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The Body Weight Contingency of Self-Worth and the Social Monitoring System: Implications for Self-Esteem, Information Processing, and Body Dissatisfaction

Lauren O'Driscoll
Universty of Windsor

THE BODY WEIGHT CONTINGENCY OF SELF-WORTH AND THE SOCIAL

MONITORING SYSTEM: IMPLICATIONS FOR SELF-ESTEEM, INFORMATION

PROCESSING, AND BODY DISSATISFACTION

By

Lauren O'Driscoll, H.BSc., B.Psy. (Hons)

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By

Lauren O'Driscoll

APPROVED BY:

_____
W. Park
School of Social Work

_____
P.A. Timmons Fritz
Department of Psychology

_____
J.L. Jarry, Advisor
Department of Psychology

July 9, 2013

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ABSTRACT

The purpose of this research was to investigate female body image disturbance from the

sociometer and the contingencies of self-worth perspectives of self-esteem. This study

examined whether body weight contingent self-worth moderates the effects of social threat

on self-esteem and body weight-related outcomes. It was hypothesized that rejection

would result in lower self-esteem and body satisfaction, and greater information

processing biases for body weight-related information for women who base their self-

worth on body weight, compared to women whose self-worth is less based on weight.

Female undergraduates ($N = 191$) completed a measure of body weight contingent self-

worth. Participants were then randomly assigned either an interpersonal rejection

condition, or to a neutral control condition. Lastly, participants completed measures of

state self-esteem, body dissatisfaction, and measures of cognitive accessibility and

attentional bias for body weight-related information. Results were discussed in terms of

their implications for the relational function of body image.

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

A-RSQ	Adult-Rejection Sensitivity Questionnaire
BDI-II	Beck Depression Inventory-II
BISS	Body Image States Scale
BMI	Body Mass Index
BWCSW	Body weight contingency of self-worth
BWCSWS	Body Weight Contingency of Self-Worth Scale
CSW	Contingency of self-worth
CSWS	Contingencies of Self-Worth Scale
DQ	Demographics questionnaire
ELP	English Lexicon Project
LDT	Lexical decision task
LDT-Fat	Lexical decision task mean reaction time for thin words
LDT-Thin	Lexical decision task mean reaction time for thin words
LDTNeu-Fat	Lexical decision task difference score for fat words
LDTNeu-Thin	Lexical decision task difference score for thin words
MCSDS	Marlowe-Crown Social Desirability Scale
PANAS	Positive and Negative Affect Schedule
PANAS-PA	Positive and Negative Affect Schedule – Positive Affect subscale
PANAS-NA	Positive and Negative Affect Schedule – Negative Affect subscale
RSES	Rosenberg Self-Esteem Scale
SSES	State Self-Esteem Scale

SSES-Appearance	State Self-Esteem Scale, Appearance subscale
SSES-Performance	State Self-Esteem Scale, Performance subscale
SSES-Social	State Self-Esteem Scale, Social subscale
VDP	Visual dot-probe task
VDP-Fat	Visual dot-probe task mean reaction time for thin words
VDP-Thin	Visual dot-probe task mean reaction time for thin words
VDPNeu-Fat	Visual dot-probe task difference score for fat words
VDPNeu-Thin	Visual dot-probe task difference score for thin words

INTRODUCTION

Body dissatisfaction refers to dysfunctional, negative thoughts and feelings regarding one's weight and shape (Garner, 2002). Body dissatisfaction is so prevalent among women, especially university-aged women, that researchers have referred to it as "normative discontent" (Rodin, Silberstein, & Striegel-Moore, 1984). Research has shown that university women demonstrate elevated incidences of body dissatisfaction to the extent that over 80% report being dissatisfied with their bodies (Spitzer, Henderson, & Zifian, 1999). Accordingly, the notably high prevalence of disordered eating behaviours and eating disorders among university women is well documented (e.g., Koszewski, Newell, & Higgins. 1990; Miller & Rice, 1993). Women in university settings tend to be particularly susceptible to social pressures related to body image, due to the fact that this developmental period is important for identity formation and the development of self-worth (Crocker, Luhtanen, & Cooper, 2003; Crocker & Wolfe, 2001). Because body satisfaction greatly contributes to an individual's sense of global self-esteem, it is considered integral to how one feels about the self in general (Tiggemann, 2011).

Accordingly, body dissatisfaction and global self-esteem have been shown to be highly associated with one another, such that low satisfaction with one's body is linked to low self-esteem (Ben-Tovim & Walker, 1991; Secord & Jourard, 1953). Importantly, low self-esteem is considered to be a major predictor in the development of disordered eating (Button, Sonuga-Barke, Davis, & Thompson, 1996; Dykens & Gerrard, 1986). Research has demonstrated that women with eating disorders derive their self-esteem largely from their physical appearance (Geller et al. 1998), and that they relate the overvaluation of body weight and shape with self-esteem (Cooper & Fairburn, 1993; Goldfein, Walsh, &

Midlarsky, 2000). Therefore, examination of the processes underlying the association between self-esteem and body weight concerns is important not only because self-esteem is associated with body dissatisfaction, but also because low self-esteem is a risk factor for the development of eating pathology.

As such, the overarching objective of the present research was to investigate cognitive and affective body weight-related outcomes in university women within the context of two perspectives of self-esteem: the contingencies of self-worth theory and the sociometer theory. These theories are reviewed and empirical support for each are discussed both individually and in combination, followed by a description of the present study.

Self-Esteem

Before the relevant theories of self-esteem are described, it is necessary that the concept of self-esteem be briefly defined. First described by James (1890) as an "elementary endowment of human nature," self-esteem represents an individual's attitude toward, or evaluation of him or herself. It is commonly believed that people are motivated to enhance and maintain their self-esteem, and there is a general assumption that high self-esteem has favourable effects, and that low self-esteem has adverse effects (Crocker & Park, 2004). Indeed, much evidence exists to suggest that self-esteem is associated with psychological wellbeing. Self-esteem is a strong predictor of life satisfaction (Diener, 1984), and individuals with high self-esteem report low levels of anxiety (Brockner, 1984; Pyszczynski & Greenberg, 1987) and depression (e.g., Tennen & Herzberger, 1987). In contrast, low self-esteem is related to a number of emotional and behavioural problems, including increased anxiety, drug abuse, depression (Leary & MacDonald, 2003; Leary, Schreindorfer, & Haupt, 1995), and eating disorders (Mecca,

Smelser, & Vasconcellos, 1989).

Contingencies of Self-Worth

Expanding on James' (1890) original hypothesis that people are driven to enhance and maintain their self-esteem in certain domains as opposed to others, Crocker and Wolfe (2001) propose the contingencies of self-worth (CSW) theory of self-esteem. From this perspective, the domains that are considered to be most important for self-esteem are those that are believed to be central to the individual's overall sense of self-worth. As such, Crocker and Wolfe describe contingencies of self-worth as the specific domains of life on which an individual stakes his or her self-esteem. The contingencies of self-worth theory posits that people differ in the domains in which they base their self-esteem. It is theorized that contingencies of self-worth are formed over the course of development, where certain domains become important to an individual by means of distinct competencies (Harter, 1999), through meaningful experiences, and in response to social experiences with others (Ruble, 1987).

It is commonly acknowledged that people differ in the extent to which they consider certain domains to be important to the self (Crocker et al., 2003b; Crocker & Wolfe, 2001; Harter, 1999). Crocker, Karpinski, Quinn, and Chase (2003) describe seven contingencies of self-worth common in college students: academic achievement, virtue, family support, God's love, competition, other's approval, and physical appearance. Self-worth may be contingent on one or more domains, and the domains that are considered to be important vary across individuals. For example, whereas one individual's self-worth may be based mostly on appearance, another's may be based on academic achievement and competition.

Central to the contingencies of self-worth model is the idea that people seek self-

esteem by attempting to achieve success and avoid failure in the domains on which they base their self-worth (Crocker, 2002a). From this perspective, state self-esteem fluctuates according to an individual's direct accomplishments in contingent domains, and in turn, trait self-esteem is developed as a reflection of the individual's average success in contingent domains over the course of experience (Crocker, 2002a). Insofar as self-worth contingencies are associated with pursuing success and averting failure within self-important domains (Crocker & Park, 2004), contingencies of self-worth are suggested to serve a self-regulatory function (Crocker, 2002a; Wolfe & Crocker, 2002). Individuals exert more energy to maintain their self-esteem in contingent domains, and less energy is directed to those domains that are less contingent (Crocker et al., 2003b). For instance, an individual whose self-worth is highly contingent on physical appearance spend more time on behaviours related to appearance, such as grooming, dieting, and exercising, and less time on behaviours associated with less contingent areas.

Notably, Crocker (2002b) suggests that certain contingencies of self-worth tend to be more fragile and unstable than are others. As such, Crocker draws a distinction between two general types of self-worth contingencies. Internal contingencies are those that subsume abstract, core, or unique features of the self, whereas external contingencies are based on external or superficial aspects (Crocker & Wolfe, 2001). External contingencies of self-worth tend to be more dependent on validation from others, and thus are more vulnerable to threat than are internal contingencies. When compared to internal contingencies of self-worth, threat to external contingencies tends to result in greater damage to an individual's overall sense of self-worth. Therefore, those who base their self-esteem on external domains must exert consistent effort to maintain their self-worth in the eyes of others (Crocker, 2002b). Due to the fact that external contingencies are

related to greater instability of self-esteem, those who base their self-worth largely on external domains are at greater risk of unfavourable psychological outcomes than are those who based it on internal contingencies (e.g., Crocker, 2002b; Sanchez & Crocker, 2005). According to Crocker (2002b), whereas virtue and God's love are considered to be internal and stable contingencies of self-worth, the contingencies that are regarded to be particularly external and unreliable include competition, others' approval, and appearance.

In general, physical appearance is a domain that is considered to be particularly important to people's sense of self-worth (Harter, 1999) and to their relational value (Baumeister & Leary, 1995; Langlois & Stephen, 1988; Rothblum, Miller, & Garbutt, 1998). As an external trait, appearance tends to be highly subject to evaluation by others (Crocker et al., 2003b). Consequently, self-esteem that is based on the external domain of appearance is liable to be particularly unstable (Kernis & Waschull, 1995), and tends to be low (Crocker & Wolfe, 2001). In order to prove that they are persons of worth, people whose self-esteem is contingent on appearance require consistent validation from others (Crocker, 2002b). Accordingly, research has shown that university students who base their self-worth on appearance spend significantly more time on appearance-related activities, such as shopping for clothes, grooming, and exercising (Crocker et al., 2003b), compared to students who base their self-worth on other domains. Due to the unstable nature of appearance-based self-esteem, the appearance contingency of self-worth is related to negative outcomes such as depression and disordered eating (Crocker, 2002b; Sanchez & Crocker, 2005).

The Body Weight Contingency of Self-Worth

As discussed by Clabaugh, Karpinski, and Griffin (2008), although past literature

on contingencies of self-worth has generally regarded appearance as unidimensional, much evidence suggests that appearance is in fact a multidimensional construct (e.g., Alike, Smith, & Klotz, 1986; Cash, 1989; Swami, Greven, & Furnham, 2007). Physical appearance subsumes many characteristics, including facial features, clothing, accessories (Ashmore, Soloman, & Longo, 1996), waist-to-hip-ratio, and body weight. It is even influenced by non-physical features such as personality (Swami et al., 2007).

Research on determinants of physical attractiveness has shown that in particular, body weight is considered to be an important aspect of physical appearance, particularly for women (Fan, Liu, Wu, & Dai, 2004; Puhl & Boland, 2001; Swami et al., 2007; Tovée & Cornelissen, 2001; Tovée, Maisey, Emery, & Cornelissen, 1998). In Western culture, thinness is emphasized as an ideal for female attractiveness. The sociocultural norm of "slimness as beauty" (Simpson, 2002) is regularly highlighted in magazines, television programs, and movies (e.g., Fouts & Burggraf, 1999, 2000). Notably, the standard has become increasingly thin in recent decades (Garner, Garfinkel, Schwartz, & Thompson, 1980; Klein & Shiffman 2005; Spitzer et al., 1999), to the extent that the current thin ideal is unattainable for most women. In order to achieve an 'ideal' body weight and for fear of becoming fat, a large proportion of women engage in a number of risky weight-loss behaviours such as restrictive dieting, laxative abuse, self-induced vomiting, and excessive exercise (Stice, 2002). This sociocultural norm is prevalent in the female population, to the extent that body weight is considered to be a central aspect of the female identity (Grover, Keel, & Mitchell, 2003).

As a result, Clabaugh and colleagues (2008) contend that the emphasis on thinness in Western culture probably contributes to the development of body weight as a specific contingency of self-worth in females. Given the importance of body weight for the

female self-concept, Clabaugh and colleagues suggest that it is likely that many females base their self-worth on this specific domain of appearance. Recent research has shown that the body weight contingency of self-worth is related to negative psychological outcomes, attentional biases toward body weight-related information, and vulnerability to negative feedback from others (Clabaugh, 2008).

The body weight contingency of self-worth and psychological outcomes. As discussed previously, Crocker (2002b) suggests that external contingencies of self-worth are associated with greater instability of self-esteem, and as a result are related to a number of adverse psychological outcomes. In general, previous research has shown that preoccupation with body weight in women is associated with adverse consequences, such as depression (Johnson & Wardle, 2005), unhealthy dieting (Markey & Markey, 2005), and eating disorders (Stice & Agras, 1998). Because body weight is an external contingency that is especially vulnerable to evaluation and scrutiny by others, Clabaugh and colleagues (2008) propose that females who base their self-worth on body weight may be particularly susceptible to unstable and low self-esteem, as well as consequent unfavourable psychological outcomes.

In order to investigate this proposition, Clabaugh and colleagues (2008) compared the consequences of the body weight contingency to those of appearance contingency of self-worth in a sample of 247 university women in the United States. The researchers found that the body weight contingency of self-worth predicted unique variance in low self-esteem and instability of self-esteem. It also predicted depression, anxiety, dissatisfaction with life, body shape anxiety, and disordered eating behaviours, over and above what could be accounted for by the more general appearance contingency of self-worth. Consequently, Clabaugh and colleagues conclude that body weight, as opposed to

physical appearance in general, is a particularly unhealthy domain of self-worth.

The body weight contingency of self-worth and attentional bias. As suggested by Crocker and Wolfe (2001), contingencies of self-worth function to direct peoples' attention to contingency-related information in the environment. Attentional bias occurs when individuals' attention is directed such that they show heightened awareness for particular aspects of the environment (Williams, Watts, MacLeod, & Mathews, 1997). Previous research has consistently demonstrated a link between attentional bias for body weight and shape-related stimuli and body weight preoccupation on a variety of cognitive tasks (see Dobson & Dozois, 2004; Faunce, 2002 for reviews). For example, research has shown that women with eating disorders were inclined to direct their attention toward fat-related words and away from thin body-related words on a modified visual dot-probe task (Rieger et al., 1996), and that women with restrained eating habits were faster at recognizing body weight and shape-related words compared to neutral words on a word recognition task (Boon, Vogelzang, & Jansen, 2000). Thus, in accordance with the contingencies of self-worth theory, Clabaugh (2008) posits that women who base their self-worth on body weight should show attentional biases for body weight-related information in the environment (Williams et al., 1997).

Clabaugh's (2008) research lends some support to this proposition. In order to investigate attentional biases for body weight-related information in relation to the body weight contingency of self-worth, 225 university women in the United States completed a dot-probe detection task (MacLeod, Mathews, & Tata, 1986) in which they were presented with pairs of body weight and neutral words (e.g., *waif/vase, obese/bench*), and asked to respond to a probe stimulus that appeared in the same location as one of the words. This was followed by a word recognition task (Boon et al., 2000), in which

participants were instructed to recognize strings of letters as words or non-words, where half of the words were neutral (e.g., *yacht; railway*) and the other half were related to body weight (e.g., *pudgy; emaciated*). The results demonstrated that although women who based their self-worth on body weight did not show attentional bias for weight-related words in the word recognition task and did not direct their attention toward fat words on the dot-probe task, they did display a tendency to direct their attention away from thin words on the dot-probe task. Whereas the contingencies of self-worth model predicts that self-worth contingencies should direct attention toward contingency-related information in the environment, these results provide preliminary evidence that self-worth contingencies may also serve to direct attention away from such information. Incidentally, Clabaugh suggests that avoidance of thin body weight-related information for women who base their self-worth on this domain may function to maintain body weight concerns in those individuals, presumably by directing their focus away from positive aspects of their bodies (Rieger et al., 1996; Smith & Rieger, 2006).

The body weight contingency of self-worth and interpersonal feedback. As specified by the contingency of self-worth model, Crocker and colleagues (2003a) suggest that negative feedback within a contingent domain should result in increased negative affect and decreased self-esteem for those who base their self-worth on this domain. Notably, previous research has demonstrated the importance of interpersonal experiences on body image. A number of studies have indicated that negative interpersonal weight-related comments are associated with a variety of negative psychological outcomes, such as anxiety (Cash, 1995; Rieves & Cash, 1996) and body dissatisfaction (e.g., Cash, Winstead, & Janda, 1986; Fabian & Thompson, 1989; Stormer & Thopmson, 1996; Thompson, Herbozo, Himes, & Yamamiya, 2005). In addition,

research has shown that women who are concerned with their body weight tend to be particularly sensitive to comments from others; for example, compared to non-restrained eaters, women with restrained eating habits show greater negative affect and body dissatisfaction after experiencing negative weight-related feedback (Mills & Miller, 2007). As such, Clabaugh (2008) posits that women who base their self-worth on body weight are likely to respond particularly strongly to body weight-related comments from others, given that such feedback is directly related to the domain on which such individuals base their self-worth.

Clabaugh (2008) examined this proposition by studying the effects of both negative and positive forms of interpersonal weight- and shape-related comments in relation to the body weight contingency of self-worth. One-hundred and fifty university women in the United States were asked to recall the frequency and effect of previously experienced comments from others regarding their body weight and shape. Interestingly, the results revealed that women who based their self-worth on body weight recalled receiving more frequent negative weight- and shape-related comments and less positive weight- and shape-related comments from others, when compared to those who did not base their self-worth on body weight. In terms of the effects of weight and shape feedback, this research demonstrated that the effect of negative weight-related interpersonal commentary was more powerful for women who base their self-worth on their body weight. Notably, neither of these findings was related to the participant's actual body weight. Taken together, these results imply that regardless of objective body weight, women whose self-worth is contingent on body weight are especially vulnerable to body weight and shape comments from others.

