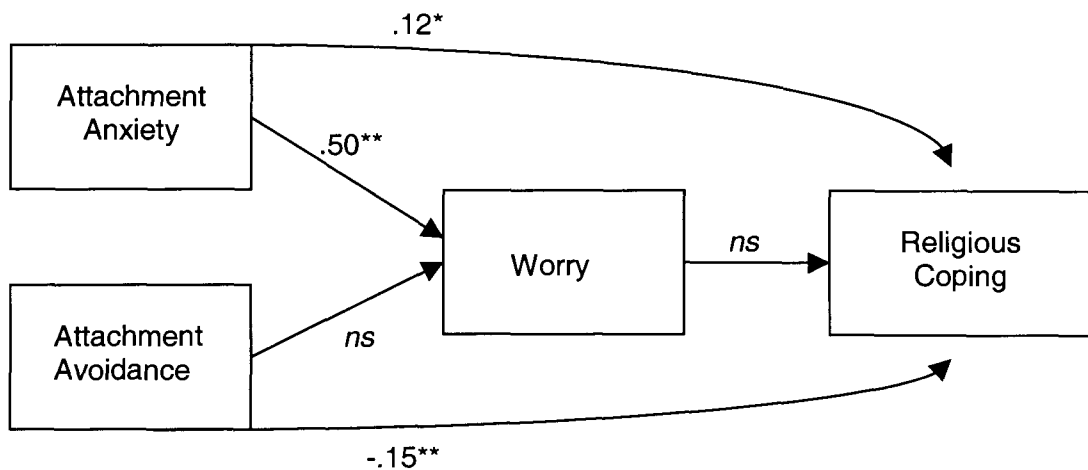


Religious Coping

Attachment anxiety and attachment avoidance each contributed to the prediction of religious coping. Attachment anxiety was positively predictive of religious coping, $b = .12$, $p < .05$, whereas attachment avoidance was negatively predictive of religious coping, $b = -.15$, $p < .01$. The resulting model, shown in Figure 6, explained 3% of the variance in religious coping.

Figure 6:

Model of Attachment, Worry, and Religious Coping



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

Other Analyses

In addition to the regression analyses discussed above, I did a series of follow-up regressions looking at potential interactions between attachment anxiety and avoidance in the prediction of both worry and coping strategies. In no case did these interactions make independent contributions. I also examined potential interactions between the attachment dimensions and worry in the prediction of coping. Again, none of the interaction terms made significant independent contributions in the prediction of coping.

I also tested a revised model which included trait anxiety as a predictor in order to assess the contributions of attachment anxiety and avoidance to worry and coping independent of trait anxiety. The path between attachment anxiety and worry and the various paths between attachment avoidance and coping strategies remained

significant. However, the two unpredicted paths between attachment anxiety and coping strategies (venting of emotions and religious coping) were no longer significant after trait anxiety was included in the model. Given that these paths between attachment anxiety and coping were not hypothesized and that they were not significant after controlling for trait anxiety, they will not be discussed further.

DISCUSSION

In this study I tested a model of the associations between attachment orientation, the tendency to worry, and coping behaviours (see Figure 2). First, I examined the associations between attachment and worry. I hypothesized that attachment anxiety would be associated with worry because higher levels of attachment anxiety lead individuals to seek out and anxiously anticipate threats in their relationships (and perhaps also in their broader environment). Thus, it seemed likely that levels of worry would increase for those higher in attachment anxiety. The hypothesized association between attachment anxiety and worry was significant even after controlling for trait anxiety, evidence of the independent contribution of attachment anxiety to worry. In contrast, attachment avoidance was not associated with worry after controlling for attachment anxiety.

These findings are consistent with the theoretical perspective on coping that outlines two types of threat appraisal, primary and secondary appraisals (e.g., Lazarus & Folkman, 1984). Primary appraisal focuses on assessment of the threat inherent in an event, whereas secondary appraisal focuses on individuals' perceptions of their ability to deal effectively with the threat. From an attachment perspective, individuals high in attachment anxiety have a predisposition to appraise threat even in relatively neutral events (primary appraisal). Moreover, individuals high in attachment anxiety doubt their ability to cope effectively with the threat (secondary appraisal). As the results of this study suggest, this process may lead to worry and the activation of preferred coping strategies.

