THE INFLUENCE OF ROMANTIC ATTACHMENT STYLES

AND IMAGINED PARTNER REJECTION

ON FEMALE BODY IMAGE

by

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Abstract

The purpose of this research was to examine how attachment style and rejection interact to influence female body image. I hypothesized that women who were high in attachment anxiety would report more negative self-evaluations than women who were low in attachment anxiety. I also hypothesized that this main effect would be qualified by a significant interaction between attachment anxiety and rejection, such that highly anxious women who were rejected would report even more negative self-evaluations than highly anxious women who were not rejected. In Study One, I found that higher levels of attachment anxiety were associated with lower self-evaluations but, contrary to expectations, attachment *avoidance* and rejection condition interacted to influence self-evaluations. At low levels of avoidance, women in the rejection condition reported significantly higher levels of appearance state self-esteem, body esteem, and trait self-esteem than women in the non-rejection condition. However, at high levels of avoidance, women in the rejection condition reported lower levels of these three constructs than women in the non-rejection condition, although this finding was statistically significant only for appearance state self-esteem. In Study Two, my goal was to replicate and extend these unexpected findings by examining perceived partner regard and public self-awareness as potential mediators of the interaction between avoidance and rejection on self-evaluations. Although a main effect of attachment anxiety was revealed for each of the dependent measures, contrary to Study One and my hypotheses, attachment avoidance and rejection did not interact to influence any of the self-evaluation measures and, thus, no mediational analyses were performed. Importantly, I discovered that even though participants' mean ratings of their body esteem did not change following the rejection

manipulation, the degree to which highly anxious women in the rejection condition associated how they felt about their appearance and how they thought their partner perceived them was significantly stronger than that of highly anxious women in the non-rejection condition and low anxious women in either condition. Explanations for the findings found in Study One and Study Two are discussed and the implications of these findings for future research and promoting a positive body image are considered.

Acknowledgements

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Chapter 1

General Introduction and Overview

In recent decades, ultra-thin figures have become the ideal form of femininity. This sociocultural norm of "slimness as beauty" (Simpson, 2002) can be seen in the attitudes and behaviours of the female population. Possessing the desire to be thinner (Collins, 1991), or a fear of becoming fat (Mellin, McNutt, Hu, Schreiber, Crawford, & Obarzanek, 1991) has led many young girls and women to diet in an attempt to lose weight. A significant proportion of females who are preoccupied with their weight will develop eating disorders, such as anorexia and bulimia nervosa (Shisslak, Crago, & Estes, 1995). Indeed, it is estimated that 3% of women will suffer from an eating disorder at some point in their lifetime (Zhu & Walsh, 2002) and, in particular, a study conducted in Ontario determined that 2.1% of women between the ages of 15 to 64 have anorexia or bulimia nervosa (Woodside, Garfinkel, Lin, Goering, Kaplan, Goldbloom, & Kennedy, 2001). Although not everyone who is dissatisfied with their bodies exhibits such extreme behaviours, possessing a negative body image can also have a major impact on one's social life, ranging from social anxiety (Cash & Fleming, 2004) to sexual dysfunction (Wiederman, 2004). Clearly, body image is an important component of one's self-concept and it is important to understand the factors that influence this facet of self-esteem. These factors may include a variety of individual difference variables, contextual factors, and the interaction between personality and environment. In my thesis, I conducted two studies that examined how attachment style and rejection from a romantic partner interacted to influence female body esteem.

Attachment Theory

Attachment theory was first proposed by Bowlby (1969) in the context of infant-caregiver interactions. His goal was to explain the strong emotional bond infants felt toward their primary caregivers, and he hypothesized that this was adaptive because it ensured proximity of the child to the caregiver in times of threat or immediate danger. Based on experiences with a caregiver, individuals form internal working models of how worthy they are of care, and the extent to which they can rely on others to be responsive to their needs. Over the years, many other researchers have elaborated on Bowlby's original attachment theory. Of particular interest, Ainsworth and her colleagues proposed three different types of attachment based on infants' expectations of their caregivers' responsiveness and accessibility: secure, anxious/ambivalent and avoidant (Ainsworth, Blehar, Waters, & Wall, 1978). These different attachment styles were derived from a groundbreaking study in which mothers briefly left their infants alone and were then reunited. A secure attachment was characterized by healthy exploration when the caregiver was present, minor distress when the caregiver left, and positive emotions when the caregiver returned. An anxious/ambivalent attachment resulted in great distress when the parent left, but no sense of relief or comfort when the parent returned. Lastly, an avoidant type of attachment was characterized by indifference toward the caregiver, such that infants did not appear to be affected by the presence or absence of their mothers.

In 1987, Hazan and Shaver extrapolated Ainsworth et al.'s infant attachment perspective to the domain of adult romantic relationships. They proposed that the three attachment styles used to describe infants could also be used to explain romantic love, and that the prevalence of these various types of attachment remained consistent from childhood through to adulthood. In sum, securely attached adults were characterized as

having happy, trusting, and supportive relationships with their partners; avoidantly attached adults were described as having strong fears of emotional closeness and lacking a sense of trust in their partners; and anxiously attached adults were described as having extreme desires to be loved and accepted by their partners coupled with intense fears of rejection and abandonment. Bartholomew (Bartholomew & Horowitz, 1991) expanded this three-category perspective even further by considering Bowlby's (1973) suggestion that all people maintain working models of the self and of others. One's self-image can either be positive or negative (i.e., feel worthy of love or not), and one's image of others can either be positive or negative (i.e., other people are trustworthy/reliable or rejecting/unavailable). According to Bartholomew, individuals who have a positive model of the self and of others are *secure*; however, people who have a positive model of the self but a negative model of others are *dismissing*. Furthermore, individuals who maintain a negative model of the self and of others are referred to as *fearful*, whereas individuals who hold a negative model of the self but a positive model of others are *preoccupied*.

As research has progressed, the more contemporary method is to regard attachment styles as continuous, instead of categorical, in nature (Fraley & Waller, 1998). The two primary dimensions that underlie attachment theory are avoidance and anxiety, and an individual can be considered high or low on either one of these constructs. Attachment avoidance is shaped by the extent to which an individual avoids or is uncomfortable with emotional intimacy and interpersonal relationships; whereas attachment anxiety refers to the degree to which an individual feels unworthy of love and fearful of rejection.

Attachment Style and Body Image

There is a growing area of research investigating the relationship between

attachment style and body esteem. Body esteem is generally measured along a continuum in which people report how positively or negatively they feel about different aspects of their appearance or their appearance as a whole. Throughout this paper, the terms body esteem, body image, body satisfaction and appearance satisfaction are used interchangeably to describe the same basic construct. It has been demonstrated that insecurely attached girls and women, particularly those with a preoccupied attachment style, are more concerned about their weight and have lower overall body satisfaction than those who are securely attached (Sharpe, Killen, Bryson, Shisslak, Estes, Gray, Crago, & Taylor, 1998; Evans & Wertheim, 1998; Suldo & Sandberg, 2000). Importantly, these high levels of weight concern put girls and young women at risk for developing eating disorders (Sharpe et al., 1998). Indeed, research has demonstrated that a preoccupied attachment orientation predicts a variety of eating disorder symptoms among college-aged women (Evans & Wertheim, 1998; Suldo & Sandberg, 2000). These results suggest that there is a negative association between attachment anxiety and body satisfaction.

Although all types of social interactions have the potential to influence the development of one's body image, many researchers believe that intimate relationships with significant others are particularly important in the construction and maintenance of this self-construct (Tantleff-Dunn & Gokee, 2004). In relation to romantic attachment styles, it was observed that anxious attachment explained a significant proportion of variance in women's body image whereas avoidant romantic attachment and general attachment dimensions did not (Cash, Theriault, & Annis, 2003). Another study compared general attachment versus specific attachment to either a close friend or a romantic partner (McKinley & Randa, 2005). Consistent with previous research, it was

found that general attachment anxiety significantly predicted body satisfaction such that higher anxiety was associated with lower body satisfaction. Predicting body satisfaction from attachment for specific close friendships mirrored the results of general attachment; however, contrary to expectations, attachment anxiety did not predict body satisfaction when the participant was primed with a romantic partner. The authors suggest that these findings demonstrate the importance of examining attachment and body image in the context of specific others. However, I think it is also important to note that over one quarter of the participants involved in this study were not currently involved in romantic relationships and had to recall past partners, or were dating several people. My concern with this sample is that retrospective accounts of a past relationship may be inaccurate, and dating several people simultaneously may infer a lack of commitment and attachment to any specific partner. Therefore, in the current studies, only women in exclusive, committed relationships were recruited for participation.

Cash and Pruzinsky (p. 7, 2004) have stated that, "from early childhood on, body image affects our emotions, thoughts, and behaviours in everyday life. Perhaps most poignantly, body image influences our relationships – those that are public as well as the most intimate". Indeed, Wiederman (2004) reported that sexual functioning is greatly affected by body image concerns. For example, individuals who reported greater concerns about their appearance while engaging in a sexual encounter were more likely to experience decreased sexual esteem and decreased sexual satisfaction. In more general situations, regardless of actual body weight, women with dysfunctional beliefs about their appearance tended to have poorer social self-esteem, greater social anxiety and increased public self-consciousness (Cash & Fleming, 2004). Understanding the factors which contribute to body dissatisfaction among women can help to alleviate its occurrence along

with the negative consequences associated with it. As previously discussed, it has been demonstrated that attachment anxiety is negatively associated with appearance satisfaction but, to my knowledge, researchers have yet to empirically investigate exactly why this relationship occurs or how it might be exacerbated under certain conditions. Thus, my goal for the current project was to examine the interactive influence of attachment anxiety and partner rejection on body satisfaction.

Attachment Anxiety and Rejection

To reiterate, attachment anxiety corresponds to the concern and vigilance one has toward rejection and abandonment. Individuals with an anxious attachment orientation are likely to have had an attachment figure in their lives who was responsive to their needs at certain times but not at others (Mikulincer, Shaver, Bar-On, & Ein-Dor, 2010). Unable to predict when support might be provided, highly anxious individuals are hypersensitive to cues of rejection and experience more intense negative emotional states in reaction to rejection (Mikulincer & Shaver, 2007). To cope with the threat or actual presence of rejection, highly anxious individuals engage in proximity-seeking behaviours, often referred to as hyperactivating strategies, to reaffirm closeness (Cassidy & Koback, 1988).

A very recent study examined emotional responses to rejection based on attachment anxiety and avoidance (Besser & Priel, 2009). Results indicated that those high in attachment anxiety experienced increased negative affective reactions after induced imaginary romantic rejection and that this relation was mediated by a decrease in self-esteem and pride. Another study conducted by Park and her colleagues demonstrated a similar link between rejection and the self perceptions of highly anxious individuals. They concluded that, in comparison to people low in anxiety, the self-worth of anxiously

attached individuals is highly contingent on gaining social approval from others (Park, Crocker, & Mickelson, 2004).

Thus, attachment anxiety is associated with lower self-evaluations, and intensified negative reactions to potential threats of rejection which, in turn, may further exacerbate the low feelings of self-esteem typically experienced by those high in attachment anxiety. Consistent with this reasoning as well as prior research, I hypothesized that anxiously attached individuals would report lower body satisfaction and overall self-esteem than less anxiously attached individuals. Moreover, having randomly assigned participants to a rejection or a non-rejection condition, I also hypothesized an interaction between rejection condition and attachment anxiety such that the main effect of attachment anxiety would be exacerbated in the rejection condition in comparison to the non-rejection condition.

Implicit Cultural Norms

All of the dependent constructs I discussed above were obtained using explicit, self-report questionnaires. To my knowledge, the research conducted so far on attachment behaviour and body satisfaction has measured explicit attitudes and processes. I thought it would also be valuable to examine this relationship using an implicit or indirect form of measurement. In the past couple of decades, there has been a growing body of research focusing on automatic processes or aspects of human behaviour that are said to occur beyond one's level of awareness (Gawronski & Bodenhausen, 2006). In particular, contemporary research on attitudes distinguishes between explicit or declarative attitudes and implicit or automatic attitudes (Greenwald & Banaji, 1995). The methods used to measure these constructs can vary. For example, self-report is often used to measure explicit attitudes whereas the Implicit Association Test (IAT: Greenwald, McGhee, &

Schwartz, 1998) has been used by some researchers to measure implicit attitudes. Studies have shown that changes in explicit attitudes do not always result in changes in implicit attitudes (e.g., Gawronski & Strack, 2004) and vice versa (e.g., Dasgupta & Greenwald, 2001). Therefore, it appears that these two types of attitudes are not always consistent.