Given the association between the body weight contingency of self-worth and the

magnified responses to negative feedback from others, it is possible that the body weight contingency of self-worth may influence women's specific responses to cues connotative of interpersonal rejection more generally. As such, the present research examined the body weight contingency of self-worth within the broader social context, specifically within the social monitoring system.

The Social Monitoring System

Although self-esteem has traditionally been defined as an intrapersonal construct, the present research focuses on self-esteem from an interpersonal perspective. From a symbolic interactionist viewpoint (Cooley, 1902; Mead, 1932), the self is a social construction that is formed largely in the context of one's relationships with others. Thus, interpersonal theories of self-esteem posit that people's self-feelings are largely a reflection of how they believe they are evaluated by others (MacDonald, Saltzman, & Leary, 2003).

In order to explain the interpersonal nature and function of self-esteem, Leary and colleagues (Leary & Baumeister, 2000; Leary & Downs, 1995) propose the sociometer theory. According to the sociometer theory, self-esteem functions as an internal monitor of one's relational value to other people (Leary & Baumeister, 2000). Leary (2001) conceptualizes relational value as "the degree to which a person regards his or her relationships with another individual as valuable, important, or close" (p. 6). Thus, the sociometer theory posits that self-esteem is a manifestation of an individual's assessment of the consequences of his or her behaviour for social inclusion or exclusion from others (Leary & Baumeister, 2000). From this perspective, people engage in behaviours that enhance and maintain their self-esteem, not because of a drive for self-esteem in itself, but instead because such behaviours increase the likelihood that they would be socially

included, and decrease the likelihood that they would be excluded. In turn, state self-esteem is conceived as a reflection of an individual's inclusionary versus exclusionary status at a given point in time, and in turn, trait self-esteem reflects an overall appraisal of one's relational value to others (Leary, 1999).

Self-esteem functioning as a sociometer is posited to have an evolutionary basis. The sociometer theory was derived from the idea that members of the human species have evolved an inborn "need to belong" to a certain number of primary relationships (Leary & Baumeister, 2000). This belongingness hypothesis posits that humans have an innate and universal need to form interpersonal relationships with others (Baumeister & Leary, 1995). From an evolutionary standpoint, being part of a cooperative group functioned to facilitate both survival and reproduction (Axelrod & Hamilton, 1981; Barash, 1977; Moreland, 1987). Not only do close interpersonal relationships provide support during times of distress, but importantly, a lack of close relationships with others is related to negative mental and physical health outcomes (see Gardner, Gabriel, & Diekman, 2000 for a review), including stress and physical illness (Cobb, 1976), psychopathology (Hamachek, 1992), eating disorders (Schmidt, Tiller, & Morgan, 1995), and suicide (Holmes, Mateczun, Lall, & Wilcove, 1998). Thus, the sociometer theory posits that self-esteem represents an internal mechanism that has evolved to monitor cues in the environment related to the quality of one's interpersonal relationships (Leary & Baumeister, 2000). When environmental cues indicate that an individual may be socially excluded by others, the individual is alerted by means of lowered self-esteem.

Interpersonal Rejection

Although the sociometer hypothesis suggests that self-esteem is a reflection of both inclusion and exclusion by important others, Leary and colleagues (1995) suggest

that social exclusion should result in damage to self-esteem far more than social inclusion raises self-esteem. Whereas inclusion by other people is related to positive feelings such as elation and joy, social exclusion is accompanied by consequences that are potentially more serious, such as jealousy, guilt, anxiety, loneliness, and depression (Leary, 1990). It should be noted that though the terms exclusion and rejection are often used interchangeably in the literature, Leary (2005b) suggests that social exclusion is a general term that refers to relational dissociation from others, which may or may not imply perceived relational devaluation on the part of the excluded individual, whereas rejection refers specifically to any instance of perceived relational devaluation by the rejected individual. Specifically, rejection is a subjective experience wherein the individual perceives that his or her relational value is less than desired (Leary, 2005b). Accordingly, the focus of the present research is within the domain of interpersonal rejection in particular. Research within the area of social rejection supports the sociometer theory of self-esteem, in that relational devaluation has been shown to be related to both self-esteem and social information processing.

     Interpersonal rejection and self-esteem. As emphasized by Sommers (2001), "there probably exists no greater threat to a person's self-esteem than to be the target of interpersonal rejection" (p. 167). Sommers suggests that rejection not only denotes a threat to one's interpersonal relationships with others, but it may also be interpreted as an indication that one does not possess qualities that are desirable in social relationships. As the sociometer theory posits that self-esteem in itself is a reflection of one's relational value, it is reasoned that rejection by others should be highly threatening to an individual's sense of self-worth.

     In consonance with sociometer theory, a number of studies have shown that

interpersonal rejection negatively affects state self-esteem (see Leary, 2005a for a review). In general, research demonstrates that individuals who are accepted by others feel relationally valued and tend to report high self-esteem (Baumeister & Leary, 1995). In contrast, those who are rejected by others tend to feel worse about themselves as a result (Leary, Tambor, Terdal, & Downs, 1995). Further, studies by Leary, Springer, Negel, Ansel, and Evens (1998) and Leary and colleagues (1995) showed that the effect of interpersonal rejection on self-esteem was not limited to relational devaluation within close relationships. Indeed, rejection by anonymous strangers led individuals to experience hurt feelings and damaged self-esteem. In addition, research by Leary and colleagues (2003) demonstrated that even the self-esteem of people who reported that they are unaffected by the evaluations of others was influenced by accepting and rejecting feedback. Overall, Leary (2005a) concludes that self-esteem is closely associated with the extent to which people perceive that they are relationally valued.

Interpersonal rejection and information processing. As put forth by Leary (2001), the social monitoring system is an internal mechanism that is presumed to operate in an automatic manner to search the environment for cues related to one's relational value. Given the importance of social relationships for self-worth, Baumesiter and Leary (1995) contend that information in the environment that is socially relevant should be preferentially processed. Support for this proposition comes from studies demonstrating that relational devaluation affects information processing for socially relevant information.

Though research in this area is limited, a few studies provide preliminary support for the role of information processing in the social monitoring system. In two studies focusing on university men and women in the United States, Gardner, Pickett, and Brewer (2000) showed that after experiencing interpersonal rejection and reading a diary entry

containing both individual events (e.g., *I bought an instant lottery ticket and won $10; I got a haircut that I absolutely can't stand- it's incredibly ugly*) and social events (e.g., *My roommate and I went out on the town tonight and had a really great time together*; *my best friend blew me off- we made weekend plans but I guess they just didn't matter*), individuals demonstrated heightened memory for both the positive and negative social events compared to the individual events. Further research in the United States by Ko (1994) demonstrated that after being excluded from a ball-toss game, individuals increased their use of the word "we," in an automatic attempt to redeem their inclusionary status with the group. Taken together, these results provide support for the proposition that individuals possess social monitoring systems that are attuned to environmental cues related to their relational value.

Individual differences in response to interpersonal rejection. Pickett, Gardner, and Knowles (2004) propose that some people may have a greater need for belongingness than do others, and therefore may possess social monitoring systems that are chronically activated. Thus, although people in general are concerned about the extent to which they are accepted or rejected by others, it is important to note that some individuals may be more sensitive than others to cues in the environment related to their relational value.

A number of studies support this premise. Three studies focusing on university men and women in the United States by Pickett and colleagues (2004) indicated that people high in need to belong tended to be more adept at noticing and interpreting the emotions of others, suggesting greater sensitivity for interpersonal information. Further, several studies have shown that, compared to people with high self-esteem, those with low self-esteem were inclined to be more sensitive to exclusionary cues and were more likely to perceive rejection from others (Downey & Feldman, 1996; Leary & Baumeister,

2000; Nezlek, Kowalski, Leary, Blevins, & Holgate, 1997).

Eating disorders and responses to interpersonal rejection. Due to the association between individual difference variables such as need to belong and low self-esteem with rejection sensitivity, a number of studies have focused specifically on the responses of individuals with eating disorders to relational devaluation. In addition to research demonstrating that individuals with eating disorders show chronically lower levels of global self-esteem compared to healthy controls (e.g. Attie & Brooks-Gunn, 1989; Huon & Brown, 1984; Williams, et al., 1993), research has demonstrated a link between disordered eating and heightened concern with the evaluations of others (Rieger et al., 2010; Schwalberg, Barlow, Algar, & Howard, 1992; Striegel-Moore, Silberstein, & Rodin, 1993). As a result, it is perhaps not surprising that when compared to other groups, individuals with disordered eating symptoms have been shown to be particularly vulnerable to cues indicative of relational devaluation. As suggested by de Groot and Rodin (1994), women with eating disorders are highly attentive to social cues, and they tend to be more sensitive to the expectations and disapproval of others. Accordingly, Downs (1997) demonstrated that after experiencing social rejection, university women with relatively high sub-clinical levels of disordered eating symptomatology reported more negative thoughts compared to those with less symptoms. Importantly, these findings suggest that certain factors such as self-esteem, belongingness needs, and eating disorder symptoms predispose some individuals to have social monitoring systems that are more sensitive to cues related to their relational value.

Contingencies of Self-Worth in the Context of the Social Monitoring System

As mentioned, the present research is based on an integration of the contingencies of self-worth and the sociometer theories of self-esteem. According to the sociometer

theory, people's self esteem is largely based on the extent to which they perceive that they are accepted or rejected by others. From the contingencies of self-worth perspective, individuals seek self-esteem by achieving success and avoiding failure in domains of self-importance. Due to the significance of relational value for self-esteem, it is likely that people seek self-esteem in those particular domains that they perceive to be important for gaining social approval from others. In other words, it is suggested that people tend to base their self-worth on domains that they perceive as more likely to lead to inclusion, and less likely to result in exclusion by other people. Thus, from a sociometer perspective, contingencies of self-worth may be considered as contingencies of relational value (Leary & Baumeister, 2000; Leary & Downs, 1995). As previously noted, people develop contingencies of self-worth in response to important experiences in their lives and within the context of socialization. Given the importance of relational value for self-esteem, the domains that become most relevant to an individual's sense of self-worth are likely to be those that have consistently garnered social acceptance from important others. Although the role of contingencies of self-worth has not been studied extensively within the context of the sociometer theory, there exists some support for the association between these perspectives in the literature. Specifically, research has shown that relational devaluation and contingencies of self-worth are associated with self-esteem and cognitive accessibility for contingency-related information.

The Social Monitoring System, Contingencies of Self-Worth, and Self-Esteem

From the sociometer perspective, the domains that are most relevant to one's self-worth are those on which social acceptance from important others are highly staked. Accordingly, research on the association between relational value and self-important domains has investigated two general propositions. Leary (2005a) suggests that people's

self-evaluations in a particular domain should predict self-esteem to the extent that they perceive that the domain is valuable to other people. Relatedly, Park and Crocker (2009) posit that the effect of others' evaluations in a certain domain on an individual's self-esteem should depend on the extent to which he or she bases self-worth on this domain.

Previous research has shown that people's self-esteem is affected by their self-evaluations in domains that they perceive to be important to others. MacDonald and colleagues (2003) found that self-ratings of attractiveness were more strongly related to global trait self-esteem for university men and women who believed that attractiveness is important for social approval, when compared to those who believed that attractiveness is less important for social approval. In addition, Harter and Marold (1991) demonstrated that adolescent boys and girls showed greater feelings of self-worth when they believed that they were competent in domains that they thought to be important to their parents. Taken together, these findings indicate that an individual's sense of self-worth is affected by his or her assumptions regarding the importance that other people place on self-important domains.

Additionally, studies have shown that that the effects of others' domain-specific evaluations on an individual's self-esteem depend on the extent to which his or her self-worth is based on this domain. Crocker, Sommers, and Luthanen (2002) demonstrated that during the graduate admission process in the United States, university men and women who base their self-worth highly on academic success demonstrated significantly higher levels of state self-esteem on days they were admitted to graduate school, and lower self-esteem on those days they were rejected, compared to students low in this contingency of self-worth. In addition, research by Park and Crocker (2008) on university men and women in the United States showed that individuals who base their

self-worth on the domain of others' approval and who received negative interpersonal feedback exhibited significantly lower levels of state self-esteem, compared to those who did not base their self-worth on others' approval. Thus, this research suggests that the effect of others' evaluations and relational devaluation on self-esteem depends on an individual's contingencies of self-worth.

The Social Monitoring System, Contingencies of Self-Worth, and Cognitive Accessibility

As discussed previously, the social monitoring system is presumed to operate as an internal mechanism that processes information in the environment in terms of one's inclusionary versus exclusionary status. vanDellen Hoy, Fernandez, and Hoyle (2011) argue that when relational devaluation is salient, information processing should focus primarily on those domains that are regarded to be most relevant for one's relational value. Because self-worth is highly associated with the status of one's relationships with others (Baumesiter & Leary, 1995), it is presumed that contingencies of self-worth should represent important sources of information about an individual's social relationships. As discussed by vanDellen and colleagues (2011), self-relevant information is organized in memory in a manner such that related thoughts are linked to one another (e.g., Markus & Wurf, 1987). Accessing one concept in a semantic network results in access to other related concepts in memory (see Collins & Loftus, 1975 for a detailed overview). As a result, vanDellen and colleagues contend that for people who base their self-worth on a particular domain, exposure to cues indicative of interpersonal rejection should result in greater cognitive accessibility for contingency-related information in memory.

vanDellen, Hoy, and Hoyle (2009) propose a bidirectional relationship between the information processing of information related to contingencies of self-worth and relational value. Specifically, the researchers posit that individuals who base their self-

worth on a particular domain should cognitively associate domain-specific outcomes with relational devaluation, and should also cognitively associate relational devaluation with domain-specific outcomes. To investigate the first part of this proposition, 85 university and community recruited men and women in the United States were presented with a lexical decision task, in which they were first primed with positive and negative appearance-related words (e.g., *beautiful, overweight*). They were subsequently asked to recognize strings of letters as words or non-words, where a subset of the words was related to social acceptance (e.g., *popular, included*) and a subset was related to rejection (e.g., *recluse, excluded*). The results showed that exposure to negative appearance primes the recognition of exclusion words for individuals with high appearance contingent self-worth. In a second study designed to investigate the second part of the bidirectional proposition, 106 university men and women were first asked to recall and write about a time where they were socially excluded. They then performed a word-stem completion task, in which they were asked to complete a series of words that each had a letter missing (e.g., _ecent), where the words could be construed as neutral or related to the domain of virtue (e.g., *recent* or *decent*). The results indicated that when social exclusion was salient, people with virtue contingent self-worth demonstrated increased accessibility for negative virtue-related words relative to positive- and non-virtue words. Evidently, these findings suggest that individuals who base their self-worth in a certain domain show cognitive associations between performance in that domain and relational value, and vice versa.

Expanding on this research, vanDellen and colleagues (2011) sought to determine whether people who base their self-worth on a certain domain would shift information processing to this domain after experiencing relational devaluation. In this study, 110

university men and women in the United States were assigned to a relational devaluation or control condition, where they were either informed that other participants chose not to work with them, or that there was a mistake assigning them to a group. They subsequently read a number of diary entries that contained both neutral and academic-related events (e.g., *my professor recommended that I go to the writing center for help*), and were later presented with a surprise recall task in which they were instructed to recall as many events from the diary as they could remember. The participants also completed a word accessibility task in which they were asked to recognize strings of letters as words or non-words, where a subset of the words was related to academic achievement (e.g., *fail, smart*). This research provided partial support for cognitive accessibility in contingency-related domains in response to relational devaluation. Though no effects were demonstrated for word accessibility, people who base their self-worth largely on academic achievement demonstrated better memory for negative academic events than they did for positive academic and non-academic events present in the diary entries after experiencing interpersonal rejection. Therefore, vanDellen and colleagues conclude that contingencies of self-worth can facilitate the cognitive accessibility for information following relational devaluation.

In sum, previous research supports the link between contingencies of self-worth and the social monitoring system. In terms of self-esteem, the literature suggests that certain domains are more strongly related to self-esteem for individuals who believe that such domains are related to social approval by others, and individuals who base their self-worth on a particular domain show higher self-esteem when they perceive that they are accepted in this domain. Furthermore, people who base their self-worth on a particular domain are faster when associating domain-specific outcomes with social exclusion, and

those who are rejected by others show cognitive accessibility for information in the particular domains on which they base their self-worth.

The Present Research

The present study was designed to expand upon past literature on the association between the contingencies of self-worth and the sociometer theories of self-esteem. Though previous studies have investigated contingencies of self-worth such as appearance, virtue, and academic achievement in relation to relational devaluation, the present research represents the first attempt at examining the body weight contingency of self-worth within the context of the social monitoring system. As posited by Crocker (2002a), contingencies of self-worth not only represent domains in which individuals are most likely to seek self-esteem, but they also reflect the domains in which people are most vulnerable to failure or interpersonal rejection. Accordingly, as body weight is an external domain that is highly subject to evaluation by others, I suggest that women who base their self-worth on body weight may be particularly vulnerable to the effects of relational devaluation.

Research Questions

Accordingly, the present research was designed to address three research questions. First, do individual differences in the tendency to base self-worth on body weight influence the effect of relational devaluation on self-esteem? Second, do women who base their self-worth on body weight show enhanced information processing for body weight-related information after experiencing relational devaluation? Lastly, does relational devaluation result in decreased body satisfaction for women who base their self-worth on body weight?

Research Aims and Hypotheses

The purpose of the present study was to test the general prediction that relational devaluation would more strongly affect self-esteem, information processing of body weight-related information, and body dissatisfaction for women who base their self-worth on body weight, when compared to those who do not base their self-worth on this domain. Three specific aims of the present research, and associated research hypotheses, are described below.

Aim 1. The first aim of the present research was to directly examine the moderating role of the body weight contingency self-worth in the effect of social rejection on state self-esteem. As previously discussed, basing self-worth on body weight is associated with low and unstable self-esteem. Because self-esteem is tied to those domains that are perceived to be most important to others (in this case body weight), and due to the fragile nature of self-esteem in individuals who base their self-worth on body weight, I propose that these individuals would experience greater damage to their self-esteem in response to relational devaluation from others, when compared to those who do not base their self-worth on body weight.

Hypothesis 1a. Women whose self-worth is highly based on body weight will demonstrate significantly lower levels of state self-esteem than will women whose self-worth is less contingent on body weight across conditions.