I also hypothesized that the worries of individuals higher in attachment anxiety tend to centre on three specific themes: relationships, lack of self-confidence, and concern about the future. This hypothesis was based on the knowledge that individuals higher in attachment anxiety tend to view themselves as unworthy of the love and support of others *and* as incapable of coping with the stresses and strains of life. Attachment anxiety was positively and significantly correlated with each of the six worry themes explored: relationships, lack of confidence, aimless future, work, financial, and health. Thus, the effects of attachment anxiety were broader than predicted. Nevertheless, once I controlled for trait anxiety, significant positive associations remained only between attachment anxiety and the hypothesized worry themes of relationships, lack of self-confidence, and concern about the future. These results indicate the strength of the association between anxious attachment and worry related to the self and the self-in-relationships. In contrast, attachment avoidance was not associated with any of the worry themes after controlling for attachment anxiety.

My model further specified that attachment avoidance would be negatively associated with each of the three support-seeking strategies assessed (emotional support-seeking, instrumental support-seeking, and turning to religion) because attachment avoidance reflects the attempt to regulate attachment anxiety, either through withdrawing from others (high avoidance) or approaching others for support (low avoidance). Findings confirmed the hypothesized associations between attachment avoidance and support-seeking. There was a moderate negative association between attachment avoidance and seeking emotional social support (see Figure 5), and weaker negative associations with seeking instrumental social support and the use of religious coping (see Figures 4 and 6). It may be that individuals higher in attachment avoidance

become skilled at dealing with their emotions on their own and thus do not feel a need to turn to others in times of stress. However, by avoiding others they also deny themselves access to individuals who might be able to provide information resulting in more effective solutions to problems.

My model also specified that attachment avoidance would be negatively associated with venting of emotion because individuals who are higher in attachment avoidance tend to suppress the expression of emotion. As expected, attachment avoidance was negatively associated with focus on and venting of emotion (see Figure 3). Thus, individuals who were higher in attachment avoidance reported that they tended to suppress their emotions whether alone or with others. Thus, higher levels of attachment avoidance did not put individuals at risk of focusing on or venting their emotions which is generally considered an ineffective method of coping as it tends to escalate emotionality and to decrease effective problem-solving (e.g., Carver et al., 1989).

The proposed model outlines a process in which the tendency to appraise experiences as threatening (attachment anxiety) leads to a cognitive or emotional state (worry), which, in turn, leads to a response (coping strategy). The negative self-model of anxiously attached individuals is expected to be activated under threat, leading them to perceive even relatively neutral events as threatening. Having perceived a threat, individuals worry about it and respond to it by enacting their typical response style, either avoidance or approach. The model could also have been ordered such that an appraisal of an experience leads to a response (coping strategy), which, in turn, leads to a cognitive or emotional state (worry). It seems likely that perception, thought, emotion, and behaviour reciprocally influence one another. Perhaps then, the order of the

variables in the model is less important than the consideration of the interdependence of the individual items. Cognitive-behavioural (CB) therapists have focused on the monitoring of automatic thoughts, typically seen to arise out of schemas that individuals use in assessing threat. They hypothesize that these largely unconscious thoughts can be brought to consciousness enabling individuals to consciously reframe events leading to positive, rather than negative, emotions (e.g., Beck & Emory, 1995; Burns, 1980). CB therapists have also focused on changing behaviours through relaxation training and the development of increased behavioural options. Both approaches have been successful in treating anxiety, suggesting that intervention at any point of the process may lead to amelioration of symptoms.