A series of recent studies have suggested that what are termed implicit cultural norms can influence one's thoughts, perceptions and behaviors and that these implicit norms can be manipulated and measured by using an alternative version of the original IAT (Yoshida, Peach, Spencer, & Zanna, 2008). To clarify, the IAT measures the strength of association between target objects (e.g., flower or insect) and evaluative attributes (e.g., pleasant or unpleasant) by having participants classify stimulus items to category labels. In the critical blocks, participants categorize items with prototypical evaluative attributes (e.g., sunshine, friends, or death) and target items (e.g., photos of flowers or insects) simultaneously. If participants respond faster when flowers and pleasant items share the same response than when flowers and unpleasant items share the same response, it is interpreted that they have positive implicit attitudes towards flowers. Yoshida et al. (2008) discovered that they could measure what they refer to as implicit descriptive norms by changing the category labels from *pleasant* and *unpleasant* to *most people like* and *most people don't like*. Using this revised IAT, Yoshida and her colleagues found that first year male and female engineering students developed more negative implicit norms toward female engineers after being at university for one semester (Yoshida et al., 2008). These results suggest that simply interacting with one's peers can alter the degree to which an individual associates female engineers with words that most people do not like.

For the current study, as a secondary dependent measure, I thought it would be interesting to investigate whether individual differences among attachment styles are

associated with differences in implicit cultural norms toward body size. Moreover, using a covert measurement tool would presumably allow me to target negative beliefs that participants were perhaps unwilling to admit or not consciously aware of.

A very recent study by Cheng and Mallinckrodt (2009) demonstrated that attachment anxiety was positively associated with the internalization of thin images portrayed in the media and that this media influence was positively associated with body dissatisfaction. Furthermore, another study using the same IAT employed in the current research revealed that viewing thin, attractive women in commercials caused participants to exhibit more negative implicit norms in regard to body size compared to a control group (Refling, Peach, Spencer, & Zanna, 2008). Integrating these two lines of research, if anxiously attached individuals are more likely to internalize thin media images and the viewing of these images can lead to more negative implicit norms toward body size, I hypothesized that anxiously attached women would demonstrate more negative implicit norms toward body size than their less anxious peers. Additionally, I hypothesized that highly anxious women who were exposed to rejection would also report more negative implicit norms toward body size than highly anxious women who were not exposed to rejection because I thought that this experience would likely make the social standards to which they measure themselves against more salient.

To summarize, higher levels of attachment anxiety are associated with lower self-evaluations and intensified negative reactions to potential threats of rejection. Therefore, for the current research project, I expected anxiously attached women to report more negative self-evaluations than their less anxious peers. I also expected a significant interaction between rejection condition and anxiety, such that this main effect of attachment anxiety would be exacerbated in the rejection condition in comparison to the

non-rejection condition. Furthermore, as research has demonstrated that women high in attachment anxiety are more likely than women low in anxiety to internalize thin media images and that this internalization is associated with negative implicit norms toward body size, I expected highly anxious women to report more negative implicit cultural norms toward body size than less anxious women. Lastly, I expected this main effect of attachment anxiety to be exacerbated when exposed to the rejection manipulation.

Chapter 2

Study One

Method

Participants

A total of 121[1] female[2] students enrolled in undergraduate courses at Queen's University participated in this study. Participants were recruited by using prescreening information that was collected at the beginning of the fall semester. As part of prescreening, participants completed the Experiences in Close Relationships (ECR) Questionnaire (Brennan, Clark, & Shaver, 1998; see Appendix A) which was designed to assess an individual's attachment style within romantic relationships by examining levels of anxiety and avoidance. The anxiety (Cronbach α = .87) and avoidance (Cronbach α = .92) dimensions are comprised of 18 items which are responded to on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores indicating greater anxiety and/or avoidance. Furthermore, all participants had indicated that they were heterosexual and involved in a romantic relationship for at least two months.[3] Of the 64% of participants who reported their ethnicity, 82.7% were White/Caucasian, 10.7% were East-Asian, 4.0% were South-Asian and 2.7% classified themselves as "other". Ages ranged from 17- to 23-years-old (*M* = 18.47, *SD* = 1.35). Participants received either a half credit toward their psychology course or five dollars in order to compensate for their participation.

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[1] Three participants were removed from data analysis (one did not complete the questionnaire on attachment, one did not complete the rejection manipulations and one incorrectly filled out all of the dependent measures).

[2] I only included females in this study because heterosexual women experience more anxiety about their appearance than do heterosexual men (Dion, Dion, & Keelan, 1990); indeed, 90% of those who suffer from eating disorders such as bulimia and anorexia nervosa are female (Johnson, Lewis, & Hagman, 1984).

[3] I only selected participants who had been in a relationship for at least two months in order to increase the likelihood that they were moderately committed to this person.

Procedure

On arriving at the lab, participants were reminded that they were participating in a study examining the self-image and cultural norms of university students. They read a letter of information (see Appendix B) which described the study in greater detail and signed a consent form (see Appendix C). After consent was obtained, participants were randomly assigned to one of two conditions: rejection or non-rejection. In the rejection condition, participants read a brief vignette which described their partner distancing himself from the relationship, whereas in the non-rejection condition, participants read a brief vignette that simply described their partner behaving in a manner consistent with their regular interactions (see Appendix D for both versions of the vignette).[4] To make these scenarios more personal, the participant's partner's name was obtained on the phone during recruitment and inserted into the vignette prior to the participant's arrival. All participants were also told that they would be completing a brief measure of cognitive speed. For this task, they were given various scrambled strings of words and instructed to make meaningful phrases by crossing out the words that did not belong (Sommer & Baumeister, 2002; see Appendix E). In the rejection condition, half of the phrases involved rejection (e.g., "they ignore her"), whereas in the non-rejection condition, half of the phrases were negative but not related to rejection (e.g., "burnt her tongue"). To remain consistent with the cover story, participants were given an hourglass timer in which time they had to complete the task. The order of the vignette and word-string tasks was counterbalanced. The reason for having each participant complete both the vignette reading and the word-string task was to ensure a powerful rejection manipulation, such

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[4] Pilot testing of other first year psychology students revealed that participants who read the rejection as opposed to the non-rejection vignette were more likely to endorse statements such as, "I worry that my partner doesn't care about me", $t(14) = 6.07$, $p < .001$.

that participants in the rejection condition not only read about their romantic partner slipping away but were also unconsciously primed with thoughts of rejection.

After being primed for rejection or not, participants completed a questionnaire package and the cultural norm IAT. Once again, the order of these two tasks was counterbalanced. The questionnaire package consisted of scales measuring state self-esteem, body-esteem, importance of appearance, global self-esteem and mood.[5] A description of the dependent measures can be found below.

Upon finishing the questionnaires and the IAT, participants were told that the study was completed and received a full debrief (see Appendix F).

Dependent Measures

State Self-Esteem. The State Self-Esteem Scale (Heatherton & Polivy, 1991; see Appendix G) is a 20-item inventory (Cronbach α = .88) that measures ones' current evaluations of self-esteem. It contains three independent factors of one's self-concept: performance (Cronbach α = .80), social (Cronbach α = .78) and appearance (Cronbach α = .85). Participants respond to items such as "I feel confident that I understand things" and "I feel self-conscious" on a scale from 1 (*not at all*) to 5 (*extremely*), with higher scores indicating greater state self-esteem.

Body Esteem. The Body Esteem Scale (Franzoi & Herzog, 1986; Franzoi & Shields, 1984; see Appendix H) lists 32 body parts (e.g., legs, waist) or functions (e.g., physical stamina, reflexes) and is responded to on a scale from 1 (*have strong negative feelings*) to 5 (*have strong positive feelings*), with higher scores indicating greater body esteem (Cronbach α = .91). It assesses body esteem as a multidimensional construct

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[5] The dependent measure questionnaires were not counterbalanced. The constructs I was most interested in (appearance satisfaction, body esteem) were filled out first.

consisting of three factors: sexual attractiveness (Cronbach α = .81), physical condition (Cronbach α = .83) and weight concern (Cronbach α = .90).

Self-Esteem. The Rosenberg Self-Esteem Scale (Rosenberg, 1965; see Appendix I) is a 10-item scale that measures self-esteem as a relatively stable construct (Cronbach α = .86). Participants respond to this questionnaire on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores indicating more positive self-esteem.

Mood. The Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988; see Appendix J) lists 20 feelings and emotions that are either positive (Cronbach α = .87; e.g., proud, excited), or negative (Cronbach α = .84; e.g., upset, guilty). Considering the purpose of this study, I also added the word 'rejection' to the original list of words. Participants respond to what extent they feel each particular emotion on a scale from 1 (*very slightly or not at all*) to 5 (*extremely*), with higher scores indicating greater positive mood or greater negative mood as these two domains are analyzed separately.

Importance of Appearance. The Appearance Schemas Inventory (Cash & Labarge, 1996; see Appendix K) includes 14 items which assess beliefs about the meaning or importance of one's appearance in life (e.g., "What I look like is an important part of who I am"; "Attractive people have it all"). Participants respond to these statements on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores representing greater importance placed on appearance (Cronbach α = .81).

IAT. The cultural norm IAT recently developed by Yoshida et al. (2008) was used to measure the participants' implicit cultural norms in regards to body size. Following the same methodology laid out by Yoshida et al. (2008), the IAT consisted of five blocks in total. Ten photographs of females, five thin and five overweight, were used as stimulus

items. The first block was a practice trial in which participants categorized words such as friends, parties and gifts to *most people like*; and disaster, evil and death to *most people don't like*. The second and fourth blocks were also practice trials. However, in these blocks participants categorized photos of thin and overweight women to the labels *thin* and *overweight* by pressing the appropriate response keys. The third block was an incompatible critical block in which *thin* and *most people don't like* items shared the same response key and *overweight* and *most people like* items shared the same response. Lastly, the fifth block was a compatible critical block in which *thin* and *most people like* items shared the same response and *overweight* and *most people don't like* items shared the same response key. The latencies for the third block were subtracted from the latencies from the fifth block and, as a result, positive scores indicate more positive implicit norms toward body size and negative scores indicate more negative implicit norms toward body size. As recommended by Greenwald and colleagues (Greenwald, Nosek, & Banaji, 2003), one participant who responded in less than 300 milliseconds more than 10% of the time was removed from the analysis. Two other participants were also removed from the data set because they made errors by pressing the wrong response key more than 20% of the time.

<div align="center">Results</div>

As stated in my hypotheses, I expected attachment anxiety to be positively associated with a negative self-image and negative implicit cultural norms toward body size. I also expected these main effects to be qualified by significant interactions such that the self-image and implicit norms of anxious participants in the rejection condition would be even more negative than the self-image and implicit norms of anxious participants in the non-rejection condition.

To examine these hypotheses, I ran multiple regression analyses on all of the dependent measures. For the rejection variable, the non-rejection condition was coded as 0 and the rejection condition was coded as 1. Also, in order to reduce multicollinearity, the anxiety and avoidance scores were mean centered (Aiken & West, 1991). Next, I computed two- and three-way interaction terms using the centered anxiety and avoidance scores and the rejection condition variable. Furthermore, I also created a new variable called *order* which would differentiate participants who completed the IAT first (coded as 0) from those who completed the questionnaire package first (coded as 1). Before running the main analyses of interest, I wanted to ensure that there was no effect of task order. Therefore, I computed two- and three-way interaction terms using the mean centred anxiety and avoidance scores and the order variable. There were no significant main effects or interactions involving order for state self-esteem, body esteem, global self-esteem, or implicit norms. However, there was a main effect of order for the performance subscale of state self-esteem, $\beta = -.22$, $t(113) = -2.40$, $p = .02$. It was also important to look at the interaction between order and rejection; therefore, I computed two- and three-way interaction terms using order, rejection and the combination of these two with anxiety and then avoidance. The interaction between order, rejection and avoidance was marginally significant for state self-esteem, $\beta = .11$, $t(114) = -1.84$, $p = .07$, and also significant for its appearance subscale, $\beta = -.33$, $t(114) = -3.52$, $p = .001$. In addition, the interaction between order and rejection was significant for state self-esteem, $\beta = -.24$, $t(114) = -2.71$, $p = .01$, as well for its performance subscale, $\beta = -.32$, $t(114) = -3.67$, $p < .001$. The interaction between order, rejection and avoidance was significant for body esteem, $\beta = -.22$, $t(114) = -2.29$, $p = .02$, as well as for two of its three subscales: sexual attractiveness, $\beta = -.22$, $t(114) = -2.29$, $p = .02$, and weight concern, $\beta = -.19$, $t(114) = -$

1.98, $p = .05$. Lastly, the order, rejection and avoidance interaction was significant for trait self-esteem, $\beta = -.27$, $t(114) = -2.76$, $p = .01$. In light of these significant interactions, I decided it was most appropriate to analyze the data separately for the order in which the two tasks were completed.[6]

State Self-Esteem

IAT First. There were no significant main effects or interactions involving state self-esteem when the IAT was completed before the questionnaire package.