Hypothesis 1b. Interpersonal rejection will result in lower levels of state self-esteem for all women, however, this effect would be significantly stronger for women whose self-worth is highly contingent on their body weight compared to those whose self-worth is less contingent on body weight.

Aim 2. The second aim of the present research was to examine the combined effect of interpersonal rejection and body weight contingency of self-worth on the information processing of body weight-related information. As previously discussed, people monitor their environment for information related to their own social standing, and this is particularly the case when they sense that their relational value is threatened. Given that previous research has shown an association between the body weight contingency of self-worth and attentional bias for body weight-related information, and that studies have demonstrated a link between social rejection and cognitive accessibility for contingency-related information, I suggest that women who base their self-worth on body weight may have information processing systems that are excessively focused on this domain. In the present research, information processing was assessed in two domains: attentional bias and cognitive accessibility. As noted previously, attentional bias refers to preferential attention for particular aspects in the environment, whereas cognitive accessibility refers to access to emotionally relevant stimuli in long-term memory.

Hypothesis 2a. Women whose self-worth is highly based on body weight will demonstrate significantly greater attentional bias for body weight-related information than will women whose self-worth is less contingent on body weight across conditions.

Hypothesis 2b. For women whose self-worth is highly contingent on body weight, interpersonal rejection will result in significantly greater levels of attentional bias for body weight-related information than it will for women whose self-worth is less based on body weight or for either group of women in the control condition.

Hypothesis 2c. Women whose self-worth is highly based on body weight will demonstrate significantly greater cognitive accessibility for body weight-related

information than will women whose self-worth is less contingent on body weight across conditions.

Hypothesis 2d. For women whose self-worth is highly based on body weight, interpersonal rejection will result in significantly greater levels of cognitive accessibility for body weight-related information than it will for women whose self-worth is less based on body weight or for either group of women in the control condition.

Aim 3. The final aim of the present research was to investigate the combined effects of social rejection and body weight contingency of self-worth on body dissatisfaction. As aforementioned, body dissatisfaction has been shown to be strongly associated with self-esteem. Given the importance of body satisfaction to women's self-concept, I suggest that women who base their self-worth on body weight may experience relational devaluation to be particularly threatening to this domain.

Hypothesis 3a. Women whose self-worth is highly based on body weight will demonstrate significantly lower levels of body satisfaction than will women whose self-worth is less contingent on body weight across conditions.

Hypothesis 3b. For women whose self-worth is highly based on body weight, interpersonal rejection will result in significantly lower levels of body satisfaction than it will for women whose self-worth is less based on body weight or for women of either group in the control condition.

METHOD

The present study utilized a controlled experimental design, and employed moderated multiple regression analysis to test the above research hypotheses. The independent variable was relational devaluation (rejection versus control) and the moderator variable was the body weight contingency of self-worth. The dependent variables were state self-esteem, attentional bias, and cognitive accessibility for body weight-related information, as well as body satisfaction. In addition, depressive symptoms, body mass index, global self-esteem, and rejection sensitivity were included as covariates.

Participants

The sample consisted of female undergraduate students from the University of Windsor. The focus of the present study was on women in particular, as body weight concerns are notably more prevalent in women than they are in men (Pilner, Chaiken, & Flett, 1990). Accordingly, the sole inclusion criterion was that all participants were female. All eligible participants were able to view an advertisement for the study that was posted online (see Appendix A), and interested participants signed up for study time-slots on an online participant pool. All received credit toward a psychology course of their choice for their participation. This study received ethics approval from the University of Windsor Research Ethics Board.

Data were collected from 191 female participants. The mean age of participants was 21.22 years ($SD = 3.83$). The average BMI of participants was 24.50 kg/m^2 ($SD = 4.79$), which is within the normal weight range (Centre for Disease Control, 2011). A total of seven (3.7%) participants reported that they had been diagnosed with a past or present eating disorder.

Self-reported race and ethnicity was as follows: 65.9% European, 7.6% Arab or West Asian, 7.0% East Asian, 5.4% South Asian, 5.4% African, 4.3% Caribbean, 2.2% Aboriginal, and 2.2% South or Central American.

In terms of years of university education, 29.6% were in their first year, 23.7% were in their second year, 21.5% were in their third year, 19.9% were in their fourth year, and 5.4% had attended university for more than four years. Additionally, 61% of participants were psychology majors. On average, participants had taken 6.89 (*SD* = 6.50) psychology courses prior to their participation.

Measures

Independent Variable Measure

Body-Weight Contingency of Self-Worth Scale (**BWCSWS**; Clabaugh et al., 2008). Body weight contingency of self-worth was assessed using the Body Weight Contingency of Self-Worth Scale (refer to Appendix B). This scale consists of 8 items designed to evaluate the extent to which individuals base their self-worth on body weight. Each item is scored on a 7-point Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*). Higher scores indicate a greater tendency to base self-esteem on body weight.

Research by Clabaugh and colleagues (2008) demonstrated excellent internal consistency for the BWCSWS with Cronbahch's alpha = .92. Convergent validity also has been demonstrated, indicating that scores on the Body Weight CSW are positively correlated (*r* = .85) with scores on the appearance contingency of self-worth subscale of the Contingencies of Self-Worth Scale (CSWS; Clabaugh et al. 2008). In the current study, the BWCSWS demonstrated excellent internal consistency, α = .94.

Dependent Variable Measures

To maintain consistency, the following dependent variable measures are described in the same order as that in which they appear in the research hypotheses.

State Self-Esteem Scale (**SSES**; Heatherton & Polivy, 1991). The SSES is a 20-item self-report measure that is designed to assess state self-esteem (refer to Appendix C). The SSES consists of three subscales used to assess Performance, Social, and Appearance self-esteem. Each item is scored on a 5-point Likert-type scale (1 = *not at all*, 5 = *extremely*). A total score is obtained by summing the ratings on each item, where higher scores mean higher state self-esteem. The SSES is sensitive to changes that occur as a result of experimental manipulation (Heatherton & Polivy, 1991).

Research by Heatherton and Polivy (1991) indicated excellent internal consistency, $\alpha = .92$, and a test-retest reliability ranging from $r = .48$ to .75. Convergent validity also was demonstrated, indicating that scores on the SSES were positively correlated with body shape satisfaction ($r = 0.54$), as well as global self-esteem ($r = 0.72$) as assessed by the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). In the current study, the SSES demonstrated excellent internal consistency, $\alpha = .93$.

Cognitive tasks. Cognitive bias for body weight-related information was assessed using a visual dot-probe task to test for attentional bias, and a lexical decision task to test for cognitive accessibility. The visual dot-probe task (VDP) is considered to be a strong and direct test of attentional bias, and is regarded to be superior to other measures including the Stroop test (Faunce & Job, 2000; MacLeod et al., 1986). The lexical decision task (LDT) is considered to be a sensitive test of the cognitive accessibility for lexical items in long-term memory as well as information processing speed, and is suggested to be one of the best available measures of network activation

(Marsh & Landau, 1995).

Visual dot-probe task (VDP; McLeod et al., 1986). Attentional bias toward or away from body weight-related information was tested using a visual dot-probe task, which was modelled after the procedure used in Rieger et al. (1996). The participants were instructed to attend to a central fixation point (+) that was presented briefly at the centre of a computer screen for 1,000 ms. A word pair, consisting of one target (i.e., body weight-related) and one neutral word, was briefly presented for 500 ms, with each word 1.5 cm above or below the fixation point (visual angle < 2°). The words pairs consisted of 40 body-related words (20 thin physique and 20 fat physique) paired with neutral words, as well as 20 filler neutral word pairs. The order of presentation of each of the word pairs was randomized. The target and neutral words in each pair were presented with equal probability above or below the central fixation point. Immediately following the disappearance of the words, a probe stimulus ('p' or 'q') was presented, remaining on the screen until the participant's response is detected. The probe appeared in the same location as target words in some trials (congruent trials), and in the other trials the probe appeared in the same location as the neutral words (incongruent trials). Each of the target and neutral words were presented twice, once in a probe congruent location, and once in a probe incongruent location. Participants were instructed to respond as quickly as possible when they detected the probe by pressing the key 'p' or 'q' matching the probe stimulus on the keyboard. The task consisted of 10 practice trials, followed by 80 experimental trials within which filler trails were randomly dispersed. The computer program timed how long it took the participant to detect each probe.

As recommended by Cassin and von Ranson (2005), attentional bias for thin and fat words were examined separately. Average reaction times for fat and thin words were

calculated by first calculating the mean response time for each of these categories separately. For each category, the sum of response time scores was divided by the total number of scores. In order to account for extreme responses, scores were excluded from these calculations when the participant gave an incorrect response (i.e. pressing a key that did not match the probe stimulus), or when the reaction time was beyond ±2 standard deviations from the mean. Difference scores were calculated from the reaction time data in order to control for individual differences in baseline reaction time (Mayerl, 2004). A VDP-Thin difference score (VDPNeu-Thin) was calculated by subtracting the mean reaction time for thin words from reaction times for neutral words. A VDP-Fat difference score (VDPNeu-Fat) was calculated by subtracting the mean reaction times for fat words from mean reaction times for neutral words. Accordingly, negative scores on these variables indicate longer detection of the probe in congruent trials compared to incongruent trials, and thus attentional bias away from body weight words. Positive scores indicate shorter detection of the probe in congruent trials compared to incongruent trials, and thus attentional bias toward body weight words.

Lexical decision task (LDT; Meyer & Schvaneveldt, 1971). Cognitive accessibility for body weight-related information was tested using a variant of the lexical decision task, which was modelled after the method used by vanDellen and colleagues (2009). Participants were instructed to fixate on a central fixation point (+) on the centre of the screen, which was displayed for 1,000 ms. On each trial, the fixation point was replaced either a word or a pronounceable non-word, and participants was asked to indicate whether the stimulus is a word or non-word by pressing "J" for a word and "F" for a non-word on the keyboard. The word and non-word stimuli remained on the screen until the participant responded, after which point the subsequent trial commenced.

Participants completed 10 practice trials, followed by 96 experimental trials. Half of the experimental trials presented a word target and half presented a non-word target. Of the word targets, half were body-related words (12 thin physique words and 12 fat physique words), and half were neutral words. The presentation of the word and non-word stimuli was randomized. The computer program timed how long it took each participant to ascertain whether each target was a word or non-word.

Cognitive accessibility for thin and fat words was examined separately (Cassin & von Ranson, 2005). Average reaction times for fat and thin words were calculated by taking the mean response time for each of these categories individually. For each category, the sum of response time scores was divided by the total number of scores. In order to account for extreme responses, scores were excluded from these calculations when the participant gave an incorrect response (i.e. categorizing the stimulus as a word versus a nonword incorrectly), or when the reaction time was beyond ±2 standard deviations from the mean. Difference scores were calculated from the reaction time data in order to control for individual differences in average reaction times (Mayerl, 2004). An LDT-Thin difference score (LDTNeu-Thin) was calculated by subtracting the mean reaction time for thin words from reaction times for neutral words. An LDT-Fat difference score (LDTNeu-Fat) was calculated by subtracting the mean reaction times for fat words from mean reaction times for neutral words. Negative scores indicate longer reaction times to thin or fat body weight-related words compared to neutral, and thus lower cognitive accessibility for body weight words. Positive scores indicate shorter reaction times to thin or fat body weight-related words compared to neutral words, and thus greater cognitive accessibility for body weight words.

Target words. The word lists used in the cognitive tasks were chosen specifically so that there was no overlap in words included in each of the two cognitive tasks (refer to Appendix D).

The word pair stimuli used in the VDP was a list of words used in previous research in eating disordered populations (Clabaugh, 2008). This list was comprised of a total of 20 thin/neutral word pairs and 20 fat/neutral word pairs that previously were matched on word length and mean usage frequency (Carroll, Davies, & Richman, 1971). Word stimuli used in the practice trials consisted of 10 neutral/neutral and 10 positive/natural word pairs, and words used as filler stimuli in the experimental trials consisted of 20 neutral/natural word pairs. All of the practice and filler word pairs were randomly selected from word lists used in previous research on attentional biases in university women at risk for eating disorders (Tressler, 2008).

The target word stimuli used in the LDT were selected from a list of body-related adjectives that previously were matched on mean percentage of categorization agreement, number of letters, number of syllables, word frequency, and word familiarity (Wojtowicz & von Ranson, 2007). To ensure that the word stimuli used in the LDT did not overlap with those presented in the VDP, 24 unique words (12 thin and 12 fat) were chosen from the list of body-related adjectives, and the resulting LDT word lists were again matched on word length, word frequency, and number of syllables using the English Lexicon Project (ELP; Balota et al., 2007). In addition, 24 neutral word and 48 pronounceable non-word stimuli were generated using the ELP (Balota et al., 2007). Neutral words were matched to the target word lists on word length, frequency of usage, and number of syllables. Pronounceable non-words were matched to the target word lists on word length and number of syllables. Stimuli presented in the practice trials consisted of 5 neutral

words and 5 pronounceable non-words that were randomly selected from the word lists

generated by the ELP. Refer to Table 1 for characteristics of the words administered in

the cognitive tasks.

Table 1

Characteristics of Word Stimuli Presented in the Cognitive Tasks

Word List	Log of Mean Frequency Based on HAL Norms	Mean Word Frequency Based on HAL Norms	Mean Word Frequency Based on KF Norms	Mean Word Length	Mean Number of Syllables
Fat	6.23	1,577.67	10.57	6.42	2.08
Thin	6.00	644.67	6.30	6.67	2.00
Neutral	6.09	1,111.17	5.75	6.42	2.04
Non-word	--	--	--	6.48	2.00

Note. Statistics generated using the ELP (Balota et al., 2007). KF refers to the Kučera & Francis (1967) study; HAL refers to the Hyperspace Analogue to Language study (Lund & Burgess, 1996).

Body Image States Scale (BISS; Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002). The BISS is a 6-item self-report measure designed to assess state body image satisfaction (refer to Appendix E). The BISS taps various facets of body image, including physical appearance, attractiveness, personal looks, looks compared to others, body shape and size, and body weight. Each item is scored on a 9-point Likert-type scale based on how the respondent feels "right now, at this very moment." A total score obtained by calculating the mean, where higher scores indicate higher state body satisfaction.

Research by Cash and colleagues (2002) indicated acceptable internal consistency ranging from $\alpha = .77$ to .90 for the BISS, and a two or three week test-retest reliability ranging of $r = .69$ in university women. Convergent validity has also been demonstrated, as scores on the BISS positively correlated ($r = .77$) with scores on trait measure of body image dissatisfaction, the Body Areas Satisfaction subscale of the Multidimensonal Body-Self Relations Questionnaire (MBSRQ; Cash & Pruzinsky, 1990). In the current study, the BISS demonstrated excellent internal consistency, $\alpha = .84$.

Covariate Measures

Several variables were measured in order to separate their effects on the dependent variables from that of interpersonal rejection and body weight contingency of self-worth. These were depressive symptoms, body mass index, global self-esteem, and rejection sensitivity. Due to the importance of reliability in covariate measures, only measures that have demonstrated at least an acceptable level of internal reliability were selected for use in the present research.

Demographics questionnaire (DQ). A demographics questionnaire was administered in order to obtain information such as age, ethnicity, and educational background from participants (refer to Appendix F).

Beck Depression Inventory-II (BDI-II; Beck, Steer, Ball, & Ranieri, 1996). The BDI-II is a 21-item self-report measure that is designed to assess the severity of depressive symptoms (refer to Appendix G). Specifically, it evaluates the intensity of affective, cognitive, and neurovegetative symptoms of depression in adults. Each item is scored on a 4-point Likert-type scale (0 = *absence of symptoms*, 3 = *severe level of that symptom*). A total score is obtained by summing the ratings of each item, where higher scores are indicative of higher levels of depressive symptoms

Research by Beck and colleagues (1996) indicated excellent internal consistency with a Cronbach's alpha = .93 for the BDI-II in university students. Test-retest reliability has been shown to be r = .93 for a group of psychiatric outpatients. Convergent validity also has been demonstrated, indicating that scores on the BDI-II were positively correlated (r = 0.93) with the original version of the BDI (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and positively correlated (r = 0.71) with the Hamilton Rating Scale for Depression (HAM-D; Hamilton, 1960; Dozois & Covin, 2004). In the current study, the BDI-II demonstrated excellent internal consistency, α = .93. BDI-II scores were examined as a covariate in all analyses because depression has been shown to correlate with self-esteem (Hankin, Lakdawalla, Carter, Abela, & Adams, 2007), and body dissatisfaction (Taylor & Cooper, 1986; Joiner, Schmidt, & Singh, 1994).

Body Mass Index (BMI). Body mass index is a measure of body weight scaled according to height. BMI was calculated by dividing body weight (kilograms) by height (metres) squared.

As objective body weight has been shown to relate to self-esteem (Miller & Downey, 1999) and body dissatisfaction (Swami et al., 2010), BMI was examined as a covariate in the present analyses to rule out the possibility that any differences observed between women with high and low levels of body weight contingent self-worth were due to their body weight.

Rosenberg Self-Esteem Scale (**RSES;** Rosenberg, 1965; 1979). The RSES is a 10-item self-report scale designed to assess global trait self-esteem (refer to Appendix H). Each item is rated on a 4-point Likert-type scale (1 = *strongly agree*, 4 = *strongly disagree*). A total score is obtained by summing the ratings on each item, where higher scores mean higher self-esteem.

Research by Rosenberg (1965) indicated excellent internal consistency, α = .92, of the RSES. Test-retest reliability ranges from a mean of .69 at six years (Robins, Hendin, & Trzesniewski, 2001) to .85 at two weeks (Silber & Tippett, 1965). Convergent validity studies indicate that scores on the RSES positively correlate (*r* = .66) with the Coopersmith Self-Esteem Inventory (CSEI; Coopersmith, 1967; Demo, 1985). In the current study, the RSES demonstrated excellent internal consistency, α = .89. RSES scores were tested as a covariate in the present analyses because global trait self-esteem has been demonstrated to correlate with state self-esteem (Heatherton & Polivy, 1991), and body dissatisfaction (Furnham, Badmin, & Sneade, 2002; Lowery et al., 2005).

Adult Rejection Sensitivity Questionnaire (**A-RSQ;** Downey, Berenson, & Kang, 2006). The A-RSQ is a 9-item self-report measure of rejection sensitivity that was developed specifically for use in adult populations (refer to Appendix I). The questionnaire presents a number hypothetical situations in which rejection by significant others is possible, where respondents indicate both the level of anxiety they feel about the

situation, as well as their perceived likelihood that an interaction partner would respond with rejection. Each item is scored on a 6-point Likert-type scale (1 = *very unconcerned* or *very unlikely*, 6 = *very concerned* or *very likely*). A total score is obtained by multiplying the ratings of rejection concern/anxiety by the ratings of rejection expectancy for each question, after which the resulting scores are averaged. Higher scores indicate greater sensitivity to interpersonal rejection.