Despite general support for my hypotheses, attachment anxiety and avoidance predicted only 25 percent of the variability in worry. And they predicted even less of the variability in coping behaviour. Clearly, there are other dispositional factors, such as emotional reactivity, and problem-related factors, such as the controllability and severity of the problem, which may play a role in the genesis of worry. It is also possible that the attachment strategies of individuals high in attachment anxiety may break down at extreme levels of worry. For example, individuals who are low on attachment avoidance, and who generally tend to seek social support when worried, may actually decrease their support-seeking activities when their worry becomes extreme. One study examining the reactions of Israeli individuals living in areas hit by Iraqi missile attacks during the Gulf War found that insecurely attached individuals who were low in attachment avoidance were no more likely to seek social support in response to the threat than those who were high in attachment avoidance (Mikulincer, Florian, & Weller, 1993).

This study took a trait rather than a situational approach to assessing coping behaviours. Relevant situational factors may include the location of the trigger event, individual levels of expertise with a trigger event, and the availability of attachment figures during and immediately following a trigger event. Thus, different situations may require individuals to have different coping behaviours in their repertoires. Moreover, individuals respond with greater accuracy to questions about specific situations as opposed to general tendencies (which may be seen to vary across situations). For instance, Carver et al. (1989) found that subscale alphas tended to be higher when they used a situational approach to the assessment of coping strategies, a finding indicative of higher internal consistency.

The generalizability of the sample used in this study must be considered. The sample was restricted to individuals attending or employed by Simon Fraser University. However, there is no reason to expect that students or employees of a university differ systematically from the general population in their approach to attachment, worry, and coping. Moreover, because I was able to sample both students and employees of the university, the resulting sample was somewhat broader than one limited to undergraduate participants. However, replication in different populations (for instance, a clinical population) would be helpful to assess the generalizability of the current findings.

The use of the internet as a means of data collection may have affected the outcome of the study. Central to this issue is the question of whether participants who respond to internet surveys differ in their approach to attachment, worry, and coping issues. Although the use of the internet in data collection for the social sciences is still relatively new, two studies comparing in-person and internet data collection have failed to document significant differences in bivariate associations between the two

methodologies (e.g., Cronk & West, 2002; Pettit, 2002). Researchers have, however, found that web-based data collection tends to yield somewhat lower completion rates than in-person data collection (e.g., Cronk & West, 2002). Perhaps participants feel less obliged to complete a survey when they are not in the room with a human researcher. Although there may be differences between completing a survey in-person and via the internet, current research tends to indicate that there are no significant differences in participant approaches to survey content (e.g., Best, Krueger, Hubbard, & Smith, 2001; Epstein, Klinkenberg, Wiley, & McKinley, 2001).

Different forms of assessment might have led to different or richer results. For example, a semi-structured interview of attachment may have yielded results other than those yielded by self-report measures given that researchers have found only moderate correlations between the results of interview and self-report measures of attachment (e.g., Griffin & Bartholomew, 1994). Such findings suggest that the constructs being tapped by these different methods are not identical. Use of other coping measures may also have facilitated exploration of the associations between attachment and other coping behaviours. In particular, different wording of the coping measure could have addressed both situation-specific and general coping tendencies, especially those related to the worry themes of interest (relationships, lack of self-confidence, and concern over the future). Moreover, the COPE measure did not ask individuals to describe their reactions when they were worried, but rather asked them to describe their reactions when they were under stress. However, a pilot study explored this issue and found no significant difference in the responses of participants based on asking about worry rather than stress.

Finally, this study made use of correlational and cross-sectional methodology rather than experimental methodology. Therefore, the direction of causality between the constructs remains unclear. Future research should include an experimental design to address causality. Such an approach could also help tease apart situational and trait contributions to coping. For example, attachment occurs in the context of a dyadic relationship. Therefore we might expect individuals to enact somewhat different behaviours depending on the availability of their attachment figures and the specific content of their worry. For example, individuals high in attachment avoidance might be more willing to seek support from an attachment figure when worrying about external, impersonal concerns than when worrying about attachment-related concerns. In contrast, individuals high in attachment anxiety might be willing to seek support from individuals other than attachment figures when their attachment figures are not available. Thus, a design that experimentally manipulates worry in the presence and absence of participants' attachment figures could shed light on the potentially different reactions of individuals with different attachment orientations, across different situations, and with their attachment figures present and absent.