Questionnaires First. As expected, a significant main effect of attachment anxiety was found, such that high levels of anxiety predicted lower state self-esteem, $\beta = -.35$, $t(52) = -2.21$, $p = .03$. There was also a significant main effect of rejection condition, $\beta = -.28$, $t(52) = -2.13$, $p = .04$, such that participants who experienced the rejection manipulation had lower state self-esteem than participants in the non-rejection condition. However, the anticipated interaction between attachment anxiety and condition was not found.

Performance State Self-Esteem

IAT First. Once again, when the IAT was completed first, I found no significant main effects or interactions.

Questionnaires First. Again, I found a significant main effect of rejection condition, $\beta = -.41$, $t(52) = -2.99$, $p = .004$, such that experiencing the rejection manipulation predicted

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[6] To decompose the three-way interactions, I analyzed each of the dependent variables for all combinations of the rejection condition and order with avoidance entered as the sole predictor. In the non-rejection condition when the questionnaires were completed first, attachment avoidance did not predict any of the dependent variables. In the non-rejection condition when the IAT was completed first, higher levels of attachment avoidance were associated with lower levels of overall state self-esteem, appearance state self-esteem, body esteem and weight concern (not significant for trait self-esteem or sexual attractiveness). In the rejection condition when the questionnaires were completed first, higher attachment avoidance predicted significantly lower levels for all of the dependent measures. Lastly, in the rejection condition when the IAT was completed first, higher attachment avoidance was associated with significantly lower levels of body esteem, sexual attractiveness and trait self-esteem. The pattern of these interactions is not readily interpretable and so will not be discussed further.

lower levels of performance state self-esteem.

Social State Self-Esteem

Because there were no significant main effects or interactions involving order for the social subscale of state self-esteem, I decided to analyze this variable ignoring the order of task completion to maintain power. As hypothesized, there was a significant main effect of anxiety, β = -.30, $t(111)$ = -2.23, p = .03, such that high levels of anxiety predicted lower social self-esteem. There were no other significant main effects or interactions.

Appearance State Self-Esteem

IAT First. I found no significant main effects or interactions when the IAT was completed before the questionnaire package.

Questionnaires First. As predicted, I found a significant main effect of anxiety, β = -.42, $t(52)$ = -3.07, p = .003, such that higher attachment anxiety predicted more negative appearance self-esteem. I also predicted an interaction between anxiety and rejection condition, however, this was not the case. Instead, the interaction between avoidance and rejection condition was a significant predictor of appearance self-esteem, β = -.41, $t(52)$ = -2.72, p = .01. To decompose this interaction, a simple slopes analysis was performed. At low levels of avoidance, there was a significant difference in appearance self-esteem between the non-rejection and the rejection conditions, such that participants in the rejection condition reported *higher* appearance self-esteem than those in the non-rejection condition, β = .47, $t(58)$ = 2.59, p = .01. At high levels of avoidance, there was also a significant difference in appearance self-esteem between the two conditions, such that participants in the rejection condition reported *lower* appearance self-esteem than those in the non-rejection condition, β = -.48, $t(58)$ = -3.05, p = .004.

Figure 1. Interaction between attachment avoidance and rejection condition on appearance state self-esteem.
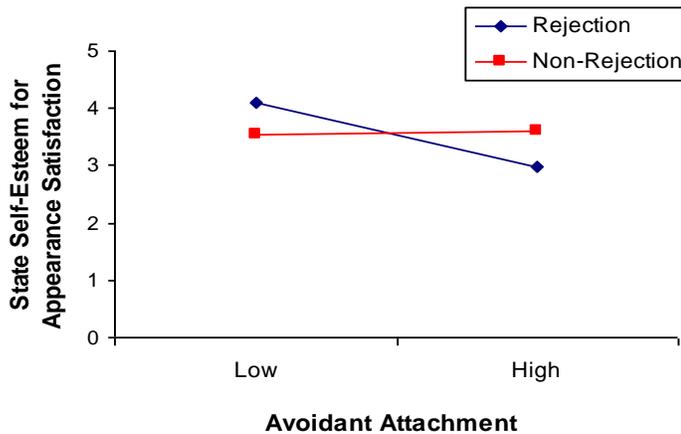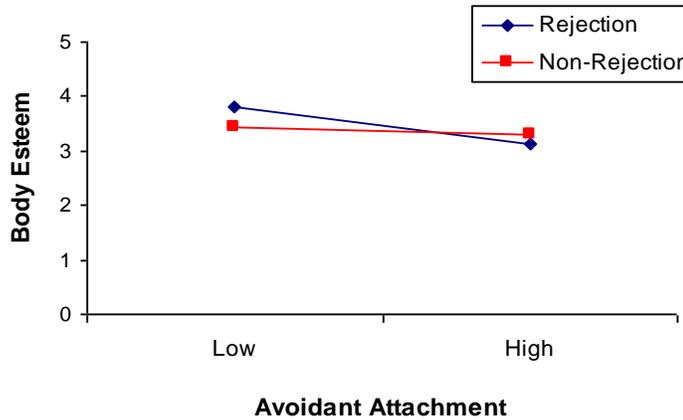

Body Esteem[7]

IAT First. Unexpectedly, there was a marginally significant main effect of rejection condition, $\beta = .26$, $t(52) = 1.89$, $p = .07$, such that being in the rejection condition predicted *higher* levels of body esteem as compared to being in the non-rejection condition.

Questionnaires First. On the other hand, as predicted, there was a significant main effect of anxiety, $\beta = -.46$, $t(52) = -3.08$, $p = .003$, such that higher attachment anxiety predicted lower body esteem. Contrary to my hypothesis but consistent with the pattern of results for appearance self-esteem, there was also a marginally significant interaction between avoidance and rejection condition, $\beta = -.31$, $t(52) = -1.88$, $p = .07$. To better understand this interaction, another simple slopes analysis was conducted. At low levels of avoidance, there was a marginally significant difference in body esteem between the non-rejection and the rejection conditions, such that participants in the rejection condition reported *higher* body esteem than those in the non-rejection condition, $\beta = .34$, $t(58) = 1.74$, $p = .09$. On the other hand, at high levels of avoidance, there was no significant

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[7] The results for the body esteem subscale, weight concern, were identical to these results (although, for weight concern, the main effect of anxiety was marginal, $p = .08$).

difference in body esteem between the non-rejection and the rejection conditions.

Figure 2. Interaction between attachment avoidance and rejection condition on body esteem.

Sexual Attractiveness, Body Esteem

IAT First. There were no significant main effects or interactions for the sexual attractiveness subscale of the body-esteem measure when the IAT was completed before the questionnaires.

Questionnaires First. As expected, there was a main effect of attachment anxiety, $\beta = -.38$, $t(52) = -2.41$, $p = .02$, such that higher anxiety was associated with lower sexual attractiveness. Also, there was a marginal avoidance by rejection condition interaction, $\beta = -.30$, $t(52) = -1.73$, $p = .09$. Consistent with the overall body-esteem scale, simple slopes analyses revealed that at low levels of avoidance, there was a marginally significant difference in sexual attractiveness between the non-rejection and the rejection conditions, such that participants in the rejection condition reported *higher* sexual attractiveness than those in the non-rejection condition, $\beta = .37$, $t(58) = 1.91$, $p = .06$. On the other hand, at high levels of avoidance, there was no significant difference in sexual attractiveness between the non-rejection and the rejection conditions.

*Physical Condition, Body Esteem*

Because there were no interactions with task order for physical condition, I analyzed the subscale ignoring this factor. As expected, there was a main effect of attachment anxiety, $\beta = -.38$, $t(111) = -2.94$, $p = .004$, such that higher anxiety predicted lower body esteem for physical condition. This main effect was also qualified by a significant interaction between anxiety and avoidance, $\beta = .28$, $t(111) = -2.30$, $p = .02$, as well as a significant interaction between anxiety, avoidance and rejection condition, $\beta = .33$, $t(111) = 2.73$, $p = .01$. To better understand this three-way interaction, I split the data by rejection condition and then performed a simple slopes analysis. In the non-rejection condition at high levels of avoidance, higher attachment anxiety was associated with lower evaluations of one's physical condition, $\beta = -.72$, $t(55) = -3.52$, $p = .001$. In the non-rejection condition at low levels of avoidance, attachment anxiety did not significantly predict body esteem for physical condition. In the rejection condition at low levels of avoidance, higher attachment anxiety was associated with marginally lower body esteem for physical condition, $\beta = -.34$, $t(55) = -1.88$, $p = .06$. Finally, in the rejection condition at high levels of avoidance, attachment anxiety did not significantly predict evaluations of one's physical condition.

Trait Self-Esteem

IAT First. As predicted, there was a significant main effect of anxiety, $\beta = -.73$, $t(52) = -2.89$, $p = .01$, such that higher attachment anxiety predicted lower self-esteem. I also found a significant interaction between avoidance and rejection condition for global self-esteem, $\beta = -.48$, $t(52) = -2.23$, $p = .03$. However, a simple slopes analysis revealed insignificant results although the direction of findings was consistent with the other avoidant by rejection interactions (a positive association between rejection and self-

esteem for those low in avoidance and a negative association for those high in avoidance).

Questionnaires First. I found no significant main effects of self-esteem; however, there was a significant interaction between avoidance and rejection condition, $\beta = -.36$, $t(52) = -2.02$, $p = .05$. At low levels of avoidance, there was a significant difference in self-esteem between the non-rejection and the rejection conditions, such that participants in the rejection condition reported *higher* self-esteem than those in the non-rejection condition, $\beta = .40$, $t(57) = 2.07$, $p = .04$. However, at high levels of avoidance, there was no significant difference in self-esteem between the non-rejection and the rejection conditions.[8]

Figure 3. Interaction between attachment avoidance and rejection condition on trait self-esteem.
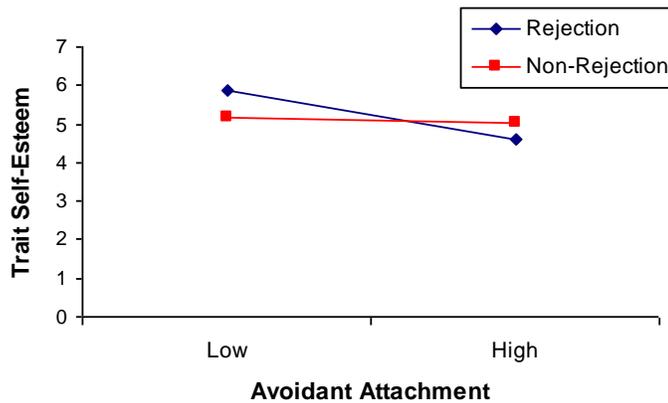
Positive Mood

IAT First. There was a main effect of anxiety, $\beta = -.55$, $t(50) = -2.00$, $p = .05$, such that higher levels of attachment anxiety predicted less positive mood.

Questionnaires First. There were no significant main effects or interactions for positive

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[8] Appearance schema: I did not have any hypotheses regarding this dependent variable but it was included as a potential control. I performed hierarchical analyses on state self-esteem, body esteem and global self-esteem with appearance schema entered into step one and the original predictors into step two. The pattern of results for all three dependent measures remained the same so this variable is not discussed further.

mood when the questionnaires were completed first.

Negative Mood

IAT First. There were no significant main effects or interactions for negative mood when the IAT was completed first.

Questionnaires First. There were also no significant main effects or interactions for negative mood when the questionnaires were completed first.

Implicit Cultural Norms

Because there were no effects of task order for this dependent variable, I decided to analyze the implicit norms ignoring this variable. There were no significant main effects involving this dependent measure or significant interactions with attachment style and rejection condition.[9]

Discussion

The results revealed an unanticipated effect of task order, so this somewhat convoluted the analyses and interpretation. It appears that doing the IAT somehow influenced participants' responses and, therefore, most of the significant effects were detected when the IAT was completed after the questionnaires. Perhaps there was a decay of the rejection manipulation since the IAT requires careful concentration, and/or perhaps viewing photographs of thin women during the IAT altered the participants' responses regarding their self-evaluations. Analyses also revealed that there were no significant main effects or interactions involving the implicit norms toward body size. However, there were several other important and more theoretically-grounded dependent measures to examine.

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[9] I also analyzed the implicit norms with the file split by task order and there were still no significant results.