Research by Berenson and colleagues (2009) demonstrated acceptable internal consistency of the A-RSQ, α = .70, in an adult population. Convergent validity has also been demonstrated, with the A-RSQ correlating with related constructs such as attachment avoidance and attachment anxiety (*r* = .33 and *r* = .48 respectively; Fraley, Waller, & Brennan, 2000), and social avoidance/distress (*r* = .34; Watson & Friend, 1969). In the current study, the A-RSQ demonstrated acceptable internal consistency, α = .71. A-RSQ scores were examined as a covariate because rejection sensitivity has been shown to correlate negatively with self-esteem (Berenson et al., 2009), and individuals who score high on rejection sensitivity have been shown to be particularly vulnerable to disruption of goal-directed attention by cues indicating social threat (Berenson et al., 2009).

Manipulation Check Measure

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988**).** The PANAS is a 20-item self-report measure of positive and negative affect (refer to Appendix I). The PANAS consists of two subscales, one assesses positive affect (PA) and one assesses negative affect (NA). Each item is rated on a 5-point Likert-type scale (1 = *very slightly or none at all*, 5 = *extremely*). Two total scores are calculated by

summing the 10 items associated with each of the PA and the NA subscales, where higher

scores indicate stronger affect.

Research by Watson and colleagues (1988) indicated good internal consistency

ranging from α = .86 to .90 for the PA subscale, and from α = .84 to .87 for the NA

subscale. Similarly, the NA subscale had excellent internal consistency post-

manipulation, α = .86, as well as post-debriefing, α = .84. Eight-week test-retest

reliability for the PANAS has been found to be r = .58 for the PA subscale and r = .48 for

the NA subscale (Watson et al., 1988). Convergent validity also has been demonstrated,

indicating that scores on the PANAS were positively correlated with scores on the Profile

of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) ranging from r = .85 to .91

(Watson & Clark, 1994). In the current study, the PA subscale demonstrated excellent

internal consistency post-manipulation, α = .91, as well as post-debriefing, α = .90. The

NA subscale also had excellent internal consistency post-manipulation, α = 86, and post-

debriefing, α = .84. The PANAS were administered to test the effectiveness of the

experimental manipulation, as past research has shown that interpersonal rejection lowers

positive affect and raises negative affect on this particular measure (Gerber & Wheeler,

2009).

Procedure

Before participants were recruited for the study, they were screened for gender,

such that all participants are female. As previously mentioned, only female participants

were able to sign up for the study.

The present research involved two components: an online survey, followed by a

laboratory session. In order to reduce suspicion that the online survey and the laboratory

session were components of the same study, participants were invited to participate in two

supposedly separate research studies on the participant pool website. They were told that the two studies are unrelated to one another, and that the primary investigator was offering them together to maximize recruitment efficacy. In order to encourage participants to attend the laboratory component of the study, the online survey was worth 0.5 bonus points for 30 minutes, and the laboratory session was worth 1.5 bonus points for 90 minutes of participation.

The first part of the study consisted of a survey posted online, which was completed at each participant's convenience. The survey presented a battery of questionnaires comprised of the covariate and the moderator measures. In order to minimize demand characteristics, the true purpose of the research was not initially disclosed[1]. Participants were told that the purpose of the online survey was to examine the relationship between mood and personality; no mention of body weight or rejection was made in the study description. Before the study began, all participants were presented with an informed consent form (refer to Appendix K), and they indicated their consent to participate by selecting "Yes" at the bottom of the screen. During the online component of the study, participant completed a demographics questionnaire, the BDI, the RSES, and the A-RSQ. In order to disguise the body weight-related aspects of the research, the BWCSWS was presented alongside the other subscales of the Contingencies of Self-Worth Scale (CSWS), which includes 35 questions related to the extent to which individuals base their self-esteem on the domains of virtue, family support, God's love, competition, other's approval, and physical appearance (Crocker et al., 2003b; refer to

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[1] Research has shown that participants are not harmed by deception. In fact, participants in deception research reported that they were not put off by the deception, but that they enjoyed the experience more and found the experience to be more educational, when compared to those who participated in non-deception research (Christensen, 1988).

Appendix L). After completing the online survey, participants were invited to participate

in the laboratory session, which was described as a second ostensibly unrelated study.

Participants were told that the purpose of the laboratory study was to examine individual

differences in decision-making; no mention of body weight or rejection was made in the

study description. The participants were provided with a list of potential time-slots for

the laboratory session, which took place at least 7 days after their completion of the

online survey. To encourage continued participation in the laboratory component of the

study, participants who agreed to attend the laboratory session were sent a reminder e-

mail prior to their appointment.

Before participating in the laboratory component of the study, each participant

was again asked to read and sign an informed consent form in paper-and-pencil format

(refer to Appendix M). The first part of the laboratory session consisted of a relational

devaluation experimental manipulation, which was conducted using a demarcated

rejection procedure modelled after the method designed by Nezlek and colleagues (1997).

Demarcated rejection refers to paradigms in which the participant is explicitly told that he

or she is rejected (Gerber & Wheeler, 2009). Procedures similar to the method used in

the present research have been shown to be effective (Gerber & Wheeler, 2009) in several

previous studies (e.g., Buckley, Winkel, & Leary, 2005; Garder et al., 2000; Kerr, 2008;

Leary et al., 1995; Nezlek, et al., 1997; vanDellen et al., 2011). The specific procedure in

the present study closely follows the method used in research by Kerr (2008).

Participants first were asked to meet in groups of four in the main laboratory room.

In situations in which less than four participants were signed up to participate, or where a

no-show or cancellation occurred, one of two trained confederates acted as a participant

in the initial group conversation task. Participants were informed that the purpose of the

study was to investigate individual differences in decision-making abilities. They were

told that they would be asked to complete a group conversation task, followed by two

cognitive tasks and several questionnaires, after which point they would complete a

decision-making task in pairs or groups. In reality, the final decision-making task did not

occur.

     In the group conversation task, participants were provided with nametags and

encouraged to get acquainted with each other. They were each given a printed list of

example neutral topics to discuss with one another (derived from Kerr, 2008; refer to

Appendix N). The experimenter facilitated this discussion. After 15 minutes, once they

had time to become familiarized with one another, participants were informed that they

would be separated into individual rooms.

     Once the participants were separated into separate laboratory rooms, they were

asked to write down the name of two other participants with whom they wished to work

during the alleged final decision-making task of the study (refer to Appendix O). They

were informed that they would be working with at least one other participant of their

choice on this final task. After making their selection, the experimenter then left the

room under the pretence of assigning groups for the final task. During this time,

participants completed the Marlowe-Crowne Social Desirability Scale (MCSDS, Form C;

Crowne & Marlowe, 1960) as a distractor (refer to Appendix P). After approximately 5

minutes elapsed, the experimenter returned and participants were given feedback

regarding their assignment. Each participant was assigned randomly to a rejection or a

neutral control condition. Participants in the rejection condition were told the following:

I need to talk to you about your participation in the final task of the experiment. This is
rather unusual, but no other participant chose to work with you. As a result you would
have to complete the rest of the experiment alone.

Alternatively, participants assigned to the control condition were told:

I need to talk to you about your participation in the final task of the experiment. This is rather unusual, but there has been a mistake in assigning you to a group. As a result you would have to complete the rest of the experiment alone.

In both scenarios, participants were instructed that they would be working alone for the remainder of the experiment; however, the reason for this was varied by condition.

In order to assess the effectiveness of the experimental manipulation, immediately following the feedback the PANAS was administered on a computer using MediaLab software. It was expected that participants in the rejection condition would demonstrate lower positive affect and higher negative affect compared to those in the control condition.

Following the manipulation check, participants were asked to complete the dependent measures, which consisted of two cognitive tasks (visual dot-probe task and the lexical decision task), and two questionnaires (the SSES and the BISS). In order to maintain consistency, the cognitive tasks (VDP and LDT) were administered using DirectRT, and all questionnaire measures were administered using MediaLab software. To prevent order effects, the order of presentation of the cognitive tasks and of the questionnaires were randomized using MediaLab software.

Following completion of the dependent measures, and in order to ascertain whether participants attributed the rejection to their body weight, the experimenter told the rejected participants that because it was uncommon for a participant not to be chosen, it was necessary to collect additional data to better understand this "unusual" situation. Each rejected participant was asked to write a few sentences about why she believed that the other participants did not choose to work with her.

To determine the credibility of the deception, participants subsequently were probed for suspicion. They were asked to describe the experimental procedure in as much detail as possible, what they believed the study was about, and what they suspect the hypotheses were. The experimenter took note of their responses. They were then debriefed thoroughly as to the true nature of the study, the purpose of the deception, and the rejection manipulation. They also were asked to read and sign an information and debriefing form confirming their consent to the use of their data (refer to Appendix Q)

In order to assess the effectiveness of the debriefing procedures in ameliorating any negative affect, participants were again administered a paper-and-pencil version of the PANAS. At this stage, it is expected that positive and negative affect would be comparable for participants from the rejection and control groups.

Finally, participants were informed that obtaining measures of their height and weight was an important component of the study. Those who agreed to be measured were asked to read and sign an additional paper-and-pencil consent form (refer to Appendix R), because the original consent did not include details for this procedure. The experimenter measured each participant's weight and height using a precise scale to obtain an accurate measure of their BMI. Finally, participants were thanked for their participation and excused.

RESULTS

Approach to Data Analysis

All statistical analyses were performed using SPSS (Version 19.0) for Windows

and SPSS for Mac (Version 21.0). First, missing values analysis was performed on all

variables included in this study. Next, descriptive analysis was conducted for

questionnaire measures across conditions. Effectiveness of the manipulation, random

assignment, and participant debriefing were then evaluated. Finally, after the

assumptions of multiple regression were assessed, separate moderated hierarchical

multiple regressions were conducted for each dependent variable, state self-esteem

(SSES-Total, SSES-Appearance, SSES-Performance, SSES-Social), attentional bias

(VDPNeu-Thin, and VDPNeu-Fat), cognitive accessibility (LDTNeu-Thin, LDTNeu-Fat),

and body dissatisfaction (BISS).

Data Inspection

Missing Data

The data were first inspected for missing values. Due to technical difficulties,

four participants were missing data for all dependent variables, and thus were removed

from the dataset. After these cases were removed, a total of 187 were retained for

subsequent analyses. As one participant declined to have her weight and height measured

for BMI calculations, this case was excluded from the main regression analyses that

involved BMI as a covariate.

Missing values analysis (MVA) on the remaining data was then performed. The

percentage of missing values for items included in subsequent analyses ranged from 0.53

to 3.70%. Overall, less than 1.00% of values were missing. Little's MCAR test was not

significant ($\chi^2(9698) = 4602.91$, $p = 1.000$), indicating that the data were missing

completely at random (MCAR) and thus considered ignorable. As a result, imputation of missing values was determined to be an acceptable solution (Schafer & Graham, 2002). Multiple imputation (MI) was chosen, as this method circumvents the problem of reduced variance that is common to other imputation methods (Tabachnik & Fidell, 2007). For all regressions, parameter estimates were pooled across five imputations.

Descriptive Analysis

Descriptive statistics for all questionnaire measures according to experimental condition are presented in Table 2 below.

Table 2

Descriptive Statistics for Measures according to Condition (Full Sample, N = 187)

Variable	Control Condition (*n* = 92)			Rejection Condition (*n* = 95)		
	Mean	*Median*	*SD*	*Mean*	*Median*	*SD*
BWCSWS	5.00	5.00	1.27	4.94	5.13	1.33
BDI^T	14.86	12.00	11.70	12.18	11.00	9.00
BMI^T	24.26	22.43	5.23	24.74	23.77	4.32
RSES	19.68	19.00	5.56	21.16	21.00	5.17
RSQ	8.85	9.00	3.24	8.54	8.11	3.65
SSES-Total	71.59	72.00	13.05	73.33	75.00	14.37
SSES-Appearance^T	19.50	19.00	4.65	20.22	21.00	4.96
SSES-Performance^T	26.46	27.39	4.90	36.91	27.00	4.88
SSES-Social^T	25.63	26.00	5.63	26.20	27.00	6.23
BISS	5.14	5.17	1.50	5.36	5.50	1.41
PANAS-PA$_M$	29.00	30.00	8.39	26.64	25.56	8.08
PANAS-NA$_M$	15.19	14.00	5.88	15.16	15.00	5.07
PANAS-PA$_D$	28.83	28.00	7.87	28.73	29.00	8.23
PANAS-NA$_D$	12.47	11.00	3.83	12.37	11.00	3.82

Note. [T] Indicates that the variable was later transformed prior to the main analysis. For these scales, the median is considered a more appropriate measure of central tendency.
BWCSWS = Body Weight Contingent Self-Worth Scale; BDI-II = Beck Depression Inventory-II; BMI = Body Mass Index; RSES = Rosenberg Self-Esteem Scale; A-RSQ = Adult Rejection Sensitivity Questionnaire; SSES-Total = State Self-Esteem Scale, Total scale; SSES-Appearance = State Self-Esteem Scale, Appearance subscale; SSES-Performance = State Self-Esteem Scale, Performance subscale; SSES-Social = State Self-Esteem Scale, Social subscale; PANAS-PA$_M$ = Positive and Negative Affect Schedule, Positive Affect subscale (post-manipulation); PANAS-NA$_M$ = Positive and Negative Affect Schedule, Negative Affect subscale (post-manipulation); PANAS-PA$_D$ = Positive and Negative Affect Schedule, Positive Affect subscale (post-debriefing); PANAS-NA$_D$ = Positive and Negative Affect Schedule, Negative Affect subscale (post-debriefing).

Effectiveness of the Manipulation, Random Assignment, and Debriefing

In order to test the effectiveness of the demarcated rejection manipulation, independent t-tests were performed on the PANAS-NA$_M$ and PANAS-PA$_M$ subscales. Manipulation checks indicated that there was no significant difference in participants' negative affect in the rejection condition ($M = 15.16$, $SD = 5.07$) compared to the control condition ($M = 15.19$, $SD = 5.88$), $t(185) = 0.33$, $p = .973$. On the other hand, participants' positive affect was significantly lower in the rejection condition ($M = 26.64$, $SD = 8.39$) than in the control condition ($M = 28.99$, $SD = 8.08$), $t(185) = 1.97$, $p = .050$. Accordingly, it appears that the rejection manipulation was effective at reducing participants' positive affect compared to control, though their negative affect was not significantly affected.

Next, a series of independent t-tests were conducted in order to determine whether random assignment of participants to the rejection versus the control condition was effective. Results indicated that participants in the rejection condition did not differ significantly from those in the control condition (ps > .261) across age, ethnicity, past or present eating disorder diagnosis, BMI, or the number of psychology courses taken at the time of the study. Thus, random assignment was considered to be effective.

Finally, a series of ANOVAs were conducted to ascertain whether there were any experimenter effects on participants' responses on the dependent variables. Results indicated that participants did not differ significantly (ps > .500) between the three experimenters on state self-esteem, cognitive accessibility, attentional bias, or state body dissatisfaction. Accordingly, it was assumed that there were no differences on participant outcomes based on the experimenter conducting the study.

In order to assess the effectiveness of the debriefing, a series of one-way repeated measures ANOVAs were conducted on the PANAS-NA$_D$ and PANAS-PA$_D$ subscales pre- and post-debriefing. Importantly, participants' negative affect scores were significantly lower after debriefing ($M = 12.42$, $SD = 3.82$) than they were before ($M = 15.11$, $SD = 5.24$), $F(1,186) = 80.33$, $p < .001$. On the other hand, the analysis revealed that participants' positive affect scores were not significantly different after debriefing ($M = 28.77$, $SD = 8.04$) than they were before ($M = 27.81$, $SD = 8.31$), $F(1,186) = 3.19$, $p = .076$. Consequently, it appears that the debriefing was effective at reducing participants' negative affect, though their positive affect was not significantly affected.

Assumptions of Multiple Regression

Prior to the main analysis, assumptions of multiple regression were evaluated for all variables included in subsequent regression analyses. First, the assumption of adequate sample size was assessed. As a rule of thumb, Green (1991) recommends a minimum sample size of $104 + k$ for testing individual predictors in multiple regression. As the number of cases in each regression exceeded $N = 112$, the sample size was deemed adequate.

The assumption of independence of errors was assessed separately for each regression. As none of the Durban-Watson statistics were less than 1 or greater than 3 (Field, 2009), this assumption was considered met. Next, the data were inspected for homoscedasticity of errors and linearity (Field, 2009). Visual inspection of standardized residual versus predicted residual scatterplots for each regression showed that the residuals were distributed in a straight horizontal fashion, and were randomly scattered with an almost equal number of residuals above and below the zero-residual line. Further,

the scatterplots did not demonstrate any wave or a megaphone patterns. Thus, the assumptions of linearity and homoscedasticity were assumed.

The assumption of absence of multicollinearity was assessed by examining variance inflation factors (VIF), tolerance, and intercorrelations among predictor variables. None of the variables approached the cut-offs of VIF > 10 or tolerance < 0.1 (Field & Miles, 2010), and none of the predictor variables shared a correlation that exceeded $r = |0.90|$ (Tabachnik & Fidell, 2007). Accordingly, absence of multicollinearity was assumed (refer to Table 3 for all zero-order correlations).

Table 3

Zero-Order Correlations (Pearson) Between Untransformed Variables Included in the Regression Models (Full Sample, N = 187).