The findings of this study are consistent with the proposition that there is a strong association between attachment and worry independent of trait anxiety. Worries likely develop over time and patterns leading to worry may be traced back to interactions with caregivers in childhood. There is now some published evidence that children who classify themselves as insecurely attached report higher levels of worry than do those who classify themselves as securely attached (e.g., Muris, Meesters, Merckelbach, & Hülßenbeck, 2000) and that worry increases with increasing cognitive development (e.g., Muris, Merckelbach, Meesters, & van den Brand, 2002). Thus, children's attachment

patterns and their cognitive maturity may interact in the development of worry.

Unpublished research conducted with undergraduates diagnosed with GAD also implies a role for attachment (Cassidy, Lichtenstein, Borkovec, & Thomas, 1994, as cited in Cassidy, 1995). Further work should be undertaken to explore the differing roles of attachment anxiety and attachment avoidance in the development and maintenance of worry.

Examining attachment orientations may also help shed light on individual differences in the presentation of worry and GAD. Some research has already begun to focus on the possible *pathoplastic* relationships between personality and pathology. Such an approach acknowledges that personality and pathology are separate constructs, but allows for the influence of personality on the presentation, treatment, and course of a disorder (see Kasoff & Pincus, 2002). For instance, Kasoff and Pincus (2002) clustered individuals with GAD into four groupings based on their reports of interpersonal problems. Two of the four clusters were termed Intrusive GAD and Nonassertive GAD. Although none of the attachment scales used in the study yielded significant results, a consideration of these clusters from an attachment perspective may yet be instructive. The Intrusive cluster scored highest on a profile that would be expected of individuals low in attachment avoidance. Given the results of the current study, I would expect these individuals to focus on and vent their emotions, seek emotional and instrumental social support, and turn to religion in times of crisis. On the other hand, the Nonassertive cluster scored highest on a profile that would be expected of individuals high in attachment avoidance. Again, given the results of the current study, I would expect these individuals not to focus on or vent their emotions, seek emotional or instrumental support, nor turn to religion in times of crisis. Our understanding of the

interpersonal problems that individuals with GAD may experience, and of their attempts to cope with their worries, may be increased through research that explores the associations between worry and the two attachment dimensions in an adult clinical sample. Such research may also help in the design of more individualized treatment for people with high levels of worry.

The results of the current study also underline the importance of asking about clients' religious or spiritual philosophies so that these can be incorporated into treatment plans. As Kirkpatrick (1994, 1997, 1998) has shown, reaching out to God in prayer or reflection is both an attachment and a coping behaviour. Future research could also examine the role of prayer in the management of worry.

Although Cognitive-Behavioural Therapy (CBT) is listed as one of the empirically validated forms of treatment for GAD (Chambless et al., 1998), only 50% of clients achieve high end-state functioning (Borkovec & Whisman, 1996). Borkovec and his colleagues have now embarked on a research program to investigate individual levels of responsiveness to CBT. In one recent study, these researchers found that those individuals who were vindictive, intrusive, and domineering in relationships (suggestive of low avoidance) were particularly likely to have poor outcomes (Borkovec et al., 2002). Results such as these have led these researchers to add an interpersonal component to their CBT treatment of GAD. The focus of this interpersonal component is 1) current interpersonal relationship patterns with particular attention to clients' roles in the maintenance of the patterns, 2) origins of current relationship problems, and 3) interpersonal difficulties experienced within the therapeutic relationship (Newman, Castonguay, Borkovec, & Molnar, in press). It might also be useful to more explicitly incorporate notions of attachment into psychotherapy for GAD. First, as Susan Johnson

says, attachment is “a depathologizing lens” (1996, p. 23). Thus, attachment can be used as a framework to help clients see how they and their attachment figures have come to be as they are. Moreover, attachment theory helps to explain why people tend to recreate the patterns of previous relationships in their new relationships. Clients might also benefit from interventions that make the link between interpersonal schemas and attachment experiences explicit. Furthermore, a practice like Emotionally Focused Therapy places importance on sustaining emotional engagement similar to that currently being piloted by Borkovec and his associates (e.g., Newman et al., in press).