Consistent with my hypotheses and previous research findings, there was a main effect of attachment anxiety for state self-esteem and body esteem but only when the questionnaires were completed first. There was also a main effect of global self-esteem; however, this was only significant when the IAT was completed first.

I had hypothesized that the main effects of attachment anxiety would be qualified by significant interactions, such that individuals high in attachment anxiety who experienced the rejection manipulation would report even more negative self-evaluations across all dependent measures than those high in attachment anxiety in the non-rejection condition. Contrary to these expectations, I discovered significant interactions between attachment avoidance and rejection condition. Individuals low in avoidance who imagined their partner rejecting them reported significantly *higher* levels of appearance state self-esteem, overall body esteem and trait self-esteem than those who did not imagine partner rejection. On the other hand, individuals high in avoidance who imagined their partner rejecting them reported *lower* levels of appearance state self-esteem, overall body esteem and trait self-esteem than those who did not experience the partner rejection, although these results were only statistically significant for appearance self-esteem. Therefore, it appears that women low in avoidance may have benefited from or simply reacted defensively to the imagined partner rejection by reporting more positive self-perceptions; whereas women high in avoidance seemed to suffer from the imagined rejection as they reported more negative self-perceptions, specifically with regard to appearance.

Although fear of rejection is often associated with attachment anxiety, it has also been suggested that highly avoidant individuals are uncomfortable with closeness and avoid emotional intimacy because they also have either a conscious or unconscious fear

of rejection (e.g., Edelstein & Shaver, 2004). Carvallo and Gabriel (2006) recently demonstrated that highly avoidant individuals who received positive feedback in a social situation reported more positive affect and higher state self-esteem than those who received no feedback. Furthermore, when told that they would experience future interpersonal success, highly avoidant individuals reported more positive affect than low avoidant individuals and more positive affect in comparison to when they were told that they would experience future individual success (Carvallo & Gabriel, 2006). These findings suggest that avoidant individuals are sensitive to cues regarding social acceptance, thus, Carvallo and Gabriel argue that cues regarding rejection may also affect those high in avoidance, although avoidant individuals may respond to the threat of rejection by deactivating the attachment system.

Therefore, in the current study, perhaps the highly avoidant women who experienced the rejection manipulation were reminded of the risks involved in depending on another person and began to feel worse about their relationship and themselves. In contrast, the women low on avoidance may have been more secure in their attachments and reacted defensively to the thought of being rejected by their partner which resulted in inflated perceptions of the self. The next step in my research project will be to replicate these unexpected findings and to uncover some of the factors contributing to the aforementioned relationships. In particular, I will determine whether or not perceptions of partner's regard and self-awareness partially mediate the relation between avoidance, rejection and self-evaluations.

Chapter 3

Study Two

In Study One, I found an unexpected interaction between attachment avoidance and rejection condition for several self-evaluation measures, with a focus on body satisfaction. In Study Two, my goal was to replicate and extend these findings. In particular, I investigated two potential mediators of the relation between attachment avoidance, rejection and body esteem: perception of partner's positive regard and public self-awareness. For Study Two, I hypothesized a main effect of attachment anxiety for state self-esteem, body esteem and global self-esteem. Because I found interactions between avoidance and rejection in Study One instead of between anxiety and rejection, I expected to find avoidance by rejection condition interactions for appearance state self-esteem, body esteem and global self-esteem. Furthermore, I expected that these significant interactions would be mediated both by perceptions of partner's regard for the self and public self-awareness.

Perception of Partner's Regard

Murray and her colleagues (Murray, Holmes, & Collins, 2006) have proposed a comprehensive model of risk regulation within romantic relationships. It is centered on the premise that people try to maintain a comfortable balance between seeking closeness with their significant other and risking the possibility of rejection from this same person. The model assumes that dependence on another person automatically increases the need to gauge the likelihood of acceptance or rejection from one's partner and this can be achieved through the perception of a partner's positive regard for the self. The appraisal of a partner's regard leads to changes in behavioural responses and, of particular

importance to this study, self-evaluations. The notion that acceptance and rejection are internalized is consistent with the sociometer theory of self-esteem (Leary & Baumeister, 2000). These researchers state that self-esteem is an indicator of a person's perceived likelihood of experiencing interpersonal approval or disapproval.

Following this line of thought, I expected that when individuals high and low on avoidance experienced the rejection manipulation, their perceptions of their partner's regard would mediate the effect of rejection on self-evaluations. Specifically, I hypothesized that individuals high on avoidance in the rejection condition would experience a more negative perception of their partner's regard than those in the non-rejection condition which, in turn, would be associated with a decrease in appearance state self-esteem.[10] As previously noted, researchers believe that avoidantly attached individuals distance themselves from others because, at some level, they fear being hurt and rejected. Although the rejection experienced in Study One and Study Two was only imagined, I believed that people high on avoidance would be negatively affected by it because it would remind them that they are in a position of dependence on another person and that the potential for rejection is very real. In accordance with Murray's risk regulation model, realizing this potential for rejection, highly avoidant individuals who are rejected may experience negativity toward their relationship and their partner's regard and, therefore, would feel worse about themselves in comparison to those high in avoidance who are not rejected. On the other hand, I hypothesized that individuals low on avoidance in the rejection condition would experience a more positive appraisal of their partner's regard in comparison to those who are not rejected which, subsequently, would

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[10] Although the simple slopes analyses at high avoidance for body esteem and self-esteem were not significant in Study One, I expected that perhaps with an increase in power in Study Two (double the participants because there would be no effect of task order) these slopes would become significant.

lead to an increase in appearance state self-esteem, body esteem and global self-esteem. Individuals low on avoidance presumably feel more comfortable experiencing dependence and emotional intimacy, and are potentially more secure in their attachments. Once again, because the rejection is imagined, perhaps in comparison to reality, it actually makes low avoidantly attached people feel better about their current relationship and how their partner regards them instead of more vulnerable. In this sense, it could also be described as a defensive response (e.g., "My partner's not like that!), which leads to inflated perceptions of partner's positive regard and, consequently, increased self-perceptions.

Although I expected perceptions of partner's regard to mediate the relation between attachment avoidance and rejection condition, I believe that several other factors are likely contributing to this interaction. In particular, I hypothesized that the association between avoidance and rejection would also be mediated by changes in public self-awareness.

Self-Awareness

Researchers generally agree that self-focus has two separate dimensions: private and public (e.g., Fenigstein, Scheier, & Buss, 1975; Govern & Marsch, 2001). Private self-focus is attentiveness to one's innermost feelings, thoughts and reflections, whereas public self-focus is attentiveness to the self as a social object that can be evaluated by others. When considered in terms of stable dispositions, these concepts are referred to as public and private self-consciousness; however, when referring to a brief state of self-focus, these concepts are labeled public and private self-awareness (Fenigstein et al., 1975). Research has demonstrated that, indeed, level of self-consciousness is a relatively stable personality trait whereas level of self-awareness is variable and susceptible to

manipulation (Carver & Glass, 1976).

For the current study, I hypothesized that when individuals high on avoidance experienced the rejection manipulation, their level of public self-awareness would mediate the effect of rejection on self-evaluations. I refer to self-awareness instead of self-consciousness because I believed the rejection manipulation would temporarily alter the participants' state of self-focus in comparison to those in the non-rejection condition. For highly avoidant individuals, I expected that the rejection manipulation would heighten their sense of vulnerability and make salient the fact that they have allowed someone to get close to them and, therefore, they may feel self-conscious about how they appear to that person. I expected that this increase in public self-awareness would then result in less appearance satisfaction in comparison to those who are not rejected. In fact, Striegel-Moore and her colleagues discovered a strong link between social-self concerns and body dissatisfaction when their studies supported a negative association between public self-consciousness and body esteem among a sample of non-clinical women as well as a heightened sense of public self-consciousness amongst bulimics (Striegel-Moore, Silberstein, & Rodin, 1993). In regard to individuals low on avoidance, I did not hypothesize any differences in public self-awareness between the rejection and non-rejection groups.

<div align="center">Method</div>

Participants

One hundred and twenty-five[11] female participants who were enrolled in undergraduate courses at Queen's University and agreed to be contacted for participation

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[11] Four participants were removed from data analysis because they did not complete the ECR questionnaire. One other participant was removed because she was an extreme outlier in terms of age and length of relationship.

in psychology studies were recruited to take part in this study. As in Study One, only participants who indicated that they were heterosexual and in a heterosexual, romantic relationship for at least two months were recruited (M = 17.3 months or 1 year/5 months). Again, participants completed the Experiences in Close Relationships (ECR) Questionnaire as part of prescreening measures (Brennan, Clark, & Shaver, 1998; see Appendix A) as well as indicated their height and weight (I thought it might be helpful to have information on body mass index to use as a covariate). Furthermore, participants also completed the Body Esteem Scale (Franzoi & Shields, 1984, see Appendix H) during prescreening to use as a potential baseline comparison. Of the 78% of participants who reported their ethnicity, 79.8% were White/Caucasian, 10.6% were East-Asian, 4.3% were South-Asian, 4.3% were Middle Eastern and 1.1% were Black/African. Participants ranged in age from 17- to 24-years-old (M = 18.52, SD = 1.53). Participants received either a half credit toward their psychology course or five dollars in order to compensate for their participation.

Procedure

Because my intention was to replicate the novel findings revealed in the first study, the procedure for Study Two was almost identical to that of Study One. However, the IAT was no longer employed and some of the questionnaires were changed.

Thus, once arriving at the lab and after reading and signing consent forms (see Appendices B and C), participants were randomly assigned to the rejection condition or the non-rejection condition. Both of these conditions consisted of the same vignette (see Appendix D) and scrambled word-string task (Sommer & Baumeister, 2002; see Appendix E) used in Study One. Upon completion of the rejection or non-rejection manipulation, participants filled out several questionnaires. New to Study Two,

participants began by filling out the two mediator measures, perceptions of partner's regard and self-awareness, which are described below (the order of these two questionnaires was counterbalanced). As in Study One, participants then completed the State Self-Esteem Scale (Heatherton & Polivy, 1991; see Appendix G), the Body Esteem Scale (Franzoi & Shields, 1984; see Appendix H), the Rosenberg Self-Esteem Scale (Rosenberg, 1965; see Appendix I) and the PANAS Scale (Watson et al., 1988; see Appendix J).

Upon finishing the questionnaires, participants were told that the study was complete and received a full debrief (see Appendix F).

Mediator Questionnaires

Perceptions of Partner's Regard. The Interpersonal Qualities Scale (Murray, Holmes, & Griffin, 1996; Murray, Holmes, & Griffin, 2000; see Appendix L; Cronbach α = .93) required participants to rate how well 21 positive attributes (i.e., understanding, responsive to my needs) and negative attributes (i.e., thoughtless, distant) describe the self (Cronbach α = .80), their romantic partner (Cronbach α = .79), how they think their partner sees them (i.e., perceived regard; Cronbach α = .80), and how they want their partner to see them (i.e., desired regard; Cronbach α = .80).[12] A 9-point scale was used ranging from 1 (*not at all characteristic*) to 9 (*completely characteristic*).

Self-Awareness. The Situational Self-Awareness Questionnaire (Govern & Marsch, 2001; see Appendix M) is a 9-item measure that can be categorized into public self-awareness (e.g., "Right now, I am self-conscious about the way I look"; Cronbach α = .84), private self-awareness (e.g., "Right now, I am conscious of my inner feelings";

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[12] The order in which the self and the partner were rated was counterbalanced as was the order in which perceived regard and desired regard were rated.

Cronbach α = .58), and self-awareness of immediate surroundings (e.g., "Right now, I am conscious of all objects around me"; Cronbach α = .81). Each item was responded to on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores indicating greater self-awareness.

Results

As stated in my hypotheses, I intended to replicate and extend the results from Study One. In particular, I expected to find an interaction between attachment avoidance and rejection condition for body esteem, appearance self-esteem and global self-esteem. Furthermore, I expected these significant interactions to be mediated by perceptions of partner's regard and public self-awareness. Finally, as has been demonstrated numerous times in the literature, I expected attachment anxiety to be positively associated with a negative self-image.

As with the first study, I ran multiple regression analyses on all of the dependent measures. For condition, non-rejection was coded as 0 and rejection was coded as 1. Next, the anxiety and avoidance scores were mean centered, and I computed two-way and three-way interaction terms using the centred scores and the condition variable.[13]

State Self-Esteem

As expected, a significant main effect of attachment anxiety was found, $\beta = -.45$, $t(112) = -3.56$, $p = .001$, such that higher levels of anxiety predicted lower state self-esteem. However, no other significant main effects or interactions were found.