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. BWCSWS	1																
2. Condition	-.02	1															
3. BDI^T	.14	-.13	1														
4. BMI^T	.22**	.05	.09	1													
5. RSES	-.20**	.14	-.59**	-.08	1												
6. RSQ	-.08	-.04	.35**	.07	-.52**	1											
7. SSES-Total	-.34**	.06	-.44**	-.14	.63**	-.34**	1										
8. SSES-Appearance^T	-.40**	.08	-.34**	-.34**	.55**	-.27**	.84**	1									
9. SSES-Performance^T	-.20**	.05	-.44**	.05	.58**	-.24**	.88**	.71**	1								
10. SSES-Social^T	-.30**	.05	-.38**	-.09	.54**	-.37**	.91**	.64**	.88**	1							
11. VDPNeu-Thin	.01	-.00	.03	-.02	-.02	.01	.08	.09	.06	.05	1						
12. VDPNeu-Fat	.00	-.19*	-.00	-.03	.16*	-.22**	.12	.05	.10	.17*	.01	1					
13. LDTNeu-Thin	.01	-.02	-.05	.06	.06	.01	.09	.12	.13	.02	.07	-.02	1				
14. LDTNeu-Fat	.04	-.08	.04	.02	.06	.00	.04	.07	.08	-.03	.13	-.03	.74**	1			
15. BISS	-.42**	.08	-.29**	-.42**	.44**	-.22**	.64**	.81**	.40**	.49**	.06	.04	.10	.02	1		
16. PANAS-PA$_M$	-.09	-.14	-.11	-.03	.17*	-.20**	.14	.15*	.08	.13	-.06	.10	-.08	-.11	.16*	1	
17. PANAS-NA$_M$	.05	-.00	.36**	-.10	-.38**	.31**	-.52**	-.32**	-.50**	-.53**	.03	-.16*	.02	-.03	-.18*	-.04	1

* Indicates statistical significance at the $p < .05$ level, ** indicates statistical significance at the $p < .01$ level.
^{T} Indicates that the variable was later transformed prior to the main analysis.

The assumption of normality was assessed by visual inspection of histograms and Q-Q plots, standardized scores for skewness and kurtosis, as well as Kolmogrov Smirnov (*K-S*) and Shapiro-Wilk (*SW*) statistics (Field, 2009). Although univariate normality is not an explicit assumption of multiple regression, Tabachnick and Fidell (2007) suggest that non-normal distribution of individual variables can degrade the solution of a regression model. Examination of normality diagnostics for each continuous variables indicated that BWCSWS, RSQ, and BISS were approximately normal, whereas BDI, BMI, RSES, SSES-Total, SSES-Appearance, SSES-Social, SSES-Performance, VDPNeu-Thin, VDPNeu-Fat, LDTNeu-Thin, and LDTNeu-Fat were not normally distributed.

As recommended by Tabachnik and Fidell (2007), transformations were attempted for each non-normally distributed variable in order to reduce the impact of outliers, minimize the likelihood of homoscedasticity, and to improve pairwise linearity. For each variable, a square-root transformation for moderate skewness was attempted first, followed by a logarithm transformation for substantial skewness, and an inverse ($1/x$) transformation for severe skewness (Tabachnik & Fidell, 2007). Normality diagnostics were inspected following each transformation, and the transformation that brought the variable closest to univariate normality was selected. A square-root transformation was applied to BDI in order to correct for positive skewness. This transformation greatly improved normality of BDI and the *K-S* statistic was no longer significant ($p > .076$). An inverse transformation was applied to BMI to correct for positive skewness. After applying the transformation, the data for BMI more closely approximated the normal distribution, and the *K-S* and *SW* statistics were no longer significant ($ps > .200$). Reflect and square-root transformations were applied to SSES-Total, SSES-Appearance, SSES-

Performance, and SSES-Social in order to correct for negative skewness. After transformations were applied, *K-S* statistics were no longer found to be significant for SSES-Total, SSES-Social, and SSES-Performance (*p*s > .200), and *SW* statistics were no longer significant for SSES-Total, SSES-Appearance, and SSES-Performance (*p*s > .051). When transformation was successful, the transformed variables were included in all subsequent analyses. It is important to note that, when interpreting regression weights for reflect transformed and inverse transformed variables, it is necessary to reverse the direction of interpretation as well (i.e. what is low becomes high and what is high becomes low). Transformations were unsuccessful for RSES, VDPNeu-Thin, VDPNeu-Fat, LDTNeu-Thin, and LDT-Neu-Fat.

Examination of normality diagnostics for normally distributed errors post-transformations indicated that the standardized residuals for BISS, SSES-Total, SSES-Appearance, SSES-Performance, and SSES-Social were approximately normal, whereas the residuals of VDPNeu-Thin, VDPNeu-Fat, LDTNeu-Thin, and LDTNeu-Fat were not normal. Notably, after outliers were identified and their impact was reduced (refer to discussion of outliers below), normality of residuals for VDPNeu-Thin and VDPNeu-Fat were greatly improved and the *K-S* statistic was no longer significant (*p* > .200). As recommended by Field (2009), in order to circumvent problems related to non-normality, bootstrapping was attempted for the remaining variables with non-normal residuals. Bootstrapping is a technique whereby the properties of a sampling distribution of a statistic are estimated using repeated sampling from the data (Field, 2009). As bootstrapping did not change the results of the final regression models, and because multiple regression analysis is considered to be fairly robust to violations of normally

distributed errors (e.g. Osborne, & Waters, 2002), the non-boostrapped results for LDTNeu-Thin and LDTNeu-Fat are reported.

As recommended by Tabachnik and Fidell (2007), the assumption of absence of outliers was examined after normality was inspected and transformations were performed. The authors suggest that transforming non-normal data prior to dealing with outliers is preferable, because improving univariate normality reduces the impact of outliers that may exist in the tails of untransformed distributions. The data were first inspected for univariate outliers within each variable, where extreme cases were detected using scatter plots and z-scores. In order to reduce the impact of univariate outliers, scores beyond 300ms and greater than 1500ms (Boon et al., 2000; Rieger et al., 1996) on cognitive measures, and scores beyond $z = |3.29|$ on questionnaire measures were Windsorized. Windsorization is a technique used to avoid data loss, whereby extreme values are replaced with raw scores one unit larger than the next most extreme score present in the distribution of the respective variable (Tabachnik & Fidell, 2007). Univariate outliers were detected and Windsorized for VDPNeu-Thin, VDPNeu-Fat, LDTNeu-Thin, LDTNeu-Fat, and PANAS-NA$_M$.

The data were subsequently examined for multivariate outliers separately for each regression analysis. As recommended by Tabachnik and Fidell (2007), only outliers impacting the final model were removed from the analyses. First, outliers on the dependent variables were detected using studentized deleted residual values. Though outliers on the dependent variables were detected for all regression models, their removal did not appreciably impact the final solutions, and as a result they were retained. Next, outliers on independent variables were identified using leverage and Mahalanobis distance. No such outliers were detected in the data. Finally, influential observations

were examined using Cook's distance and DFfit values. As no influential observations were detected for any of the regressions, all cases were retained.

In addition to the aforementioned assumptions of MRA, inclusion of covariates in the analysis requires that the covariates are measured without error. The covariate measures in the present study were chosen based on their wide use in body image and rejection research. In addition, only measures with at least acceptable levels of internal consistency and test-retest reliability were selected and all had acceptable to excellent internal consistency in the present study (see "Measures" section for details).

Main Analyses

In order to test the research hypotheses, separate moderated multiple regression analyses (MMRA) were conducted for each of the dependent variables: state self-esteem, attentional bias, cognitive accessibility, and body satisfaction. Multiple regression was selected over analysis of variance (ANOVA) for the present analysis, as it is a more powerful approach and is more suitable for testing multiple covariates (Nelson & Zaichkowsky, 1979). The MMRA approach in particular is recommended for testing moderation in this case, as the regression equation from this approach can accommodate a moderator in its continuous form (Holmbeck, 1997; Mason, Tu, & Cauce, 1996). Prior to analysis, the continuous moderator and covariate variables were centred in order to eliminate the possibility of multcollinearity effects between the independent variable and the moderator with the interaction term (Aiken & West, 1991). A significance level of $p < 0.05$ was maintained for all data analyses.

As mentioned above, covariates in the present research included depressive symptoms (BDI), body mass index (BMI), global trait self-esteem (RSES), and rejection sensitivity (RSQ). For each regression, covariates that were at least moderately correlated

($r \geq |0.30|$) with the dependent variable were entered into the analysis and were retained

only if they contributed significantly to the model (Field, 2005). In order to test the

significance of the moderation effect, the significant covariate variables, the independent

variable (experimental condition) and the moderator variable (BWCSWS), as well as the

interaction term variable (BWCSWS x experimental condition), were entered into the

regression equation in a hierarchical fashion (Baron & Kenny, 1986; Holmbeck, 1997).

Specifically, the covariate variables were entered in the first step, the main effects

represented by the independent variable and the moderator variable were entered in the

second step, and the interaction term was entered in the third and final step of the model.

Each dependent variable, state self-esteem, attentional bias, cognitive accessibility, and

body dissatisfaction, was separately regressed on this equation. Significant moderation

effects are indicated by significance of the interaction term variable when the independent

and moderator variables are controlled (Baron & Kenny, 1986).

State Self-Esteem

In order to test hypotheses 1a and 1b, the first regression examined predictors of

state self-esteem. Hypothesis 1a predicted that women whose self-worth is highly based

on body weight would demonstrate significantly lower state self-esteem than would

women whose self-worth is less contingent on body weight across conditions.

Hypothesis 1b predicted that interpersonal rejection would result in lower state self-

esteem for all women when compared to those in the control condition. However, this

effect would be significantly stronger for women whose self-worth is highly contingent

on their body weight compared to those whose self-worth is less contingent on body

weight.

As the full sample was included in this analysis, the total N for the regression analysis was 187. Covariates BMI, BDI, and RSQ did not significantly contribute to the model ($ps > .133$), and thus were removed from subsequent analysis (refer to Table 4 for a summary of the final model).

Step 1 of the model was significant, $F(1,185) = 124.26, p < .001$, and accounted for 40.18% of the variance in state self-esteem. At this step, global trait self-esteem significantly contributed to the model, $\beta = 0.63, t(185) = 10.51, p < .001$, with participants who scored higher on this variable reporting higher levels of state self-esteem.

In Step 2, adding body weight contingent self-worth and experimental condition significantly improved the prediction of state self-esteem, $Fchange(2,183) = 8.27, p < .001$, accounting for an additional 4.96% of the variance. As predicted, body weight contingent self-worth significantly contributed to the model, $\beta = -0.23, t(185) = -4.05, p < .001$, with participants who scored higher on this variable reporting lower state self-esteem. On the other hand, experimental condition was not significant, $\beta = -0.02, t(185) = -0.36, p = .720$, and the squared partial correlation between experimental condition and state self-esteem was $sr^2 = 6.76^{-4}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = 0.07, t(185) = 0.86, p = .392$, and its addition to the model in the final step did not significantly improve the prediction of state self-esteem, $Fchange(1,182) = 0.73, p = .412$, accounting for only an additional 0.22% of the variance. The complete model accounted for 45.36% of the variance in state self-esteem.

Table 4

Final Regression Model for State Self-Esteem (Full Sample, N = 187)

Step	*R*	*R*^{2}	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.63	0.40	(Constant)	72.74	0.78	-	92.67	.000
			RSES	1.61	0.15	0.63	10.51	.000
2	0.67	0.45	(Constant)	72.74	1.08	-	67.66	.000
			RSES	1.51	0.14	0.59	10.51	.000
			BWCSWS	-2.39	0.59	-0.23	-4.05	.000
			Condition	-0.54	1.52	-0.02	-0.36	.720
3	0.67	0.45	(Constant)	72.76	1.08	-	67.61	.000
			RSES	1.52	0.14	0.60	10.53	.000
			BWCSWS	-2.91	0.85	-0.28	-3.43	.001
			Condition	-0.56	1.52	-0.02	-0.37	.712
			BWCSWS x Condition	1.17	1.17	0.07	0.86	.392

Note. RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Ancillary analyses for state self-esteem. Though not central to the research hypotheses, additional analyses were conducted for the appearance, performance, and social subscales of the SSES in order to further specify possible effects of body weight-contingent self-worth and interpersonal rejection on state self-esteem.

State appearance self-esteem. First, a regression analysis was conducted in order to examine predictors of state appearance self-esteem (reflect and square-root transformed). After removing one participant who declined to have her BMI measured, the total N for the regression analysis was 186. Covariates BDI and RSQ did not significantly contribute to the model ($ps > .885$), and thus were removed from subsequent analysis (refer to Table 5 for a summary of the final model).

Step 1 of the model was significant, $F(2,183) = 57.02$, $p < .001$, and accounted for 38.39% of the variance in state appearance self-esteem. At this step, body mass index (inverse transformed) significantly contributed to the model, β -0.28, $t(184) = -4.89$, $p < .001$, with participants with higher BMIs reporting lower levels of state appearance self-esteem. Global trait self-esteem was also significant, $\beta = -0.53$, $t(184) = -9.18$, $p < .001$, with participants who scored higher on this variable reporting higher levels of state appearance self-esteem.

Step 2 of the model was significant, $Fchange(2,181) = 9.12$, $p < .001$, and accounted for an additional 5.64% of the variance. At this step, body weight contingent self-worth significantly contributed to the model, $\beta = 0.25$, $t(184) = 4.22$, $p < .001$, with participants who scored higher on this variable reporting lower levels of state appearance self-esteem. The experimental condition was not significant, $\beta = -0.03$, $t(184) = -0.56$, $p = .573$, and the squared partial correlation between experimental condition and state appearance self-esteem was $sr^2 = 1.75^{-3}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.11$, $t(184) = -1.34$, $p = .179$, and its addition to the model in the final step did not significantly improve the prediction of state appearance self-esteem, $Fchange(1,180) = 1.81$, $p = .181$, accounting for only an additional 0.56% of the variance. The complete model accounted for 44.59% of the variance in state appearance self-esteem.

Table 5

Final Regression Model for State Appearance Self-Esteem (Full Sample, N = 186)

Step	*R*	*R²*	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.62	0.39	(Constant)	3.26	0.04	-	75.49	.000
			BMI (Inverse)	-29.28	5.99	-0.28	-4.89	.000
			RSES	-0.07	0.01	-0.53	-9.18	.000
2	0.66	0.44	(Constant)	3.28	0.06	-	55.43	.000
			BMI (Inverse)	-23.15	5.97	-0.22	-3.88	.000
			RSES	-0.07	0.01	-0.48	-8.46	.000
			BWCSWS	0.14	0.03	0.25	4.22	.000
			Condition	-0.05	0.08	-0.03	-0.56	.573
3	0.67	0.45	(Constant)	3.28	0.06	-	55.50	.000
			BMI (Inverse)	-23.21	5.96	-0.23	-3.90	.000
			RSES	-0.07	0.01	-0.49	-8.57	.000
			BWCSWS	0.19	0.05	0.33	3.95	.000
			Condition	-0.05	0.08	-0.03	-0.55	.582
			BWCSWS x Condition	-0.09	0.06	-0.11	-1.34	.179

Note. BMI (Inverse) = inverse transformed Body Mass Index; RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.
Data for state appearance self-esteem were reflect and square-root transformed, and data for BMI were inverse transformed. This requires that the interpretation of associated regression weights be reversed for both variables.

State performance self-esteem. A second regression analysis was conducted in order to examine predictors of state performance self-esteem (reflect and square-root transformed). As the full sample was included in the analysis, the total N for the regression analysis was 187. Covariates BDI, BMI, and RSQ did not significantly contribute to the model (ps > .063), and thus were removed from subsequent analysis (refer to Table 6 for a summary of the final model).

Step 1 of the model was significant, $F(1,185) = 97.72$, $p < .001$, and accounted for 34.56% of the variance in state performance self-esteem. At this step, global trait self-esteem significantly contributed to the model, $\beta = -0.59$, $t(185) = -9.88$, $p < .001$, with participants who scored higher on this variable reporting higher levels of state performance self-esteem.

Step 2 of the model was not significant, $Fchange(2,183) = 1.08$, $p = .343$, and accounted for only an additional 0.76% of the variance. At this step, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.09$, $t(185) = 1.40$, $p = .160$. Experimental condition also was not significant, $\beta = 0.03$, $t(185) = 0.42$, $p = .674$, and the squared partial correlation between experimental condition and state performance self-esteem was $sr^2 = 9.61^{-4}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.08$, $t(185) = -0.94$, $p = .345$, and its addition to the model in the final step did not significantly improve the prediction of state performance self-esteem, $Fchange(1,182) = 1.46$, $p = .347$, accounting for only an additional 0.32% of the variance. The complete model accounted for 35.64% of the variance in state performance self-esteem.

Table 6

Final Regression Model for State Performance Self-Esteem (Full Sample, N = 187)

Step	R	R^2	Variables Entered	b	*SE b*	B	t	*Sig.*
1	0.58	0.35	(Constant)	2.94	0.05	-	59.63	.000
			RSES	-0.90	0.01	-0.59	-9.88	.000
2	0.59	0.35	(Constant)	2.92	0.07	-	41.36	.000
			RSES	-0.09	0.01	-0.58	-9.39	.000
			BWCSWS	0.05	0.04	0.09	1.40	.160
			Condition	0.04	0.10	0.03	0.42	.674
3	0.60	0.36	(Constant)	2.91	0.07	-	41.31	.000
			RSES	-0.08	0.01	-0.58	-9.44	.000
			BWCSWS	0.09	0.06	0.15	1.65	.098
			Condition	0.04	0.10	0.13	0.43	.666
			BWCSWS x Condition	-0.07	0.08	-0.08	-0.94	.345

Note. RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition. Data for state performance self-esteem were reflect and square-root transformed, requiring that the interpretation of all regression weights be reversed.

State social self-esteem. A third regression analysis was conducted in order to examine predictors of state social self-esteem (reflect and square-root transformed). As the full sample was included in the model, the total *N* for the regression analysis was 187. Covariates BDI, BMI, and RSQ did not significantly contribute to the model (*ps* > .113), and thus were removed from subsequent analysis (refer to Table 7 for a summary of the final model).

Step 1 of the model was significant, $F(1,185) = 77.56$, $p < .001$, and accounted for 29.54% of the variance in state social self-esteem. At this step, global trait self-esteem significantly contributed to the model, $\beta = -0.54$, $t(185) = -8.80$, $p < .001$, with participants who scored higher on this variable reporting higher levels of state social self-esteem.

Step 2 of the model was significant, *Fchange*$(2,183) = 5.53$, $p = .005$, and accounted for an additional 4.02% of the variance. At this step, body weight contingent self-worth significantly contributed to the model, $\beta = 0.22$, $t(185) = 3.32$, $p = .001$, with participants who scored higher on this variable reporting lower levels of state social self-esteem. The experimental condition was not significant, $\beta = 0.01$, $t(185) = 0.09$, $p = .928$, and the squared partial correlation between experimental condition and state social self-esteem was $sr^2 = 4.90^{-5}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.01$, $t(185) = -0.16$, $p = .869$, and its addition to the model in the final step did not significantly improve the prediction of state social self-esteem, *Fchange*$(1,182) = 0.03$, $p = .870$, accounting for only an additional 1.04^{-4}% of the variance. The complete model accounted for 33.56% of the variance in state social self-esteem.