In summary, the findings of this study provide support for the proposed model that posited an association between attachment anxiety and worry, and between attachment avoidance and coping strategies. Attachment anxiety was positively associated with worry, independent of trait anxiety. Attachment avoidance was negatively associated with four coping strategies: focus on and venting of emotions, seeking emotional social support, seeking instrumental social support, and the use of religion. These results highlight the importance of the inclusion of an interpersonal perspective, and more specifically, an attachment perspective in the understanding and treatment of worry.

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APPENDIX**SIMON FRASER UNIVERSITY**

OFFICE OF RESEARCH ETHICS

BURNABY, BRITISH COLUMBIA
CANADA V5A 1S6
Telephone: 604-291-3447
FAX: 604-268-6785

October 30, 2003

Ms. Colleen Allison
Graduate Student
Department of Psychology
Simon Fraser University

Dear Ms. Allison:

Re: Worry and Coping: An Attachment Perspective

The above-titled ethics application has been granted approval by the Simon Fraser Research Ethics Board, in accordance with Policy R 20.01, "Ethics Review of Research Involving Human Subjects".

Sincerely,

Dr. Hal Weinberg, Director
Office of Research Ethics

SIMON FRASER UNIVERSITY

OFFICE OF RESEARCH ETHICS
ROOM 2105 STRAND HALL



BURNABY, BRITISH COLUMBIA
CANADA V5A 1S6
Telephone: 604-291-3447
FAX: 604-268-6785

October 30, 2003

Ms. Colleen Allison
Graduate Student
Department of Psychology
Simon Fraser University

Dear Ms. Allison:

Re: Worry: An Attachment Perspective
Title Change

In response to your request dated October 27, 2003, I am pleased to approve, on behalf of the Research Ethics Board, the title change to Worry and Coping: An Attachment Perspective in the research protocol of the above referenced Request for Ethical Approval of Research originally approved on July 22, 2002.

Best wishes for continued success in this research.

Sincerely,

Dr. Hal Weinberg, Director
Office of Research Ethics

c: Dr. K. Bartholomew, Supervisor

/jmy

SIMON FRASER UNIVERSITY

OFFICE OF VICE-PRESIDENT, RESEARCH

BURNABY, BRITISH COLUMBIA
CANADA V5A 1S6
Telephone: (604) 291-4370
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September 4, 2002

Ms. Colleen Allison
Graduate Student
Department of Psychology
Simon Fraser University

Dear Ms. Allison :

Re: Worry: An Attachment Perspective
Revision

In response to your request dated August 26, 2002, I am pleased to approve, on behalf of the Research Ethics Board, the minor revisions involving 1) changes to two measures involved in the original application, and 2) a new method of data collection (the SFU Intranet) of the above titled research protocol originally approved on July 23, 2002.

Continued best wishes for success in this research.

Sincerely,

Dr. Hal Weinberg, Director
Office of Research Ethics

c: K. Bartholomew, Supervisor

/bjr

SIMON FRASER UNIVERSITY

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July 23, 2002

Ms. Colleen Allison
Graduate Student
Department of Psychology
Simon Fraser University

Dear Ms. Allison:

Re: Worry: An Attachment Perspective

I am pleased to inform you that the above referenced Request for Ethical Approval of Research has been approved on behalf of the Research Ethics Board. This approval is in effect for twenty-four months from the above date. Any changes in the procedures affecting interaction with human subjects should be reported to the Research Ethics Board. Significant changes will require the submission of a revised Request for Ethical Approval of Research. This approval is in effect only while you are a registered SFU student.

Your application has been categorized as "minimal risk" and approved by the Director, Office of Research Ethics, on behalf of the Research Ethics Board in accordance with University policy R20.0, <http://www.sfu.ca/policies/research/r20-01.htm>. The Board reviews and may amend decisions made independently by the Director, Chair or Deputy Chair at its regular monthly meetings.

Best wishes for success in this research.

Sincerely,

Dr. Hal Wehberg, Director
Office of Research Ethics

c: K. Bartholomew, Supervisor

/bjr