Performance State Self-Esteem

There was a significant main effect of attachment anxiety, $\beta = -.36$, $t(112) = -2.68$,

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[13] I computed these same regression analyses on all of the dependent measures with BMI as a covariate and the results did not change. Thus, the original analyses are only presented and BMI is not discussed further.

$p = .01$, such that higher levels of anxiety predicted lower performance state self-esteem. No other significant effects were found.

Social State Self-Esteem

As hypothesized, there was a significant main effect of attachment anxiety, $\beta = -.53$, $t(112) = -4.34$, $p < .001$, such that higher levels of anxiety predicted lower social state self-esteem. There were no other significant main effects or interactions.

Appearance State Self-Esteem

In comparison to Study One in which a main effect of attachment anxiety was revealed, in the current study, I found a marginal main effect of attachment avoidance, $\beta = -.23$, $t(112) = -1.88$, $p = .06$, such that higher levels of avoidance predicted lower levels of appearance state self-esteem. Also contrary to my hypotheses and the results from Study One, there were no significant interactions.

Body Esteem

As predicted, there was a significant main effect of attachment anxiety, $\beta = -.31$, $t(112) = -2.39$, $p = .02$, such that higher attachment anxiety predicted lower body esteem. However, contrary to my expectations once again, there were no significant interactions.

Sexual Attractiveness, Body Esteem

Once again, in comparison to the main effect of attachment anxiety found in Study One, the current analyses revealed a main effect of attachment avoidance, $\beta = -.26$, $t(112) = -2.06$, $p = .04$, such that higher levels of avoidance were associated with lower levels of sexual attractiveness.

Physical Condition, Body Esteem

As expected, there was a main effect of attachment anxiety, $\beta = -.60$, $t(112) = -4.83$, $p < .001$, such that higher anxiety predicted lower body esteem for physical

condition. This main effect was also qualified by a significant interaction between anxiety and condition, $\beta = .37$, $t(112) = 2.88$, $p = .01$. Simple slopes analyses revealed that at low levels of anxiety, those in the rejection condition had lower body esteem for their physical condition than those in the non-rejection condition, $\beta = -.19$, $t(116) = -1.59$, $p = .12$. On the other hand, at high levels of anxiety, there was no difference between conditions. Alternatively, in the non-rejection condition, higher levels of anxiety predicted lower body esteem for physical condition, $\beta = -.51$, $t(58) = -4.56$, $p < .001$ and in the rejection condition, higher levels of anxiety also predicted lower body esteem for physical condition but to a much lesser extent, $\beta = -.21$, $t(58) = -1.62$, $p = .11$.

Figure 4. Interaction between attachment anxiety and rejection condition on body esteem for physical condition.
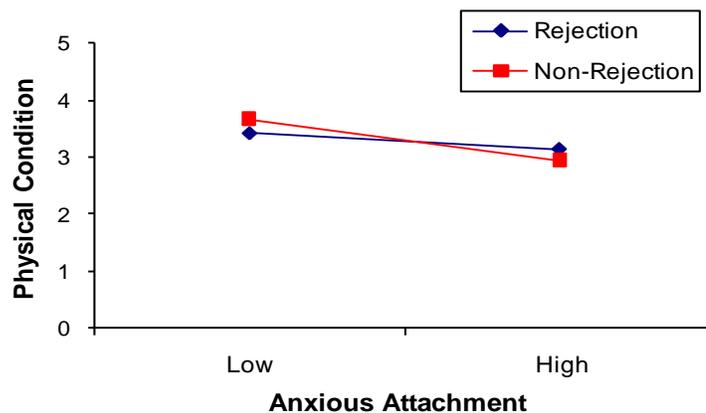
Weight Concern, Body Esteem

Unexpectedly, there were no significant main effects or interactions for this particular subscale.

Trait Self-Esteem

As predicted, there was a significant main effect of anxiety, $\beta = -.41$, $t(112) = -3.24$, $p = .002$, such that higher attachment anxiety predicted lower self-esteem. No

significant interactions were found.

Positive Mood

There was a main effect of anxiety, β = -.28, $t(110)$ = -2.13, p = .04, such that higher levels of attachment anxiety predicted less positive mood. This main effect was also qualified by a significant interaction between anxiety and avoidance, β = .32, $t(110)$ = 2.75, p = .01. To decompose this interaction, I used the median of avoidance to split the data and then ran a regression analysis with attachment anxiety as the only predictor. At low levels of avoidance, higher attachment anxiety was associated with less positive mood, β = -.34, $t(58)$ = -2.77, p = .01. However, at high levels of avoidance, attachment anxiety did not significantly predict positive mood.

Negative Mood

There was a significant main effect of attachment anxiety, β = .38, $t(109)$ = 3.03, p = .003, such that higher levels of anxiety were associated with more negative mood.

Because I did not replicate the interactions found in Study One between condition and avoidance for any of the dependent variables, there was no relationship to conduct a meditational analysis on. However, to understand the direct relationship between the independent variables and the mediation variables, I ran multiple regression analyses on public self-awareness and perceptions of partner's regard with anxiety, avoidance, condition and the two-way and three-way interactions between these variables as predictors.

Public Self-Awareness

There were no significant main effects or interactions involving public self-awareness.

Interpersonal Qualities Scale

Perceptions of self. There was a main effect of anxiety, β = -.55, t(112) = -4.65, p < .001, such that higher attachment anxiety predicted lower perceptions of the self. This main effect was qualified by a significant interaction between anxiety and condition, β = .24, t(112) = 1.94, p = .05. Simple slopes analyses revealed that at low levels of anxiety, there was no significant difference between conditions. However, at high levels of anxiety, those in the rejection condition reported more positive perceptions of the self than those in the non-rejection condition, β = .24, t(116) = 2.03, p = .04.

Figure 5. Interaction between attachment anxiety and rejection condition on perceptions of the self.
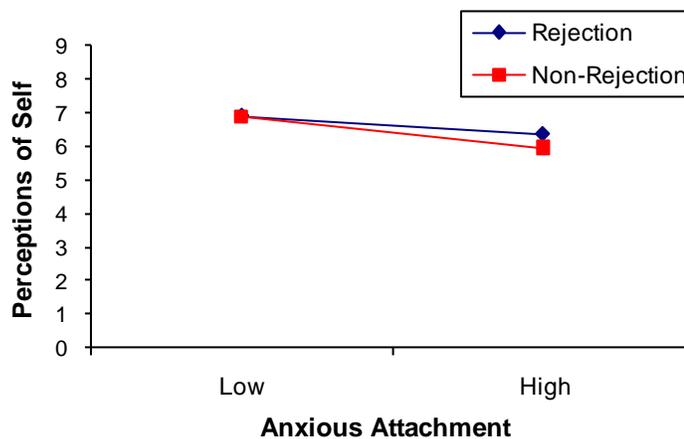
Perceptions of partner. There was a main effect of anxiety, β = -.34, t(112) = -2.72, p = .01, such that higher attachment anxiety predicted more negative perceptions of one's partner. This main effect was qualified by a significant three-way interaction between anxiety, avoidance and condition, β = .24, t(112) = 1.98, p = .05. To decompose this interaction, I split the data by rejection condition and then performed a simple slopes analysis. In the non-rejection condition at low levels of avoidance and at high levels of avoidance, higher attachment anxiety was associated with more negative perceptions of

one's partner, $\beta = -.36$, $t(56) = -1.92$, $p = .06$ and $\beta = -.37$, $t(56) = -2.53$, $p = .01$, respectively. In the rejection condition at low levels of avoidance, higher attachment anxiety was also associated with more negative perceptions of one's partner, $\beta = -.50$, $t(56) = -3.52$, $p = .001$. However, in the rejection condition at high levels of avoidance, attachment anxiety did not significantly predict perceptions of one's partner.

Figure 6. Interaction between attachment avoidance, attachment anxiety and rejection condition on perceptions of the partner.
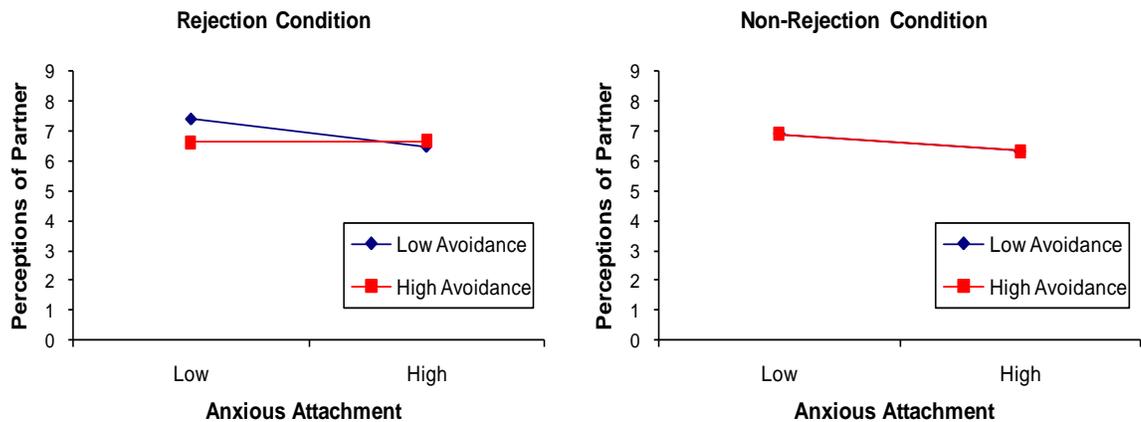
How one thinks partner perceives the self (perceived regard). There was a main effect of anxiety, $\beta = -.40$, $t(112) = -3.27$, $p = .001$, such that higher attachment anxiety was associated with thinking that one's partner sees the self less positively. There was also another three-way interaction between anxiety, avoidance and condition, $\beta = .23$, $t(112) = 1.96$, $p = .05$. To decompose this interaction, I split the data by rejection condition and then performed a simple slopes analysis. In the non-rejection condition at low levels of avoidance and at high levels of avoidance, higher attachment anxiety was associated with lower perceived regard, $\beta = -.40$, $t(56) = -2.19$, $p = .03$ and $\beta = -.44$, $t(56) = -3.14$, $p = .003$, respectively. In the rejection condition at low levels of avoidance, higher attachment anxiety was also associated with lower perceived regard, $\beta = -.45$, $t(56) = -3.10$, $p = .003$. However, in the rejection condition at high levels of avoidance,

attachment anxiety did not significantly predict perceived regard.

Figure 7. Interaction between attachment avoidance, attachment anxiety and rejection condition on perceived regard.
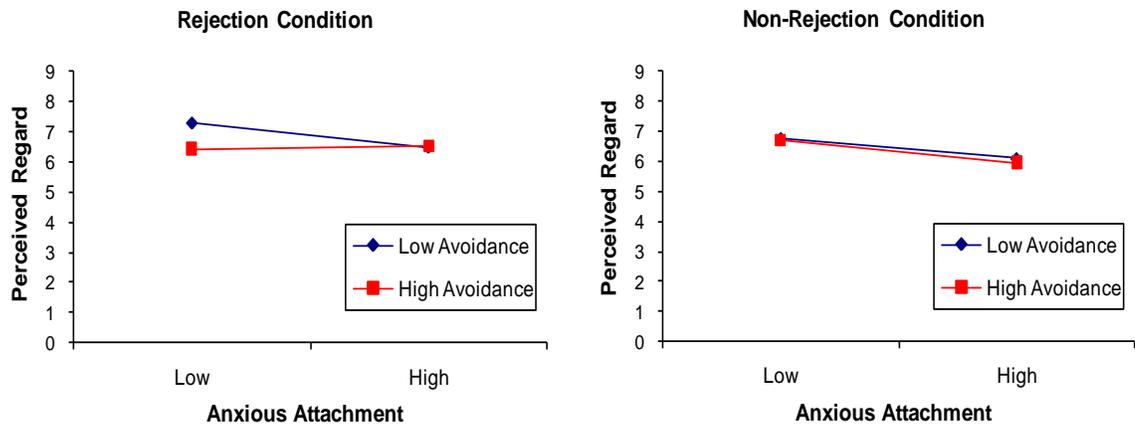
How one wants partner to perceive the self (desired regard). There was a main effect of anxiety, $\beta = -.32$, $t(111) = -2.42$, $p = .02$, such that higher levels of attachment anxiety were associated with one wanting their partner to see them less positively. This main effect was qualified by a significant interaction between anxiety and condition, $\beta = .27$, $t(111) = 2.00$, $p = .05$. Simple slopes analyses revealed that at low levels of anxiety, there was no significant difference between the conditions. On the other hand, at high levels of anxiety, those in the rejection condition wanted their partners to see them more positively than did those in the non-rejection condition, $\beta = .27$, $t(115) = 2.05$, $p = .04$.