Table 7

Final Regression Model for State Social Self-Esteem (Full Sample, N = 187)

Step	*R*	*R*^{2}	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.54	0.30	(Constant)	3.02	0.06	-	49.90	.000
			RSES	-0.10	0.01	-0.54	-8.80	.000
2	0.58	0.34	(Constant)	3.02	0.09	-	35.63	.000
			RSES	-0.09	0.01	-0.51	-8.13	.000
			BWCSWS	0.15	0.05	0.22	3.32	.001
			Condition	0.01	0.12	0.01	0.09	.928
3	0.58	0.34	(Constant)	3.01	0.09	-	35.52	.000
			RSES	-0.09	0.01	-0.50	-8.08	.000
			BWCSWS	0.16	0.07	0.22	2.43	.015
			Condition	0.01	0.12	0.01	0.09	.972
			BWCSWS x Condition	-0.02	0.09	-0.01	-0.16	.869

Note. RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition. Data for state social self-esteem were reflect and square-root transformed, requiring that the interpretation of all regression weights be reversed.

Attentional Bias

In order to test hypotheses 2a and 2b, regression analyses were used to examine predictors of attentional bias for body weight-related words. Hypothesis 2a predicted that women whose self-worth is highly based on body weight would demonstrate significantly greater attentional bias for body weight-related information than would women whose self-worth is less contingent on body weight across conditions. Hypothesis 2b predicted that for women whose self-worth is highly contingent on body weight, interpersonal rejection would result in significantly greater levels of attentional bias for body weight-related information than it would for women whose self-worth is less based on body weight or for either group of women in the control condition.

As previously discussed, reaction time data from the visual dot-probe task was used as a measure of attentional bias for body weight-related information (refer to Table 8 for descriptive statistics). Attentional bias for thin and fat words was analysed separately (Cassin & von Ranson, 2005). For the following analyses, difference scores (VDPNeu-Thin and VDPNeu-Fat) were calculated from the reaction time data in order to control for individual differences in baseline reaction time (Mayerl, 2004). Negative scores on these variables indicate longer reaction times for body weight words compared to neutral, and thus attentional bias away from body weight words. Positive scores indicate shorter reaction times for body weight words compared to neutral, and thus attentional bias toward body weight words.

Table 8

Descriptive Statistics for Visual Dot Probe Task by Condition (Full Sample, N = 187)

	Control Condition (*n* = 92)			Rejection Condition (*n* = 95)		
Variable	*Mean*	*SD*	*Range*	*Mean*	*SD*	*Range*
Difference Scores						
Neutral - Thin Words	-0.95	33.40	-80.44 – 87.28	-0.99	30.73	-146.66 – 110.63
Neutral - Fat Words	9.04	36.22	-70.84 – 185.74	-3.26	29.13	-90.57 – 78.47
Reaction Times (ms)						
Thin Words	518.08	94.56	377.58 – 959.44	511.54	99.00	315.67 – 971.75
Neutral/Thin Words	517.13	89.75	382.40 – 966.21	510.55	92.97	340.94 – 965.68
Fat Words	512.21	96.11	385.83 – 1072.17	515.26	88.99	341.32 – 892.95
Neutral/Fat Words	521.25	95.48	388.50 – 1021.67	512.00	94.39	357.37 – 971.42
Accuracy Rates						
Thin Words	0.97	0.05	0.80 – 1.00	0.97	0.04	0.80 – 1.00
Neutral/Thin Words	0.97	0.05	0.70 – 1.00	0.98	0.04	0.85 – 1.00
Fat Words	0.97	0.04	0.80 – 1.00	0.96	0.05	0.80 – 1.00
Neutral/Fat Words	0.97	0.04	0.85 – 1.00	0.97	0.04	0.80 – 1.00

Note. Raw difference, reaction time, and accuracy statistics are provided for descriptive purposes. Due to the nature of the VDP, statistics for neutral words paired with fat and thin words are presented separately. Neutral/Thin Words refers to neutral paired with thin words, and Neutral/Fat Words refers to neutral paired with fat words.

Attentional bias for thin words. The first regression examined predictors of attentional biases for thin body weight-related words. As the full sample was included in the analysis, the total N for the regression analysis was 187. None of the covariates significantly contributed to the model ($ps > .602$), and thus all were removed from subsequent analysis (refer to Table 9 for a summary of the final model).

Step 1 of the model was not significant, $F(2,184) = 0.02$, $p = .981$, and accounted for only 1.95^{-4}% of the variance in attentional bias for thin words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.01$, $t(185) = 0.70$, $p = .944$. The experimental condition also was not significant, $\beta = 0.01$, $t(185) = 0.18$, $p = .991$, and the squared partial correlation between experimental condition and attentional biases for thin body weight-related words was $sr^2 = 1.69^{-4}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = 0.07$, $t(185) = 0.68$, $p = .499$, and its addition to the model in the final step did not significantly improve the prediction of attentional bias for thin words, $Fchange(1,183) = 0.46$, $p = .500$, accounting for only an additional 0.25% of the variance. The complete model accounted for 0.27% of the variance in attentional bias for thin body-related words.

Table 9

Final Regression Model for Attentional Biases for Thin Words (Full Sample, N = 187)

Step	R	R^2	Variables Entered	b	*SE b*	β	t	*Sig.*
1	0.01	0.00	(Constant)	-1.53	3.12	-	-0.49	.914
			BWCSWS	0.11	1.69	0.01	0.70	.944
			Condition	0.78	4.39	0.01	0.18	.991
2	0.05	0.00	(Constant)	-1.49	3.13	-	-0.48	.629
			BWCSWS	-1.10	2.48	-0.05	-0.45	.656
			Condition	0.78	4.39	0.01	0.18	.858
			BWCSWS x Condition	2.29	3.39	0.07	0.68	.499

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Attentional bias for fat words. A second regression examined predictors of attentional biases for fat body weight-related words. As the full sample was included in the analysis, the total N for the regression analysis was 187. None of the covariates significantly contributed to the model ($ps > .304$), and thus all were removed from subsequent analysis (refer to Table 10 for a summary of the final model).

Step 1 of the model was not significant, $F(2,184) = 2.89$, $p = .058$, and accounted for 3.04% of the variance in attentional bias for fat words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.10$, $t(185) = -0.10$, $p = .924$. At this step, the experimental condition was significant, $\beta = -0.17$, $t(185) = -2.40$, $p = .010$, with individuals who were rejected reporting slower reaction times for fat words compared to neutral, and thus attentional bias away from fat words. The squared partial correlation between experimental condition and attentional biases for fat body weight-related words was $sr^2 = 0.03$, which is a small effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.15$, $t(185) = -1.41$, $p = .160$, and its addition to the model in the final step did not significantly improve the prediction of attentional bias for fat words, $Fchange(1,183) = 1.98$, $p = .161$, accounting for only an additional 1.04% of the variance. The complete model accounted for 4.04% of the variance in attentional bias for fat body-related words.

Table 10

Final Regression Model for Attentional Biases for Fat Words (Full Sample, N = 187)

Step	*R*	*R*^{2}	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.17	0.03	(Constant)	7.41	3.17	-	2.34	.042
			BWCSWS	-0.16	1.71	0.10	-0.10	.924
			Condition	-10.67	4.44	-0.17	-2.40	.010
2	0.20	0.04	(Constant)	7.34	3.16	-	2.32	.020
			BWCSWS	2.40	2.50	0.10	0.96	.337
			Condition	-10.67	4.43	-0.17	-2.41	.016
			BWCSWS x Condition	-4.81	3.42	-0.15	-1.41	.160

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Cognitive Accessibility

In order to test hypotheses 2c and 2d, regression analyses were used to examine predictors of cognitive accessibility for body weight-related information. Hypothesis 2c predicted that women whose self-worth is highly based on body weight would demonstrate significantly greater cognitive accessibility for body weight-related information than would women whose self-worth is less contingent on body weight across conditions. Hypothesis 2d predicted that for women whose self-worth is highly based on body weight, interpersonal rejection would result in significantly greater levels of cognitive accessibility for body weight-related information than it would for women whose self-worth is less based on body weight or for either group of women in the control condition.

Reaction time data from the lexical decision task was used as a measure of cognitive accessibility for body weight-related information (refer to Table 11 for descriptive statistics). Due to technical complications within the MediaLab program, LDT data was not collected for six participants, and thus a sample size of 181 was used in subsequent analyses.

As previously discussed, cognitive accessibility for thin and fat words was analysed separately (Cassin & von Ranson, 2005). For the following analyses, difference scores (LDTNeu-Thin and LDTNeu-Fat) were calculated from the reaction time data in order to control for individual differences in baseline reaction time (Mayerl, 2004). Negative scores indicate longer reaction times for body weight words compared to neutral, and thus lower cognitive accessibility for body weight words. Positive scores indicate shorter reaction times for body weight words compared to neutral, and thus greater cognitive accessibility for body weight words.

Table 11

Descriptive Statistics for Lexical Decision Task by Condition (Full Sample, N =181)

Variable	Control Condition (*n* = 88)			Rejection Condition (*n* = 93)		
	Mean	*SD*	*Range*	*Mean*	*SD*	*Range*
Difference Scores						
Neutral - Thin Words	-22.58	133.09	-681.57 – 163.00	-34.48	358.23	-3082.78 – 815.49
Neutral - Fat Words	-27.80	107.65	-451.57 – 181.76	-57.87	237.33	-1689.27 – 561.05
Reaction Times (ms)						
Thin Words	809.17	245.20	499.80 – 2375.63	858.36	706.47	479.00 – 5777.33
Fat Words	813.17	210.22	537.63 – 2145.63	881.75	605.45	480.00 – 4922.10
Neutral Words	786.55	161.19	564.53 – 1694.06	823.88	456.25	478.81 – 4232.81
Accuracy Rates						
Thin Words	0.86	0.12	0.58 – 1.00	0.85	0.15	0.33 – 1.00
Fat Words	0.87	0.16	0.33 – 1.00	0.85	0.16	0.33 – 1.00
Neutral Words	0.88	0.09	0.67 – 1.00	0.86	0.10	0.42 – 1.00

Note. Raw difference, reaction time, and accuracy statistics are provided for descriptive purposes.

Cognitive accessibility for thin words. The first regression examined predictors of cognitive accessibility for thin body weight-related words. None of the covariates significantly contributed to the model ($ps > .133$), and thus all were removed from subsequent analysis (refer to Table 12 for a summary of the final model).

Step 1 of the model was not significant, $F(2,176) = 1.03$, $p = .360$, and accounted for only 1.14% of the variance in cognitive accessibility for thin words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.06$, $t(146) = 0.83$, $p = .408$. The experimental condition also was not significant, $\beta = 0.09$, $t(146) = 1.18$, $p = .213$, and the squared partial correlation between experimental condition and cognitive accessibility for thin body weight-related words was $sr^2 = 7.74^{-3}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.12$, $t(146) = -1.08$, $p = .279$, and its addition to the model in the final step did not significantly improve the prediction of cognitive accessibility for thin words, $Fchange(1,177) = 1.17$, $p = .280$, accounting for only an additional 0.65% of the variance. The complete model accounted for 1.79% of the variance in cognitive accessibility for thin body-related words.

Table 12

Final Regression Model for Cognitive Accessibility for Thin Words (Full Sample, N = 181)

Step	*R*	*R²*	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.11	0.01	(Constant)	-9.66	11.23	-	-0.86	.391
			BWCSWS	4.97	6.01	0.06	0.83	.408
			Condition	18.52	15.66	0.09	1.18	.213
2	0.13	0.02	(Constant)	-9.67	11.22	-	-0.86	.389
			BWCSWS	12.05	8.88	0.15	1.36	.175
			Condition	18.32	15.66	0.09	1.17	.242
			BWCSWS x Condition	-13.05	12.05	-0.12	-1.08	.279

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Cognitive accessibility for fat words. The second regression examined predictors of cognitive accessibility for fat body weight-related words. None of the covariates significantly contributed to the model (ps > .401), and thus all were removed from subsequent analysis (refer to Table 13 for a summary of the final model).

Step 1 of the model was not significant, $F(2,178) = 0.86$, $p = .424$, and accounted for only 0.96% of the variance in cognitive accessibility for fat words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.08$, $t(179) = 1.04$, $p = .297$. The experimental condition also was not significant, $\beta = -0.06$, $t(179) = -0.78$, $p = .440$, and the squared partial correlation between experimental condition and cognitive accessibility for fat body weight-related words was $sr^2 = 3.48^{-3}$, which is a trivial effect size.

The interaction term was not significant, $\beta = -0.03$, $t(179) = -0.27$, $p = .788$, and its addition to the model in the final step did not significantly improve the prediction of cognitive accessibility for fat words, $Fchange(1,177) = 0.07$, $p = .788$, accounting for only an additional 4.06^{-4}% of the variance. The complete model accounted for 1.00% of the variance in cognitive accessibility for fat body-related words.

Table 13

Final Regression Model for Cognitive Accessibility for Fat Words (Full Sample, N = 181)

Step	*R*	*R²*	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.10	0.01	(Constant)	-20.50	11.34	-	-1.81	.071
			BWCSWS	6.33	6.07	0.08	1.04	.297
			Condition	-12.40	15.82	-0.06	-0.78	.440
2	0.10	0.01	(Constant)	-20.50	11.37	-	-1.80	.071
			BWCSWS	8.12	9.00	0.10	0.90	.367
			Condition	-12.45	15.86	-0.06	-0.79	.432
			BWCSWS x Condition	-3.29	12.21	-0.03	-0.27	.788

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

State Body Satisfaction

In order to test hypotheses 3a and 3b, a regression model was designed to examine predictors of state body satisfaction. Hypothesis 3a predicted that women whose self-worth is highly based on body weight would demonstrate significantly lower body satisfaction than would women whose self-worth is less contingent on body weight across conditions. Hypothesis 3b predicted that for women whose self-worth is highly based on body weight, interpersonal rejection would result in significantly lower body satisfaction than it would for women whose self-worth is less based on body weight or for women of either group in the control condition.

After removing one participant who declined to have her BMI measured, the total *N* for the regression analysis was 186. Covariates BDI and RSQ did not significantly contribute to the model (ps > .893), and thus were removed from subsequent analysis (refer to Table 14 for a summary of the final model).

Step 1 of the model was significant, $F(2,183) = 48.08$, $p < .001$, and accounted for 34.45% of the variance. At this step, body mass index (inverse transformed) significantly contributed to the model, $\beta = 0.39$, $t(184) = 6.43$, $p < .001$, with participants with higher BMIs reporting lower levels of state body satisfaction. Global trait self-esteem also significantly contributed to the model, $\beta = 0.42$, $t(184) = 7.01$, $p < .001$, with participants who scored higher on this variable reporting higher levels of state body satisfaction.

Step 2 of the model was significant, $Fchange(2,181) = 9.87$, $p < .001$, and accounted for an additional 6.39% of the variance. As predicted, body weight contingent self-worth significantly contributed to the model, $\beta = -0.26$, $t(184) = -4.33$, $p < .001$, with participants who scored higher on this variable reporting lower levels of state body satisfaction. The experimental condition was not significant, $\beta = 0.05$, $t(184) = 0.88$, p

$= .381$, and the squared partial correlation between experimental condition and state body satisfaction was $sr^2 = 4.10^{-3}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = 0.10$, $t(184) = 1.25$, $p = .212$., and its addition to the model in the final step did not significantly improve the prediction of state body satisfaction, $Fchange(1,180) = 1.56$, $p = .213$, accounting for only an additional 0.51% of the variance. The complete model accounted for 41.40% of the variance in state body satisfaction.

Table 14

Final Regression Model for State Body Satisfaction (Full Sample, N = 186)

Step	*R*	*R*²	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.59	0.34	(Constant)	5.25	0.09	-	60.13	.000
			BMI (Inverse)	77.92	0.02	0.39	6.43	.000
			RSES	0.11	12.13	0.42	7.01	.000
2	0.64	0.41	(Constant)	5.18	0.12	-	43.34	.000
			BMI (Inverse)	65.56	0.02	0.33	5.44	.000
			RSES	0.10	12.05	0.37	6.22	.000
			BWCSWS	-0.29	0.07	-0.26	-4.33	.000
			Condition	0.15	0.17	0.05	0.88	.381
3	0.64	0.41	(Constant)	5.18	0.12	-	43.43	.000
			BMI (Inverse)	65.67	12.03	0.33	5.46	.000
			RSES	0.10	0.02	0.37	6.32	.000
			BWCSWS	-0.38	0.10	-0.34	-3.97	.000
			Condition	0.15	0.17	0.05	0.86	.388
			BWCSWS x Condition	0.16	0.13	0.10	1.25	.212

Note. BMI (Inverse) = inverse transformed Body Mass Index; RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.
Data for BMI were inverse transformed, requiring that the interpretation of associated regression weights be reversed.

Rejection Attribution

As discussed, participants in the rejection condition were asked to report on why they believed that the other participants did not choose to work with them. Of those in the rejection condition, eight participants (8.42%) attributed the rejection to their physical appearance, whereas 87 participants (91.58%) attributed the rejection to other reasons (e.g., personality, age, university major, race/ethnicity). Accordingly, a chi-square analysis was conducted in order to determine whether these attribution groups differed according to their reported level of body weight contingent self-worth (high versus low median split). Results indicated that based on the odds ratio, participants with high body weight contingent self-worth were 3.87 times more likely to report that they were rejected because of their appearance compared to those with low levels of body weight contingent self-worth, though this association was not significant, $\chi^2(1) = 2.89$, $p = .089$.

Suspicious Cases Removed

Prior to debriefing, participants were probed for suspicion regarding the true nature of the study. Overall, 17.64% of participants (experimental condition = 28, control condition = 5) reported that they had previous experience with deception research and that as a result, they were not convinced by the cover story. Due to the fact that these participants reported that they suspected that the study was investigating interpersonal rejection, these cases were excluded and regression analyses were conducted for the remaining participants. After all of the suspicious cases were removed from the data, a total sample of $N = 154$ participants was retained in subsequent analyses. This subsample will be referred to as the Suspicious Cases Removed (SCR) sample from this point forward.

Data Inspection

All data preparation steps presented for the main analyses were repeated on the SCR sample.

Descriptive analysis. Descriptive statistics for all questionnaire measures according to experimental condition are presented in Table 15 below.