Figure 8. Interaction between attachment anxiety and rejection condition on desired regard.
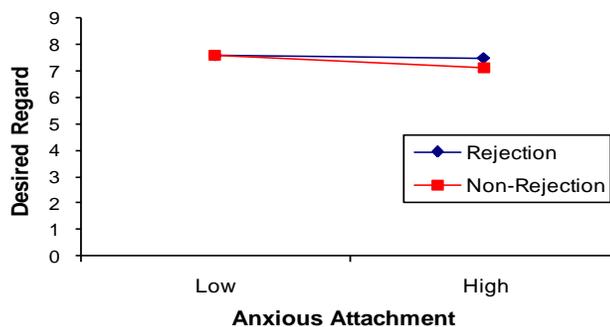
To summarize, there were significant interactions between attachment anxiety and rejection condition for perceptions of the self and desired regard. In both cases, there was no difference between conditions at low levels of anxiety; however, at high levels of anxiety, those in the rejection condition saw themselves more positively and wanted their partners to see them more positively than did those in the non-rejection condition. For perceptions of partner and perceived partner regard, there were significant three-way interactions with attachment anxiety, attachment avoidance, and rejection condition. Again, the pattern of these interactions was the same for the two variables such that, in the rejection condition at low levels of anxiety, higher levels of attachment avoidance predicted more negative perceptions of one's partner and more negative perceived regard. However, in the rejection condition at high levels of anxiety, attachment avoidance did not significantly predict perceptions of one's partner or perceived regard.

Although in Study One and Study Two I had originally expected participants' mean levels of body image ratings to fluctuate depending on their attachment orientation and whether or not they experienced rejection, the analyses did not support this hypothesis. However, I began to speculate that perhaps participants' satisfaction with their appearance was not so malleable, but the degree to which they associated how they thought their partner saw them and how they felt about their own appearance may have been influenced by their attachment anxiety and the rejection condition. To test this idea, I examined and compared the within-cell correlations between the dependent measures assessing self-perceptions and perceived partner regard for condition (rejection versus non-rejection) and attachment anxiety (high versus low)[14]. I also examined the within-cell correlations between the dependent measures and the other three categories used in

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[14] A median split (median = 3.33) was performed on attachment anxiety.

the Interpersonal Qualities Scale (perceptions of self, perceptions of partner and desired regard). In particular, I thought that the extent to which participants associated how they felt about themselves more generally and how they felt about their appearance, once again, may have been influenced by their attachment anxiety and the condition to which they were assigned.

Perceived Regard

As shown in Tables 1 and 2, highly anxious individuals in the rejection condition demonstrated significantly stronger, positive correlations between perceived partner regard and several of the dependent measures related to appearance (namely, appearance state self-esteem, weight concern and physical condition) than individuals high in anxiety in the non-rejection condition and individuals low in anxiety in either condition.

Additionally, I examined the correlations between the body esteem scale ratings collected during prescreening and perceived partner regard to use as a baseline comparison. This allowed me to determine whether the correlations between the body esteem subscales and perceived partner regard changed from prescreening to the laboratory session.[15] As can be seen in Table 2, the correlation between perceived regard and weight concern was significantly higher in the lab, $r(19) = .70$, as compared to prescreening, $r(18) = .29$, for highly anxious individuals in the rejection condition, $t(17) = 2.67$, $p = .02$. Also, for this same group of participants, the correlation between perceived regard and physical condition was significantly higher in the lab, $r(19) = .63$) in comparison to prescreening, $r(18) = .22$, $t(17) = 2.66$, $p = .02$.[16] These results give

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[15] The differences between these non-independent correlations were obtained using Williams' (1959) recommendations.
[16] All of the same within-cell correlation analyses were conducted with attachment avoidance instead of attachment anxiety; however, no clear pattern emerged.

credence to the idea that the correlation between perceived regard and weight concern and perceived regard and physical condition changed as a function of the rejection manipulation. No other lab versus prescreening comparisons were significant.

Table 1[17]

Correlations Between the State Self-Esteem Scale and Perceived Partner Regard

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Appearance	$.75_a$**	$.26_b$	$.11_b$	$.07_b$
Social	$.48_a$*	$.34_a$*	$.27_a$	$.34_a$
Performance	$.23_a$	$.23_a$	$.25_a$	$.29_a$

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row. The differences between these independent correlations were obtained using Fisher's (1921) r to z transformation. *$p < .05$, **$p < .001$.

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[17] It should be noted that the sample size in each of these groups varies quite a bit: rejection, high anxiety (n = 22); rejection, low anxiety (n = 38); non-rejection, high anxiety (n = 39); and non-rejection, low anxiety (n = 21).

Table 2

Correlations Between the Body Esteem Scale and Perceived Partner Regard

Prescreening

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	.29	.17	-.07	.14
Physical	.22	.40*	.09	.09
Sexual	.42	.25	.09	.28

Lab

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	$.70_a$***	$.07_b$	$.05_b$	$.15_b$
Physical	$.63_a$**	$.22_{marg. \, p = .07}$	$.14_b$	$.10_b$
Sexual	$.41_a$	$.11_a$	$.11_a$	$.21_a$

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row.
*$p < .05$, **$p < .01$, ***$p < .001$.

Perceptions of the Self

As shown in Table 3, highly anxious individuals in the rejection condition demonstrated significantly stronger, positive correlations between perceptions of the self and appearance state self-esteem than individuals high in anxiety in the non-rejection condition and individuals low in anxiety in either condition. In Table 4, a similar pattern emerged for the weight concern and physical condition subscales; however, not every comparison to the rejection condition and high anxiety group reached statistical significance.

As can be seen in Table 4, for the rejection and high anxiety group, the correlation between perceptions of the self and physical condition was significantly higher in the lab,

$r(19) = .67$, compared to prescreening, $r(18) = .34$, $t(17) = 2.15$, $p = .05$. For the non-rejection and high anxiety group, the correlation between perceptions of the self and sexual attractiveness was significantly higher in the lab, $r(37) = .47$, compared to prescreening, $r(34) = .21$, $t(33) = 2.22$, $p = .03$. All other lab versus prescreening correlations were not significantly different from one another.

Table 3

Correlations Between the State Self-Esteem Scale and Perceptions of the Self

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Appearance	$.70_a$***	$-.03_b$	$.36_{\text{marg. } p = .08}$*	$.22_b$
Social	$.55_a$**	$.30_a$	$.58_a$***	$.45_a$*
Performance	$.27_a$	$.25_a$	$.38_a$*	$.46_a$*

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row.
*$p < .05$, **$p < .01$, ***$p < .001$.

Table 4

Correlations Between the Body Esteem Scale and Perceptions of the Self

Prescreening

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	.34	-.15	.01	.23
Physical	.34	.29	.25	-.03
Sexual	.32	.24	.21	.28

Lab

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	$.61_a$**	$-.17_b$	$.19_{marg.\ p = .07}$	$.25_a$
Physical	$.67_a$**	$.11_b$	$.42_a$**	$.09_b$
Sexual	$.48_a$*	$.19_a$	$.47_a$**	$.23_a$

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row.
*$p < .05$, **$p < .01$, ***$p < .001$.

Perceptions of Partner

As shown in Table 5, once again, highly anxious individuals in the rejection condition demonstrated significantly stronger, positive correlations between perceptions of one's partner and appearance state self-esteem than individuals high in anxiety in the non-rejection condition and individuals low in anxiety in either condition. In Table 6, a similar pattern was revealed for the weight concern and physical condition subscales; however, not every comparison to the rejection condition and high anxiety group reached statistical significance.

In reference to Table 6, for the rejection condition and high anxiety group, the correlation between perceptions of one's partner and weight concern was significantly

higher in the lab, $r(19) = .50$, compared to prescreening, $r(18) = .01$, $t(17) = 2.81$, $p = .01$.

For this same group, the correlation between perceptions of one's partner and physical

condition was also stronger in the lab, $r(19) = .63$, than in prescreening, $r(18) = .13$, $t(17)$

$= 3.48$, $p = .003$. All other lab versus prescreening correlations were not significantly

different from one another.

Table 5

Correlations Between the State Self-Esteem Scale and Perceptions of Partner

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Appearance	$.61_a$**	$.13_b$	$-.10_b$	$.02_b$
Social	$.51_a$*	$.25_a$	$.10_a$	$.12_a$
Performance	$.20_a$	$.23_a$	$.14_a$	$.06_a$

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row.
*$p < .05$, **$p < .01$.

Table 6

Correlations Between the Body Esteem Scale and Perceptions of Partner

Prescreening

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	.01	-.01	-.10	.03
Physical	.13	.20	.09	.03
Sexual	.02	.10	.10	.29

Lab

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	$.50_a$*	$.03_{\text{marg. } p = .07}$	$-.03_b$	$.03_a$
Physical	$.63_a$**	$.38_a$*	$.08_b$	$-.09_b$
Sexual	$.14_a$	$.18_a$	$.06_a$	$.01_a$

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row.
*$p < .05$, **$p < .01$.

Desired Regard

As can be seen in Tables 7 and 8, for the appearance state self-esteem, weight concern and physical condition subscales the three groups did not consistently and significantly differ from the rejection condition and high anxiety comparison group. However, in contrast with the other tables I have discussed, the correlation between the sexual attractiveness subscale and desired regard was significantly higher in the rejection condition and high anxiety group than it was for the other three groups.

As shown in Table 8, for the rejection condition and high anxiety group, the correlation between desired regard and sexual attractiveness was stronger in the lab, $r(19) = .58$, than in prescreening, $r(18) = .13$, $t(17) = 3.63$, $p = .002$. All other lab versus

prescreening correlations were not significantly different from one another.

Table 7

Correlations Between the State Self-Esteem Scale and Desired Partner Regard

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Appearance	$.39_a$	$-.30_b$	$-.02_a$	$.05_a$
Social	$.01_a$	$.01_a$	$.07_a$	$.24_a$
Performance	$-.25_a$	$-.03_a$	$.19_a$	$.29_a$

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row.
*$p < .05$.

Table 8

Correlations Between the Body Esteem Scale and Desired Partner Regard

Prescreening

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	.01	-.39*	-.13	-.15
Physical	.13	.09	.01	-.14
Sexual	.13	-.05	.11	.05

Lab

	Rejection, High Anxiety	Rejection, Low Anxiety	Non-Rejection, High Anxiety	Non-Rejection, Low Anxiety
Weight	$.38_a$	$-.26_b$	$.02_a$	$-.08_a$
Physical	$.48_a$*	$.14_a$	$.07_a$	$-.18_b$
Sexual	$.58_a$**	$.01_b$	$.13_{marg.\ p = .06}$	$.02_b$

Note. Subscripts refer to differences between the correlations presented for rejection, high anxiety and the other three values in the same row.
*$p < .05$, **$p < .01$.

Discussion

The goal of Study Two was to replicate the interaction effects found in Study One between attachment avoidance and rejection condition on several of the self-evaluation measures, and to extend these findings by assessing mediators that could partially explain these relationships. Contrary to expectations, analyses from Study Two did not reveal significant interactions between avoidance and rejection condition for any of the dependent variables. In fact, the only interaction detected was between attachment anxiety and rejection condition for the physical condition body esteem subscale. At low levels of anxiety, participants in the rejection condition reported lower body esteem for their physical condition than those in the non-rejection condition; however, at high levels of anxiety, there was no difference between conditions. An interaction between anxiety and rejection condition was what I had originally expected to find for Study One, but I hypothesized that the rejection condition would most strongly affect the highly anxious participants. Because this interaction was not present in Study One and because it only appears for one of the subscales in Study Two, I do not think it is meaningful enough to interpret any further.

Given that I did not replicate the interactions between avoidance and rejection condition, there were no mediational analyses to perform. Nonetheless, I tested the direct effect of the independent variables and their interactions on the intended mediator variables. For perceptions of the self, there was a significant interaction between anxiety and condition such that highly anxious individuals in the rejection condition reported more *positive* perceptions of the self than those in the non-rejection condition, but at low levels of anxiety, there was no difference between conditions. The same pattern of results existed for desired partner regard. Based on my hypotheses from Study One, I would have

expected highly anxious individuals to feel worse instead of better about themselves in the face of rejection. I can only speculate that perhaps it was a defensive reaction elicited from this particular rejection manipulation. In addition to these findings, two three-way interactions between avoidance, anxiety and condition were revealed for perceived partner regard and perceptions of one's partner. In the rejection condition at low levels of anxiety, higher levels of avoidance were associated with more negative evaluations of perceived partner regard; however, avoidance did not significantly predict perceived partner regard at low levels of anxiety or in the non-rejection condition. The same pattern of results existed for perceptions of one's partner. Even in the absence of a mediational model, these three-way interactions are somewhat consistent with what I had expected. Indeed, it appears that the rejection manipulation was threatening to highly avoidant individuals and they reacted by seeing their partner more negatively as well as thinking that their partner saw them in a more negative light. However, I did not expect this relationship to also depend on attachment anxiety.

In light of the interaction effects described above, a plausible reason for failing to replicate the results from Study One could be that the influence of the rejection manipulation had waned by the time participants filled out the dependent measures. The mediator questionnaires were completed directly after the manipulation and it is clear that this influenced their responses as the rejection condition interacted with anxiety and/or avoidance for each of the domains in the Interpersonal Qualities Scale; however, there is no evidence for an effect of the rejection manipulation on the dependent measures that were administered after the mediating variables.

Although Study Two did not turn out as expected, the within-cell correlations that I examined revealed a very interesting pattern that will provide the basis for a number of

subsequent studies I have planned. These results strongly suggest that people's general feelings toward their appearance are not so easily altered but, for highly anxious individuals, the degree to which they associate how they feel about their bodies and how they think their partner perceives them is significantly strengthened with the threat of rejection. This strengthened association did not appear for low anxious individuals or for those in the non-rejection condition (a similar pattern of results emerged for the correlations with perceptions of the self and perceptions of one's partner but it was not as consistent and clear as perceived regard). Furthermore, the correlations between perceived partner regard and social or performance state self-esteem were not similarly influenced. Finally, although these analyses were correlational, the significant change in correlations for two of the body esteem subscales from prescreening to lab increases the likelihood that the strong association between perceived partner regard and body esteem was not pre-existing but was, in fact, a result of random assignment to the rejection condition. This reasoning provides evidence consistent with a causal relationship between the interactive influence of the rejection condition and high anxiety on the association between perceived partner regard and body image satisfaction.

Chapter 4

General Discussion and Conclusions

The sociocultural norms in Western society encourage women to try and achieve a level of physical attractiveness that is quite difficult to attain. Because of its societal importance, body image is central to a woman's overall self-concept and partly governs the way women interact with other people, not only in romantic relationships, but across all social situations. Indeed, a negative body image can lead to decreased sexual satisfaction, poorer social self-esteem, increased social anxiety and, of course, eating disorders (Wiederman, 2004; Cash & Fleming, 2004). Consequently, it is crucial to assess the factors that influence a woman's body image to determine who is most likely to experience body dissatisfaction and, eventually, to develop techniques which can be used to alleviate this negative self perception.

The current research project adds valuable information to the body of research investigating factors that influence appearance dissatisfaction in relation to attachment behaviour. The general conclusion from this literature is that higher levels of attachment anxiety are associated with lower levels of body satisfaction (e.g., Suldo & Sandberg, 2000), however, there are mixed results as to whether this main effect of attachment anxiety is applicable to general attachment as well as romantic attachment to a specific partner. My goal was to examine further the relation between attachment and body image in the domain of romantic relationships as well as to introduce a new variable, rejection, to determine its influence on this particular self-concept.

In Study One, I manipulated romantic partner rejection and measured the influence this had on self-evaluations and implicit cultural norms toward body size. As

expected, I replicated the finding that greater attachment anxiety is associated with more negative self-evaluations. Contrary to my expectations, there was no main effect of attachment anxiety for implicit cultural norms toward body size and nor were there any significant interactions between anxiety and rejection condition. Moreover, among women in the rejection condition, higher levels of avoidance were associated with *lower* levels of appearance state self-esteem, overall body esteem and trait self-esteem, whereas lower levels of avoidance were associated with *higher* levels of each of these dependent measures. These interactions were contrary to my expectations as I had hypothesized that the moderating effects of rejection would be most apparent for those high in attachment anxiety.

In Study Two, my goal was to replicate and further explain the unanticipated interactions between avoidance and rejection that were revealed in Study One. Once again, I manipulated romantic partner rejection, but I also included additional questionnaires to assess potential mediators that could help to explain why avoidance and rejection were having an effect on people's self-evaluations. I thought that highly avoidant individuals in the rejection condition might have been experiencing an increase in public self-awareness and/or a decrease in perceived partner regard which then resulted in lower appearance self-esteem. On the other hand, I speculated that women low on avoidance in the rejection condition reacted defensively to the thought of being rejected by their partner and, thus, inflated their perceived partner regard which then resulted in higher levels of appearance self-esteem and overall self-esteem. Apart from revealing several main effects of attachment anxiety for the dependent measures, the results from Study Two did not replicate those from Study One.

With my goal of replication in mind, the design of Study Two was almost

identical to that of Study One such that the same selection criteria were used, the same measures of attachment and body image were given, and the same rejection manipulation was employed. The only difference between these two studies was the addition of the mediator questionnaires in Study Two. Therefore, the reason for this failure to replicate may be due to task order. Because of the nature of a mediating relationship, I intentionally ordered the questionnaires so that the mediator variables would be completed before the dependent variables; however, the effect of the rejection manipulation might have dissipated by the time the dependent measures were collected. In support of this idea, testing the direct effect of the independent variables on the mediator variables revealed that all of the domains of the Interpersonal Qualities Scale were qualified by participants' scores on the ECR questionnaire and the rejection condition. At this point, it is difficult to make strong conclusions as to whether the moderating effects of rejection are driven by attachment avoidance. It would be useful to conduct another follow-up study in which the dependent measures are obtained directly after the rejection manipulation. If the results from Study One are replicated, perhaps mediators could be assessed using experimental manipulation instead of self-report measures.

Regardless of my original hypotheses not being supported in either of the current studies, Study Two revealed some interesting findings. I had initially expected participants' mean body image satisfaction to fluctuate depending on their attachment style and the condition they were exposed to; however, in hindsight, I thought that this self-construct might not be so easily altered. This thought is what led me to analyze the within-cell correlations between the dependent measures and, most importantly, perceived partner regard (but I also considered perceptions of self, perceptions of one's

partner and desired regard) for attachment anxiety and rejection condition. The differences in correlations across the four groups and the differences in correlations from prescreening to the in-lab session strongly support the notion that, among women who were rejected, higher levels of attachment anxiety predicted the robust tendency to associate how they felt about their appearance with how positively regarded they felt by their romantic partner. In other words, the worse these women felt about their appearance, the more negatively they thought their partner viewed them across a variety of personality characteristics. These results have practical implications for people involved in relationships. For example, a highly anxious woman who is hypersensitive to cues of rejection is, at times, likely to feel that her partner does not regard her very highly, and this may be coupled with negative feelings about her own appearance. In addition to demonstrating clingy, needy behaviours with her partner, she may also make unhealthy dieting choices to deal with her body image dissatisfaction.

In retrospect, considering the young, generally healthy population I sampled for these studies, I think the results from Study Two are not that surprising. For a woman who is objectively thin and recognizes this about herself, upon being rejected, she may not suddenly feel heavy; however, the extent to which she associates her physical appearance with other factors, such as how she thinks her partner sees her, may change. This finding has not caused me to completely abandon my original hypotheses in which I expected highly anxious women's mean ratings of their body image satisfaction to decrease as a result of rejection, but it has led me to believe that perhaps this hypothesis was incomplete without considering weight as a moderating factor. For women who are somewhat heavier but do not demonstrate a floor effect for body image ratings, upon being rejected, they may be more susceptible than their thinner peers to experience actual

changes in how positively they feel about their appearance. Although there was a range of BMI ratings in Study Two, the majority of participants were quite thin ($M = 21.52$) and this made it difficult to assess weight as a factor. However, it should also be noted that I used self-report to gather information on participants' height and weight and, therefore, the measure of BMI may not be entirely accurate.

In addition to this limitation, in Study One and Study Two, the sample of participants mainly consisted of White/Caucasian, heterosexual females, so one should be careful in generalizing these results to people of other ethnicities and sexual orientations. Another potential issue with generalizing the results from these two samples is that they were all young adults who were in relatively new relationships. Although some might view this as a limitation, it was my intention to use this type of sample as I would expect the relation between attachment style, rejection and body image to be strongest at the early stages of one's romance. Also in regard to relationship status, I did not collect any information on whether participants were involved in long-distance relationships or not. Because long-distance relationships are quite likely to occur at university, this might be an interesting variable to examine in the future.

I have primarily discussed how the current research project has enhanced our knowledge of body image concerns for young women, but it is also important to acknowledge the value of this research for the literature on attachment theory. Study One and Study Two both point to the fact that one's romantic attachment orientation, whether avoidant or anxious, is an important variable to consider when examining body image concerns. This is particularly true when investigating the influence interpersonal conflict, such as rejection, has on this self-construct. In addition, I believe the findings from Study Two have potentially revealed a key factor, perceived partner regard, to consider in

research investigating the influence of attachment style on health behaviour, such as stress during interpersonal conflict (e.g., Powers, Pietromonaco, Gunlicks, & Sayer, 2006).

In the near future, I plan to expand on the findings from Study Two. My first objective would be to replicate the findings using another research paradigm. For instance, I could expose women to a rejection manipulation and then have them rank order how important several qualities, including physical attractiveness, are to their partner. Presumably, highly anxious women in the rejection condition would be more likely to report that appearance is important than highly anxious women who are not rejected and women low in anxiety. Another idea would be to behaviourally demonstrate the association between appearance and partner regard. To fulfill this objective, I could recruit women to come to the lab with their partners, make the potential for rejection salient, and then examine how many primping behaviours the females demonstrate in front of a mirror before they are reunited with their partner at the end of the study. Lastly, I could determine the causal direction of the relation between body image and perceived regard (i.e., does lower body esteem lead to more negative perceived regard and/or does negative perceived regard lead to lower body esteem). For instance, I could manipulate how women in relationships feel about their appearance by showing them thin media images (Groesz, Levine, & Murnen, 2002), and then determine if a more negative body image predicts less positive perceived partner regard for highly anxious women.

Overall, the results from my thesis provide some promising work for future research. Nevertheless, from the current findings, there is still support for the idea that the threat of rejection can have an impact on women's appearance satisfaction. Programs aimed at fostering a positive body image among young women and therapists working

with clients to achieve this same goal could use this information and provide women with the tools to buffer themselves against the potential negative effects associated with interpersonal rejection. For example, in the context of cognitive behavioural therapy, practitioners could help highly anxious clients disentangle their feelings about their appearance from their perceptions of their partner's love and acceptance (or lack thereof). This could be achieved by encouraging women to acknowledge and focus on their positive traits while diminishing the importance of their appearance, and training these women to believe that their partner's love and approval is not contingent on their physical attractiveness. This type of intervention would be helpful to highly anxious women because they are most prone to react to rejection by associating their body image with their partner's regard.

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Appendix A

The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale.

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

___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 get uncomfortable when a 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 often want to merge completely with romantic partners, and this sometimes scares them away.
___13. I am nervous when partners get too close to me.
___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.
___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 B

Letter of Information
"Simba"

This study is being conducted by Erica Refling, graduate student. She is working with Tara MacDonald, Associate Professor, of the Department of Psychology at Queen's University in Kingston, Ontario.

The purpose of this research is to explore the self-image of university students in relationships. As part of the study, you will be asked to answer a series of questionnaires concerning how you feel about yourself, your abilities and your romantic partner. We estimate that it will take approximately 30 minutes to complete this study.

There are no known physical, psychological, economic, or social risks associated with this study and it has been granted clearance by the General Research Ethics Board for compliance with the TCPS: Ethical Conduct of Research Involving Humans, and Queen's policies. Your participation in this study is completely voluntary. Although it would be greatly appreciated if you would answer all material as frankly as possible, you may decline to answer any questions or withdraw at any time if you feel uncomfortable. You may also withdraw at any time with no effect on your standing in school.

All of your responses will be kept confidential. We will store the data in a locked room until the raw data is no longer needed. Only experimenters in the Social Psychology Lab will have access to this area. To help us ensure confidentiality, please do not put your name on any of the answer sheets. The data may also be presented in professional psychological journals or at scientific conferences, but any such presentations will be of general findings and will never breach individual confidentiality. Should you be interested, you are entitled to a copy of the findings.

To compensate for your participation in this study, you will earn 0.5 credits toward your final Psychology 100 grade. However, if you are not enrolled in the Psychology 100 course or if you have already earned your maximum credits, we will compensate you with $5.00 cash.

Any questions about study participation may be directed to Erica Refling at 7er6@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at 613-533-6081 or Chair.GREB@queensu.ca.