Table 15

Descriptive Statistics for Measures according to Condition (SCR Sample, N =154)

Variable	Control Condition ($n = 87$)			Rejection Condition ($n = 67$)		
	Mean	*Median*	*SD*	*Mean*	*Median*	*SD*
BWCSWS	4.99	5.00	1.30	4.93	5.12	1.31
BDI[T]	14.09	12.00	10.62	12.11	10.50	8.38
BMI[T]	24.31	22.49	5.30	24.61	23.61	4.10
RSES	19.76	19.00	5.32	21.25	21.00	5.29
RSQ	8.91	8.89	3.19	8.14	7.78	17.33
SSES-Total	71.63	71.00	13.09	73.18	77.00	15.28
SSES-Appearance[T]	19.44	19.00	4.60	20.28	21.00	5.22
SSES-Performance[T]	26.62	28.00	4.75	26.70	27.00	5.28
SSES-Social[T]	25.57	26.00	5.75	26.19	27.00	6.37
BISS	5.10	5.17	1.49	5.49	5.50	1.42
PANAS-PA$_M$	28.84	30.00	8.51	26.48	26.67	7.69
PANAS-NA$_M$	15.06	13.00	5.85	15.43	11.00	5.31
PANAS-PA$_D$	28.80	28.00	7.91	28.37	29.99	8.36
PANAS-NA$_D$	12.57	11.00	3.82	12.97	11.00	4.26

Note. [T] Indicates that the variable was later transformed prior to the main analysis. For these scales, the median is considered a more appropriate measure of central tendency.
BWCSWS = Body Weight Contingent Self-Worth Scale; BDI-II = Beck Depression Inventory-II; BMI = Body Mass Index; RSES = Rosenberg Self-Esteem Scale; A-RSQ = Adult Rejection Sensitivity Questionnaire; SSES-Total = State Self-Esteem Scale, Total scale; SSES-Appearance = State Self-Esteem Scale, Appearance subscale; SSES-Performance = State Self-Esteem Scale, Performance subscale; SSES-Social = State Self-Esteem Scale, Social subscale; PANAS-PA$_M$ = Positive and Negative Affect Schedule, Positive Affect subscale (post-manipulation); PANAS-NA$_M$ = Positive and Negative Affect Schedule, Negative Affect subscale (post-manipulation); PANAS-PA$_D$ = Positive and Negative Affect Schedule, Positive Affect subscale (post-debriefing); PANAS-NA$_D$ = Positive and Negative Affect Schedule, Negative Affect subscale (post-debriefing).

Effectiveness of the manipulation, random assignment, and debriefing. In order to test the effectiveness of the demarcated rejection manipulation for non-suspicious participants, independent t-tests were performed on the PANAS-NA$_M$ and PANAS-PA$_M$ subscales. Manipulation checks indicated that there was no significant difference in participants' negative affect in the rejection condition ($M = 15.43$, $SD = 5.31$) compared to the control condition ($M = 15.06$, $SD = 5.85$), $t(152) = -0.04$, $p = .528$. Positive affect was lower in the rejection condition ($M = 26.48$) than in the control condition ($M = 28.83$), though this difference was only marginally significant ($t(152) = 1.77$, $p = .078$). Thus, it appears that the rejection manipulation did not significantly alter participants' positive or negative affect compared to control.

Next, a series of independent *t*-tests were conducted in order to determine whether random assignment of participants to the rejection versus the control condition was effective. Results indicated that participants in the rejection condition did not differ significantly from those in the control condition ($ps > .244$) across age, ethnicity, past or present eating disorder diagnosis, BMI, or the number of psychology courses taken at the time of the study. Thus, random assignment was considered to be effective.

A series of ANOVAs were conducted to determine whether there were any experimenter effects on participants' responses on the dependent variables. Results indicated that participants did not differ significantly ($ps > .314$) between the three experimenters on state self-esteem, cognitive accessibility, attentional biases, or state body dissatisfaction. Accordingly, it was assumed that there were no differences on participant outcomes based on the experimenter conducting the study.

In order to assess the effectiveness of the debriefing, a series of one-way repeated measures ANOVAs were conducted on the PANAS subscales pre- and post-debriefing.

Importantly, participants' negative affect scores were found to be significantly lower after debriefing ($M = 12.75$, $SD = 4.01$) than they were before ($M = 15.21$, $SD = 15.21$), $F(1,153) = 50.76$, $p < .001$. As well, the analysis revealed that participants' positive affect scores were shown to be significantly higher after debriefing ($M = 28.62$, $SD = 8.09$) than they were before ($M = 25.03$, $SD = 7.40$), $F(1,153)$, 42.07, $p < .001$. Consequently, debriefing procedures were deemed adequate.

Assumptions of multiple regression. Prior to the main analysis, assumptions of multiple regression were evaluated. First, the assumption of adequate sample size was assessed. As a rule of thumb, Green (1991) recommends a minimum sample size of 104 + k for testing individual predictors in multiple regression. As the number of cases in each regression exceeded $N = 112$, the sample size was determined to be sufficient.

The assumption of independence of errors was subsequently assessed separately for each regression. As none of the Durban-Watson statistics were shown to be less than 1 or greater than 3 (Field, 2009), this assumption was considered to be met. Next, the data were inspected for homoscedasticity of errors and linearity (Field, 2009). Visual inspection of standardized residual versus predicted residual scatterplots for each regression showed that the residuals were distributed in a straight horizontal fashion, and were randomly scattered with an almost equal number of residuals above and below the zero-residual line. Further, the scatterplots did not demonstrate any wave or a megaphone patterns. Thus, the assumptions of linearity and homoscedasticity were assumed. Subsequently, the assumption of absence of multicollinearity was assessed by examining variance inflation factors (VIF), tolerance, and intercorrelations among predictor variables. None of the variables approached the cut-offs of VIF > 10 or tolerance < 0.1 (Field & Miles, 2010), and none of the predictor variables shared a correlation that

exceeded $r = |0.90|$ (Tabachnik & Fidell, 2007). Accordingly, absence of

multicollinearity was assumed (refer to Table 16 for all zero-order correlations).

Table 16

Zero-Order Correlations (Pearson) Between Untransformed Variables Included in the Regression Models (SCR Sample, N = 154)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. BWCSWS	1																
2. Condition	-.02	1															
3. BDI^T	.09	-.10	1														
4. BMI^T	.25**	.03	.10	1													
5. RSES	-.20*	.14	-.56**	-.13	1												
6. RSQ	-.04	-.11	-.38**	.05	-.55**	1											
7. SSES-Total	-.32**	.06	-.41**	-.16	.63**	-.37**	1										
8. SSES-Appearance^T	-.39**	.09	-.30**	-.37**	.56**	-.30**	.85**	1									
9. SSES-Performance^T	-.16*	.01	-.41**	.03	.59**	-.30**	.89**	.62**	1								
10. SSES-Social^T	-.29**	.05	-.36**	-.10	.54**	-.37**	.92**	.66**	.75**	1							
11. VDPNeu-Thin	-.02	.04	.06	-.00	-.04	.01	.07	.07	.05	.07	1						
12. VDPNeu-Fat	.01	-.13	-.06	-.02	.14	-.17*	.15	.05	.16*	.17*	.02	1					
13. LDTNeu-Thin	.03	-.06	-.02	.05	.04	-.00	.09	.11	.12	.01	.09	-.00	1				
14. LDTNeu-Fat	.05	-.12	.05	.01	.05	-.02	.04	.08	.07	-.04	.15	-.03	.73**	1			
15. BISS	-.40**	.13	-.24**	-.46**	.45**	-.24**	.62**	.80**	.38**	.49**	.04	.02	.09	.03	1		
16. PANAS-PA$_M$	-.08	-.14	-.05	-.05	.12	-.16	.12	.12	.08	.11	-.04	.04	-.10	-.11	.12	1	
17. PANAS-NA$_M$	.04	.03	.39**	-.10	-.38**	.34**	-.52**	-.34**	-.51**	-.51**	.00	-.19*	.03	-.02	-.18*	-.03	1

* Indicates statistical significance at the $p < .05$ level, ** indicates statistical significance at the $p < .01$ level.
^{T} Indicates that the variable was later transformed prior to the main analysis.

The assumption of normality was assessed by visual inspection of histograms and Q-Q plots, standardized scores for skewness and kurtosis, as well as Kolmogrov Smirnov (*K-S*) and Shapiro-Wilk (*SW*) statistics (Field, 2009). Although univariate normality is not an explicit assumption of multiple regression, Tabachnick and Fidell (2007) suggest that non-normal distribution of individual variables can degrade the solution of a regression model. Examination of normality diagnostics for each continuous variable indicated that BWCSWS, RSQ, SSES-Total, VDPNeu-Fat, and BISS were approximately normal, whereas BDI, BMI, RSES, SSES-Appearance, SSES-Performance, SSES-Social, VDPNeu-Thin, LDTNeu-Thin, and LDTNeu-Fat were not normal.

As recommended by Tabachnik and Fidell (2007), transformations were attempted for each non-normally distributed variable. A square-root transformation was applied to BDI in order to correct for positive skewness. This transformation greatly improved normality of BDI and *SW* and *K-S* statistics were no longer found to be significant (*p*s > .138). An inverse transformation was applied to BMI to correct for positive skewness. Transformation greatly improved normality of BMI and *SW* and *K-S* statistics were no longer found to be significant (*p*s > .200). Reflect and square-root transformations were applied to SSES-Appearance, SSES-Performance, and SSES-Social and in order to correct for negative skewness. These transformations greatly improved normality of all SSES subscales, and the *K-S* and *SW* statistics were no longer significant (*p* > .052). When transformation was successful, the transformed variables were included in all subsequent analyses. It is important to note that, when interpreting regression weights for reflect transformed and inverse transformed variables, it is necessary to reverse the direction of interpretation as well (i.e. what is low becomes high and what is high

becomes low). Transformations were unsuccessful for RSES, or for difference scores for VDP-Thin, LDT-Thin, and LDT-Fat.

Examination of normality diagnostics for normally distributed errors post-transformations indicated that the standardized residuals for SSES-Total, SSES-Appearance, SSES-Performance, SSES-Social, VDPNeu-Fat, and BISS were approximately normal, whereas the residuals of VDPNeu-Thin, LDTNeu-Thin, and LDTNeu-Fat were not normal. As recommended by Field (2009), in order to circumvent problems related to non-normality, bootstrapping was attempted for the remaining variables with non-normal residuals. As bootstrapping did not change the results of the final regression models, and because multiple regression analysis is considered to be fairly robust to violations of normally distributed errors (e.g. Osborne, & Waters, 2002), the non-boostrapped results for VDPNeu-Thin, LDTNeu-Thin and LDTNeu-Fat are reported.

The assumption of absence of outliers was examined. The data were first inspected for univariate outliers within each variable, where extreme cases were detected using scatter plots and z-scores. In order to reduce the impact of univariate outliers, scores beyond 300ms and greater than 1500ms (Boon et al., 2000; Rieger et al., 1996) on cognitive measures, and scores beyond $z = |3.29|$ on all questionnaire measures were reduced using Windsorization. Accordingly, univariate outliers were detected and Windsorized for LDTNeu-Thin, LDTNeu-Fat, and PANAS-NA$_M$.

The data were subsequently examined for multivariate outliers separately for each regression analysis. As recommended by Tabachnik and Fidell (2007), only outliers impacting the final model were removed from the analyses. First, outliers on the dependent variables were detected using studentized deleted residual values. Though

such outliers were detected for all regression models, their removal did not appreciably

impact the final solutions, and as a result they were retained. Next, outliers on the

independent variables were identified using leverage and Mahalanobis distance. No such

outliers were detected in the data. Finally, influential observations were detected using

Cook's distance and DFfit values. One such case the regression for LDTNeu-Thin was

identified and removed from subsequent analysis.

Main Analyses

In order to test the research hypotheses, separate moderated multiple regression

analyses (MMRA) were conducted for each of the dependent variables: state self-esteem,

body satisfaction, attentional bias, and cognitive accessibility. Prior to analysis,

continuous moderator and covariate variables were centred in order to eliminate the

possibility of multcollinearity effects between the independent variable and the moderator

with the interaction term (Aiken & West, 1991). A significance level of $p < 0.05$ was

maintained for all data analyses.

As mentioned above, covariates in the present research included depressive

symptoms (BDI), body mass index (BMI), global trait self-esteem (RSES), and rejection

sensitivity (RSQ). For each regression, covariates that were at least moderately correlated

($r \geq 0.30$) with the dependent variable were entered into the analysis and were retained

only if they contributed significantly to the model (Field, 2005). In order to test the

significance of the moderation effect, the significant covariate variables, the independent

variable (rejection versus control) and the moderator variable (BWCSWS), as well as the

interaction term variable (rejection versus control x BWCSWS), were entered into the

regression equation in a hierarchical fashion (Baron & Kenny, 1986; Holmbeck, 1997).

Specifically, the covariate variables were entered in the first step, the main effects

represented by the independent variable and the moderator variable were entered in the second step, and the interaction term variable was entered in the third and final step of the model. Each dependent variable, state self-esteem, attentional bias, cognitive accessibility, and body dissatisfaction, was separately regressed on this equation.

State self-esteem. In order to test hypotheses 1a and 1b, the first regression examined predictors of state self-esteem. As the entire SCR sample was included in this analysis, the total N for the regression analysis was 154. Covariates BMI, BDI, and RSQ did not significantly contribute to the model ($ps > .131$), and thus were removed from subsequent analysis (refer to Table 17 for a summary of the final model).

Step 1 of the model was significant, $F(1,152) = 102.12, p < .001$, and accounted for 40.16% of the variance in state self-esteem. At this step, global trait self-esteem significantly contributed to the model, $\beta = 0.63, t(153) = 10.10, p < .001$, with participants who scored higher on this variable reporting higher levels of state self-esteem.

In Step 2, adding body weight contingent self-worth and experimental condition significantly improved the prediction of state self-esteem, $Fchange(2,150) = 5.19, p = .007$, accounting for an additional 3.87% of the variance. As predicted, body weight contingent self-worth significantly contributed to the model, $\beta = -0.20, t(153) = -3.17, p = .002$, with participants who scored higher on this variable reporting lower levels of state self-esteem. On the other hand, experimental condition was not significant, $\beta = -0.03, t(153) = -0.53, p = .595$, and the squared partial correlation between experimental condition and state self-esteem was $sr^2 = 0.19$, which is a medium effect size (Cohen, 1988).

The interaction term was not significant, $\beta = 0.08, t(153) = 0.96, p = .964$, and its addition to the model in the final step did not significantly improve the prediction of state

self-esteem, *Fchange*(1,149) = 0.93, *p* = .336, accounting for only an additional 0.35% of

the variance. The complete model accounted for 44.39% of the variance in state self-

esteem.

Table 17

Final Regression Model for State Self-Esteem (SCR Sample, N = 154)

Step	*R*	*R*^{2}	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.63	0.40	(Constant)	72.31	0.88	-	82.23	.000
			RSES	1.67	0.17	0.63	10.10	.000
2	0.66	0.44	(Constant)	72.69	1.14	-	63.55	.000
			RSES	1.58	0.17	0.60	9.52	.000
			BWCSWS	-2.14	0.67	-0.20	-3.17	.002
			Condition	-0.93	1.74	-0.03	-0.53	.595
3	0.67	0.44	(Constant)	72.71	1.14	-	63.54	.000
			RSES	1.59	0.17	0.61	9.56	.000
			BWCSWS	-2.70	0.88	0.08	-3.04	.002
			Condition	-0.93	1.74	-0.03	-0.53	.595
			BWCSWS x Condition	1.29	1.34	0.08	0.96	.964

Note. RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Ancillary analyses for state self-esteem. Similar to the original analyses,

additional analyses were conducted for the appearance, performance, and social subscales

of the SSES in order to further specify possible effects of body weight-contingent self-

worth and interpersonal rejection on state self-esteem in the SCR sample.

State appearance self-esteem. First, a regression analysis was conducted in order

to examine predictors of state appearance self-esteem (reflect and square-root

transformed). After removing one participant who declined to have her BMI measured,

the total *N* for the regression analysis was 153. Covariates BDI and RSQ did not

significantly contribute to the model (*p*s > .684), and thus were removed from subsequent

analyses (refer to Table 18 for a summary of the final model).

Step 1 of the model was significant, $F(2,150) = 50.14$, $p < .001$, and accounted for

40.07% of the variance in state appearance self-esteem. At this step, body mass index

(inverse transformed) significantly contributed to the model, $\beta = 0.40$, $t(151) = -4.66$, *p*

$< .001$, with participants with higher BMIs reporting lower levels of state appearance self-

esteem. Global trait self-esteem also significantly contributed to the model, $\beta = -0.53$,

$t(151) = -8.42$, $p < .001$, with participants who scored higher on this variable reporting

higher levels of state appearance self-esteem.

Step 2 of the model was significant (*Fchange*$(2,148) = 6.08$, $p < .01$), and

accounted for an additional 4.55% of the variance. At this step, body weight contingent

self-worth significantly contributed to the model, $\beta = 0.30$, $t(151) = 3.42$, $p = .002$, with

participants who scored higher on this variable reporting lower levels of state appearance

self-esteem. The experimental condition was not significant, $\beta = -0.04$, $t(151) = -0.60$, *p*

$= .550$, and the squared partial correlation between experimental condition and state

appearance self-esteem was $sr^2 = 0.14$, which is a medium effect size (Cohen, 1988).

Adding the interaction between body weight contingent self-worth and experimental condition in the final step did not significantly improve the prediction of state appearance self-esteem, $Fchange(1,147) = 2.39$, $p = .125$, accounting for only an additional 0.08% of the variance. Further, the interaction term was not significant, $\beta = -0.13$, $t(151) = -1.55$, $p = .122$. The complete model accounted for 45.50% of the variance in state appearance self-esteem.