Again, thank you. Your interest in participating in this research study is greatly appreciated. Please keep a copy of this information form for your records.

Dr. T. MacDonald   Erica Refling
Associate Professor   Graduate Student – Master's in Social Psychology

Appendix C

Consent Form
"Simba"

Name (please print clearly): _____

1. I have read the Letter of Information and have had any questions answered to my satisfaction.

2. I understand that I will be participating in a study called "Simba". I also understand that as part of the study, I will be asked to answer a series of questionnaires concerning how I feel about myself, my abilities and my romantic partner. Knowing this, I agree to participate in this study.

3. I understand that my participation in this study is voluntary and I may withdraw at any time.

4. I understand that every effort will be made to maintain the confidentiality of the data now and in the future. The data will be kept in a locked room that is accessible only by the researchers involved in the study. When assessing and compiling the data, all participants names will be converted to numbers and no individual data will be reported. The data collected for this study will not be used for any purpose outside of scientific research.

5. I am aware that if I have any questions about my study participation I can direct them to Erica Refling at 7er6@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at 613-533-6081 or Chair.GREB@queensu.ca.

I have read the above statements and freely consent to participation in this research:

Signature: _____ Date: _____

Appendix D

Rejection Vignette:

Imagine that you are noticing some changes in NAME'S behaviour. Lately, he has been so busy doing other things and barely making any time for you. You often find yourself waiting for the phone call NAME promised to make, but the phone never rings. You usually receive a quick text message or an e-mail with an apology explaining that he forgot to call - yet again. Even more, during the limited time you do get to spend together, he seems to get annoyed with you very easily and you can't understand why. Recently, you had plans to go out for dinner but NAME cancelled at the last minute because he didn't "feel like going anymore". You keep telling yourself that he is probably just stressed out, has a lot on his mind and is really tired… but you have started to run out of excuses for NAME'S change in behaviour and are becoming worried.

Non-rejection Vignette:

Imagine your daily relationship with NAME. You have been able to hang out and make time for one another as much as usual. You have had some minor disagreements with NAME, but generally enjoy each other's company and are getting along without any major issues arising. You talk on the phone the same amount as you always have. Also, you have been making time to text and e-mail one another the same amount as you normally do. Overall, you seem to be getting along like normal and aren't noticing any significant changes in your NAME'S behaviour.

Appendix E

Sentence Unscramble (rejection condition)

<u>Task</u>: Form meaningful 3-word phrases from the clusters below by crossing out the "filler" word. Try to complete this task as quickly as possible.

Example: cake could ate she
Solution: cake ~~could~~ ate she

asleep she work fell

group the leave a

dishes before washed the

it crawl they found

from isolated on others

friend avoid the if

her ignore has they

test build the took

book high the color

away on she walked

she turn them showed

the under party leave

door hide the close

felt she top rejected

office call under the

them went hates he

strangers are over they

the slide truck tow

his walked book dog

she have him distrusts

alone her the left

Sentence Unscramble (non-rejection condition)

<u>Task</u>: Form meaningful 3-word phrases from the clusters below by crossing out the "filler" word. Try to complete this task as quickly as possible.

Example: cake could ate she
Solution: cake ~~could~~ ate she

asleep she the fell

above crash hurt in

book high the color

away plant ran dog

office call under the

tongue great her burnt

door hide the close

watch cannot lost the

movie peanut sad the

him surprise cry made

disgust table with respond

she turn them showed

nauseates food package her

test build the took

his walked book dog

student poor dorm was

the slide truck tow

it crawl they found

made delight upset her

dishes before washed the

Appendix F

Debriefing Form

Initially, we told you that the purpose of this study was to explore the self-image of university students. We only gave you a vague description of the study beforehand because we did not want to influence your responses in any way. In reality, we are interested in determining how adult romantic attachment styles and potential partner rejection interact to influence self-image, with a particular emphasis on appearance.

Derived from psychological theories and past research, adult attachment styles are based on an individual's positive or negative models of self and models of others. The model of self refers to one's feelings of worthiness of love. The model of others refers to an individual's ability to trust others. Past research has also demonstrated that body-image is an important component of one's overall self-image and that it can even influence how we interact with our partners and friends. The current study will build on this body of research by assessing how attachment styles and potential partner rejection might interact to influence an individual's self-image and appearance satisfaction.

This study was experimental in nature. Participants were randomly assigned to one of two conditions. In each condition, participants read a short paragraph that asked them to imagine their relationship with their partner. Some participants imagined their partner slowly distancing himself from the relationship, whereas the other participants did not read about this type of rejection. In each condition, participants were also given a group of four word strings in which they had to eliminate one word to make a meaningful phrase. Some participants received phrases that were related to rejection while others did not. State self-esteem and body image concerns were the main dependent variables being measured. The two variables were assessed using the questionnaires participants filled out. We believe that partner rejection will affect individuals' self-image and body satisfaction depending on their adult romantic attachment style.

If you would be interested in obtaining a copy of the results of this study, you may contact the primary researcher, Erica Refling, at 7er6@queensu.ca. If you have a more general interest in this area of research, you may wish to consult the following:

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measures of adult romantic attachment: An integrative overview. In J. A. Simpson & W. S. Rhodes (eds.), *Attachment theory and close relationships* (pp. 44-76). New York: Guilford.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, 74, 1464-1480.

McKinley, N. M., & Randa, L. A. (2005). Adult attachment and body satisfaction: An exploration of general and specific relationship differences. *Body Image*, 2, 209-218.

As stated earlier, your responses to the questionnaire items will be confidential. This study was granted clearance by the General Research Ethics Board for compliance with the TCPS: Ethical Conduct of Research Involving Humans, and Queen's policies. If you feel upset as a result of your participation, you may wish to contact Queen's

Counselling Services, at 613-533-2893. Any questions about study participation may be directed to Erica Refling at 7er6@queensu.ca or Dr. MacDonald at tmacdon@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at 613-533-6081 or Chair.GREB@queensu.ca.

<u>Please do not tell other potential subjects about the purpose of this study.</u> Thank you for your participation!

Appendix G

This is a questionnaire designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at the moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you RIGHT NOW.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

___ 1. I feel confident about my abilities.

___ 2. I am worried about whether I am regarded as a success or failure.

___ 3. I feel satisfied with the way my body looks right now.

___ 4. I feel frustrated or rattled about my performance.

___ 5. I feel that I am having trouble understanding things that I read.

___ 6. I feel that others respect and admire me.

___ 7. I am dissatisfied with my weight.

___ 8. I feel self-conscious.

___ 9. I feel as smart as others.

___ 10. I feel displeased with myself.

___ 11. I feel good about myself.

___ 12. I am pleased with my appearance right now.

___ 13. I am worried about what other people think of me.

___ 14. I feel confident that I understand things.

___ 15. I feel inferior to others at this moment.

___ 16. I feel unattractive.

___ 17. I feel concerned about the impression I am making.

___ 18. I feel that I have less scholastic ability right now than others.

___ 19. I feel like I'm not doing well.

___ 20. I am worried about looking foolish.

Appendix H

On this page are listed a number of body parts and functions. Please read each item and indicate how you feel about this part or function of <u>your own body </u>using the following scale:

1 = Have strong negative feelings
2 = Have moderate negative feelings
3 = Have no feeling one way or the other
4 = Have moderate positive feelings
5 = Have strong positive feelings

----

1. body scent   _____
2. appetite   _____
3. nose   _____
4. physical stamina   _____
5. reflexes   _____
6. lips   _____
7. muscular strength   _____
8. waist   _____
9. energy level   _____
10. thighs   _____
11. ears   _____
12. biceps   _____
13. chin   _____
14. body build   _____
15. physical coordination   _____
16. buttocks   _____
17. agility   _____
18. chest or breasts   _____
19. appearance of eyes   _____
20. cheeks/cheekbones   _____
21. hips   _____
22. legs   _____
23. figure or physique   _____
24. sex drive   _____
25. sex organs   _____
26. appearance of stomach   _____
27. health   _____
28. sex activities   _____
29. body hair   _____
30. physical condition   _____
31. face   _____
32. weight   _____

Appendix I

Below is a list of statements dealing with your general feelings about yourself. Indicate your level of agreement with each statement by circling the appropriate number. There is no right or wrong response.

1. One the whole, I am satisfied with myself.

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

2. At times, I think I am no good at all.

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

3. I feel that I have a number of good qualities.

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

4. I am able to do things as well as most other people.

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

5. I feel I do not have much to be proud of.

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

6. I certainly feel useless at times.

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

7. I feel that I'm a person of worth, at least on an equal plane with others.

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

8. I wish I could have more respect for myself.

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

9. All in all, I am inclined to feel that I am a failure.

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

10. I take a positive attitude toward myself.

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

Appendix J

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate answer next to that word. Indicate to what extent you have felt this way during the past week.

Use the following scale to record your answers.
 (1) = Very slightly   (2) = A little   (3) = Moderately   (4) = Quite a bit   (5) = Extremely
         or not at all

	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
1. Interested	1	2	3	4	5
2. Distressed	1	2	3	4	5
3. Excited	1	2	3	4	5
4. Upset	1	2	3	4	5
5. Strong	1	2	3	4	5
6. Guilty	1	2	3	4	5
7. Scared	1	2	3	4	5
8. Hostile	1	2	3	4	5
9. Enthusiastic	1	2	3	4	5
10. Rejected	1	2	3	4	5
11. Proud	1	2	3	4	5
12. Irritable	1	2	3	4	5
13. Alert	1	2	3	4	5
14. Ashamed	1	2	3	4	5
15. Inspired	1	2	3	4	5
16. Nervous	1	2	3	4	5
17. Determined	1	2	3	4	5
18. Attentive	1	2	3	4	5
19. Jittery	1	2	3	4	5
20. Active	1	2	3	4	5
21. Afraid	1	2	3	4	5

Appendix K

"Personal Opinions Questionnaire"

Indicate your beliefs about these items using the 1 to 5 point scale:

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Disagree Nor Agree	Mostly Agree	Strongly Agree

__ 1. What I look like is an important part of who I am.

__ 2. What's wrong with my appearance is one of the first things that people will notice about me.

__ 3. One's outward physical appearance is a sign of the character of the inner person.

__ 4. If I could look just as I wish, my life would be much happier.

__ 5. If people knew how I *really* look, they would like me less.

__ 6. By controlling my appearance, I can control many of the social and emotional events in my life.

__ 7. My appearance is responsible for much of what has happened to me in my life.

__ 8. I should do whatever I can to always look my best.

__ 9. Aging will make me less attractive.

__ 10. To be feminine, a woman must be as pretty as possible.

__ 11. The media's messages in our society make it impossible for me to be satisfied with my appearance.

__ 12. The only way I could ever like my looks would be to change what I look like.

__ 13. Attractive people have it all.

__ 14. Homely people have a hard time finding happiness.

Appendix L

Please rate how much each trait describes 1) yourself, 2) your romantic partner, 3) how you *think* your partner sees you, and 4) how you *want* your partner to see you.
Use the following 9-point scale: **1 = not at all characteristic** to **9 = completely characteristic.**

	Self	Partner	Think partner sees you	Want partner to see you
1. kind and affectionate	___	___	___	___
2. open and disclosing	___	___	___	___
3. patient	___	___	___	___
4. understanding	___	___	___	___
5. responsive to my needs	___	___	___	___
6. tolerant and accepting	___	___	___	___
7. critical and judgmental	___	___	___	___
8. lazy	___	___	___	___
9. controlling and dominant	___	___	___	___
10. emotional	___	___	___	___
11. moody	___	___	___	___
12. thoughtless	___	___	___	___
13. irrational	___	___	___	___
14. distant	___	___	___	___
15. complaining	___	___	___	___
16. childish	___	___	___	___
17. self-assured	___	___	___	___
18. sociable	___	___	___	___
19. intelligent	___	___	___	___
20. witty	___	___	___	___
21. traditional	___	___	___	___

Appendix M

Please respond to each statement based on how you feel RIGHT NOW, AT THIS INSTANT - not how you feel in general, or at this point in your life. Circle the number that corresponds to your answer. There are no 'right' or 'wrong' answers - just be honest.

1. Right now, I am keenly aware of everything in my environment.

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

2. Right now, I am conscious of my inner feelings.

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

3. Right now, I am concerned about the way I present myself.

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

4. Right now, I am self-conscious about the way I look.

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

5. Right now, I am conscious of what is going on around me.

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

6. Right now, I am reflective about my life.

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

7. Right now, I am concerned about what other people think of me.

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

8. Right now, I am aware of my innermost thoughts.

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

9. Right now, I am conscious of all objects around me.

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