Table 18

Final Regression Model for State Appearance Self-Esteem (SCR Sample, N = 153)

Step	R	R^2	Variables Entered	b	SE b	β	t	Sig.
1	0.63	0.40	(Constant)	3.98	0.04	-	103.57	.000
			BMI (Inverse)	-24.77	5.31	-0.30	-4.66	.000
			RSES	-0.06	0.01	-0.53	-8.42	.000
2	0.67	0.45	(Constant)	4.00	0.05	-	80.63	.000
			BMI (Inverse)	-19.98	5.37	-0.24	-3.72	.000
			RSES	-0.056	0.01	-0.49	-7.77	.000
			BWCSWS	0.10	0.03	0.30	3.42	.001
			Condition	-0.05	0.08	-0.04	-0.60	.550
3	0.68	0.46	(Constant)	4.00	0.05	-	80.97	.000
			BMI (Inverse)	-20.40	5.36	-0.24	-3.81	.000
			RSES	-0.06	0.01	-0.50	-7.92	.000
			BWCSWS	0.14	0.04	0.30	3.64	.000
			Condition	-0.05	0.08	-0.40	-0.61	.540
			BWCSWS x Condition	-0.09	0.06	-0.13	-1.55	.122

Note. BMI (Inverse) = inverse transformed Body Mass Index; RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.
Data for state appearance self-esteem were reflect and square-root transformed, and data for BMI were inverse transformed. This requires that the interpretation of associated regression weights be reversed for both variables.

State performance self-esteem. A second regression analysis was conducted in order to examine predictors of state performance self-esteem (reflect and square-root transformed). As the entire SCR sample was included in the analysis, the total N for the regression analysis was 154. Covariates BDI, BMI, and RSQ did not significantly contribute to the model (ps > .110), and thus were removed from subsequent analysis (refer to Table 19 for a summary of the final model).

Step 1 of the model was significant, $F(1,152) = 88.49$, $p < .001$, and accounted for 36.27% of the variance in state performance self-esteem. At this step, global trait self-esteem significantly contributed to the model, $\beta = -0.60$, $t(152) = -9.30$, $p < .001$, with participants who scored higher on this variable reporting higher levels of state performance self-esteem.

Step 2 of the model was not significant, $Fchange(2,150) = 0.56$, $p = .570$, and accounted for only an additional 0.48% of the variance. At this step, body weight contingent self-worth did not significantly contribute to the model, $\beta = -0.61$, $t(152) = 0.63$, $p = .528$. Experimental condition also was not significant, $\beta = 0.04$, $t(152) = 0.85$, $p = .395$, and the squared partial correlation between experimental condition and state performance self-esteem was $sr^2 = 4.76^{-3}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.12$, $t(152) = -1.21$, $p = .227$, and its addition to the model in the final step did not significantly improve the prediction of state performance self-esteem, $Fchange(1,149) = 1.46$, $p = .229$, accounting for only an additional 0.62% of the variance. The complete model accounted for 37.36% of the variance in state performance self-esteem.

Table 19

Final Regression Model for State Performance Self-Esteem (SCR Sample, N = 154)

Step	*R*	*R*²	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.60	0.36	(Constant)	2.94	0.06	-0.60	53.55	.000
			RSES	-0.10	0.01	-0.60	-9.30	.000
2	0.61	0.37	(Constant)	2.90	0.07	0.04	39.40	.000
			RSES	-0.10	0.01	0.06	-8.99	.000
			BWCSWS	0.03	0.04	-0.61	0.63	.528
			Condition	0.10	0.11	0.04	0.85	.395
3	0.61	0.37	(Constant)	2.89	0.07	0.06	39.44	.000
			RSES	-0.10	0.01	-0.61	-9.08	.000
			BWCSWS	0.07	0.06	0.11	1.27	.206
			Condition	0.10	0.11	0.06	0.85	.394
			BWCSWS x Condition	-0.10	0.09	-0.12	-1.21	.227

Note. RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.
Data for state performance self-esteem were reflect and square-root transformed, requiring that the interpretation of all regression weights be reversed.

State social self-esteem. A third regression analysis was conducted in order to examine predictors of state social self-esteem (reflect and square-root transformed). As the entire SCR sample was included in the model, the total N for the regression analysis was 154. Covariates BDI, BMI, and RSQ did not significantly contribute to the model ($ps > .178$), and thus were removed from subsequent analysis (refer to Table 20 for a summary of the final model).

Step 1 of the model was significant, $F(1,152) = 62.85$, $p < .001$, and accounted for 29.25% of the variance in state social self-esteem. At this step, global trait self-esteem significantly contributed to the model, $\beta = -0.54$, $t(152) = -7.93$, $p < .001$, with participants who scored higher on this variable reporting higher levels of state social self-esteem.

Step 2 of the model was significant, $Fchange(2,150) = 4.26$, $p = .016$, and accounted for an additional 3.81% of the variance. At this step, body weight contingent self-worth significantly contributed to the model, $\beta = 0.20$, $t(152) = 2.92$, $p = .004$, with participants who scored higher on this variable reporting lower levels of state social self-esteem. On the other hand, the experimental condition was not significant, $\beta = 0.01$, $t(152) = 0.08$, $p = .934$, and the squared partial correlation between experimental condition and state social self-esteem was $sr^2 = 4.55^{-5}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.03$, $t(152) = -1.31$, $p = .760$, and its addition to the model in the final step did not significantly improve the prediction of state social self-esteem, $Fchange(1,149) = 0.09$, $p = .762$, accounting for only an additional 4.20^{-4}% of the variance. The complete model accounted for 33.10% of the variance in state social self-esteem.

Table 20

Final Regression Model for State Social Self-Esteem (SCR Sample, N = 154)

Step	R	R^2	Variables Entered	b	$SE\ b$	β	t	$Sig.$
1	0.54	0.29	(Constant)	3.03	0.07	-	45.21	.000
			RSES	-0.10	0.01	-0.54	-7.93	.000
2	0.58	0.33	(Constant)	3.03	0.09	-	34.51	.000
			RSES	-0.09	0.01	-0.50	-7.30	.000
			BWCSWS	0.15	0.05	0.20	2.92	.004
			Condition	0.01	0.13	0.01	0.08	.934
3	0.58	0.33	(Constant)	3.03	0.09	-	34.40	.000
			RSES	-0.09	0.01	-0.50	-7.27	.000
			BWCSWS	0.16	0.07	0.22	2.41	.016
			Condition	0.01	0.13	001	0.08	.934
			BWCSWS x Condition	-0.03	0.10	-0.03	-0.31	.760

Note. RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.
Data for state social self-esteem were reflect and square-root transformed, requiring that the interpretation of all regression weights be reversed.

Attentional bias. In order to test hypotheses 2a and 2b, reaction time data from the visual dot-probe task was used as a measure of attentional bias for body weight-related information (refer to Table 21 for descriptive statistics). As previously discussed, attentional bias for thin and fat words was analysed separately (Cassin & von Ranson, 2005). For the following analyses, difference scores (VDPNeu-Thin and VDPNeu-Fat) were calculated from the reaction time data in order to control for individual differences in baseline reaction time (Mayerl, 2004). Negative scores on these variables indicate longer reaction times for body weight words compared to neutral, and thus attentional bias away from body weight words. Positive scores indicate shorter reaction times for body weight words compared to neutral, and thus attentional bias toward body weight words.

Table 21

Descriptive Statistics for Visual Dot Probe Task by Condition (SCR Sample, N =154)

Variable	Control Condition (*n* = 87)			Rejection Condition (*n* = 67)		
	Mean	*SD*	*Range*	*Mean*	*SD*	*Range*
Difference Scores						
Neutral - Thin Words	-1.83	32.93	-80.44 – 87.28	0.62	34.78	-146.66 – 110.63
Neutral - Fat Words	6.49	30.91	-70.84 – 127.31	-1.35	30.27	-90.57 – 78.47
Reaction Times (ms)						
Thin Words	515.71	91.55	377.69 – 959.44	521.93	106.23	315.47 – 971.75
Neutral/Thin Words	513.89	88.60	382.40 – 966.21	522.55	99.10	340.94 – 965.68
Fat Words	517.01	90.82	385.83 – 1072.16	562.38	95.56	341.21 – 892.95
Neutral/Fat Words	516.29	86.91	388.50 – 1021.67	525.03	100.55	357.37 – 971.42
Accuracy Rates						
Thin Words	0.97	0.04	0.80 – 1.00	0.97	0.04	0.80 – 1.00
Neutral/Thin Words	0.97	0.05	0.70 – 1.00	0.98	0.04	0.85 – 1.00
Fat Words	0.97	0.04	0.80 – 1.00	0.96	0.05	0.80 – 1.00
Neutral/Fat Words	0.97	0.04	0.85 – 1.00	0.97	0.04	0.80 – 1.00

Note. Raw difference, reaction time, and accuracy statistics are provided for descriptive purposes.
Due to the nature of the VDP, statistics for neutral words paired with fat and thin words are presented
separately. Neutral/Thin Words refers to neutral paired with thin words, and Neutral/Fat Words refers to
neutral paired with fat words.

Attentional bias for thin words. The first regression examined predictors of attentional biases for thin body weight-related words. As the entire SCR sample was included in the analysis, the total N for the regression analysis was 154. None of the covariates significantly contributed to the model (ps > .514), and thus all were removed from subsequent analysis (refer to Table 22 for a summary of the final model).

Step 1 of the model was not significant, $F(2,151) = 1.23$, $p = .294$, and accounted for only 0.17% of the variance in attentional bias for thin words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = -0.02$, $t(152) = -0.22$, $p = .784$. The experimental condition also was not significant, $\beta = 0.05$, $t(152) = 0.64$ $p = .514$, and the squared partial correlation between experimental condition and attentional biases for thin body weight-related words was $sr^2 = 2.77^{-3}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = 0.00$, $t(152) = 0.02$, $p = .988$, and its addition to the model in the final step did not significantly improve the prediction of attentional bias for thin words, $Fchange(1,150) = 0.00$, $p = .987$, accounting for only an additional 3.00^{-6}% of the variance. The complete model accounted for 0.17% of the variance in attentional bias for thin body-related words.

Table 22

Final Regression Model for Attentional Biases for Thin Words (SCR Sample, N = 154)

Step	R	R^2	Variables Entered	b	$SE\ b$	β	t	*Sig.*
1	0.06	0.00	(Constant)	-1.82	3.47	-	-0.52	.702
			BWCSWS	-0.55	2.01	-0.02	-0.22	.784
			Condition	3.37	5.26	0.05	0.64	.514
2	0.06	0.00	(Constant)	-1.82	3.48	-	-0.52	.569
			BWCSWS	-0.58	2.70	-0.02	-0.22	.803
			Condition	3.37	5.27	0.05	0.64	.582
			BWCSWS x Condition	0.06	4.06	0.00	0.02	.988

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Attentional bias for fat words. A second regression examined predictors of attentional biases for fat body weight-related words. As the entire SCR sample was included in the analysis, the total N for the regression analysis was 154. None of the covariates significantly contributed to the model (ps > .165), and thus all were removed from subsequent analysis (refer to Table 23 for a summary of the final model).

Step 1 of the model was not significant, $F(2,151) = 1.23$, $p = .294$, and accounted for only 1.61% of the variance in attentional bias for fat words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.00$, $t(152) = 0.05$, $p = .969$. The experimental condition was also not significant, $\beta = -0.13$, $t(152) = -1.57$, $p = .099$, and the squared partial correlation between experimental condition and attentional biases for fat body weight-related words was $sr^2 = 0.02$, which is a small effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.73$, $t(152) = -0.67$, $p = .502$, and its addition to the model in the final step did not significantly improve the prediction of attentional bias for fat words, $Fchange(1,152) = 0.45$, $p = .510$, accounting for only an additional 0.31% of the variance. The complete model accounted for 1.88% of the variance in attentional bias for fat body-related words.

Table 23

Final Regression Model for Attentional Biases for Fat Words (SCR Sample, N = 154)

Step	*R*	*R*^{2}	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.13	0.02	(Constant)	6.49	3.30	-	1.97	.281
			BWCSWS	0.10	1.91	0.00	0.05	.969
			Condition	-7.84	5.00	-0.13	-1.57	.226
2	0.14	0.02	(Constant)	6.47	3.30	-	1.96	.050
			BWCSWS	1.24	2.56	0.05	0.48	.628
			Condition	-7.88	5.01	-0.13	-1.57	.099
			BWCSWS x Condition	-2.59	3.86	-0.73	-0.67	.502

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Cognitive accessibility. In order to test hypotheses 2c and 2d, reaction time data from the lexical decision task was used as a measure of cognitive accessibility for body weight-related information (refer to Table 24 for descriptive statistics). Due to technical complications within the MediaLab program, LDT data was not collected for six participants, and thus a sample size of 148 was used in subsequent analyses.

As previously discussed, cognitive accessibility for thin and fat words was analysed separately (Cassin & von Ranson, 2005). For the following analyses, difference scores (LDTNeu-Thin and LDTNeu-Fat) were calculated from the reaction time data in order to control for individual differences in baseline reaction time (Mayerl, 2004). Negative scores indicate longer reaction times for body weight words compared to neutral, and thus lower cognitive accessibility for body weight words. Positive scores indicate shorter reaction times for body weight words compared to neutral, and thus greater cognitive accessibility for body weight words.

Table 24

Descriptive Statistics for Lexical Decision Task by Condition (SCR Sample, N = 148)

Variable	Control Condition (*n* = 87)			Rejection Condition (*n* = 67)		
	Mean	*SD*	*Range*	*Mean*	*SD*	*Range*
Difference Scores						
Neutral - Thin Words	-21.42	136.67	-681.57 – 163.00	-55.04	420.92	-3082.78 – 815.49
Neutral - Fat Words	-27.79	112.41	-451.57 – 181.76	-78.15	277.19	-1689.27 – 561.05
Reaction Times (ms)						
Thin Words	806.08	243.13	499.80 – 2375.63	918.68	833.11	496.10 – 5777.33
Fat Words	812.45	210.60	537.65 – 2145.63	941.78	707.84	480.00 – 4922.10
Neutral Words	784.66	161.47	564.53 – 1694.06	863.63	532.24	529.40 – 4232.81
Accuracy Rates						
Thin Words	0.86	0.12	0.58 – 1.00	0.85	0.15	0.33 – 1.00
Fat Words	0.87	0.16	0.33 – 1.00	0.85	0.16	0.33 – 1.00
Neutral Words	0.88	0.09	0.67 – 1.00	0.86	0.10	0.42 – 1.00

Note. Raw difference, reaction time, and accuracy statistics are provided for descriptive purposes.

Cognitive accessibility for thin words. The first regression examined predictors of cognitive accessibility for thin body weight-related words. After removing participants with missing data on the LDT, the total N for the regression analysis was 148. None of the covariates significantly contributed to the model ($ps > .198$), and thus all were removed from subsequent analysis (refer to Table 25 for a summary of the final model).

Step 1 of the model was not significant, $F(2,144) = 1.59$, $p = .208$, and accounted for only 2.15% of the variance in cognitive accessibility for thin words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.12$, $t(146) = 1.51$, $p = .131$. The experimental condition also was not significant, $\beta = 0.08$, $t(146) = 0.97$, $p = .330$, and the squared partial correlation between experimental condition and cognitive accessibility for thin body weight-related words was $sr^2 = 6.56^{-3}$, which is a trivial effect size (Cohen, 1988).

Contrary to predictions, adding the interaction between body weight contingent self-worth and experimental condition in the final step did not improve the prediction of cognitive accessibility for thin words, $Fchange(1,143) = 0.75$, $p = .389$, accounting for only an additional 0.51% of the variance. Further, the interaction term was not significant, $\beta = -0.10$, $t(146) = -0.86$, $p = .388$. The complete model accounted for 2.67% of the variance in cognitive accessibility for thin body weight-related words.

Table 25

Final Regression Model for Cognitive Accessibility for Thin Words (SCR Sample, N = 148)

Step	R	R^2	Variables Entered	b	SE b	β	t	*Sig.*
1	0.15	0.02	(Constant)	-11.39	12.71	-	-0.90	.371
			BWCSWS	11.03	7.31	0.12	1.51	.131
			Condition	18.70	19.27	0.08	0.97	.330
2	0.16	0.03	(Constant)	-11.32	12.73	-	-0.89	.374
			BWCSWS	16.77	9.88	0.19	1.70	.090
			Condition	18.25	19.29	0.08	0.95	.345
			BWCSWS x Condition	-12.70	14.71	-0.10	-0.86	.388

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

Cognitive accessibility for fat words. This regression examined predictors of cognitive accessibility for fat body weight-related words. After removing participants with missing data on the LDT, the total N for the regression analysis was 148. None of the covariates significantly contributed to the model ($ps > .723$), and thus all were removed from subsequent analysis (refer to Table 26 for a summary of the final model).

Step 1 of the model was not significant, $F(2,144) = 1.26$, $p = .286$, and accounted for only 1.72% of the variance in cognitive accessibility for fat words. Contrary to predictions, body weight contingent self-worth did not significantly contribute to the model, $\beta = 0.09$, $t(146) = 1.10$, $p = .272$. The experimental condition also was not significant, $\beta = -0.09$, $t(146) = -1.13$, $p = .265$, and the squared partial correlation between experimental condition and cognitive accessibility for fat body weight-related words was $sr^2 = 8.84^{-3}$, which is a trivial effect size (Cohen, 1988).

The interaction term was not significant, $\beta = -0.00$, $t(146) = -0.04$, $p = .970$, and its addition to the model in the final step did not significantly improve the prediction of cognitive accessibility for fat words, $Fchange(1,143) = 0.00$, $p = .970$, accounting for only an additional 9.80^{-4}% of the variance. The complete model accounted for 1.72% of the variance in cognitive accessibility for fat body-related words.

Table 26

Final Regression Model for Cognitive Accessibility for Fat Words (SCR Sample, N = 148)

Step	*R*	*R²*	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.13	0.02	(Constant)	-21.98	13.45	-	-1.64	.102
			BWCSWS	8.49	7.73	0.09	1.10	.272
			Condition	-23.01	20.38	-0.09	-1.13	.265
2	0.13	0.02	(Constant)	-21.98	13.49	-	-1.63	.103
			BWCSWS	8.76	10.48	0.09	0.84	.403
			Condition	-2.03	20.46	-0.09	-1.13	.263
			BWCSWS x Condition	-0.59	15.59	-0.00	-0.04	.970

Note. BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.

State body satisfaction. In order to test hypotheses 3a and 3b, a regression model was designed to examine predictors of state body satisfaction. After removing one participant who declined to have her BMI measured, the total N for the regression analysis was 153. Covariates BDI and RSQ did not significantly contribute to the model ($ps > .518$), and thus were removed from subsequent analysis (refer to Table 27 for a summary of the final model).

Step 1 of the model was significant, $F(2,150) = 42.70, p < .001$, and accounted for 36.36% of the variance. At this step, body mass index (inverse transformed) significantly contributed to the model, $\beta = 0.40, t(151) = 6.18, p < .001$, with participants with higher BMIs reporting lower levels of state body satisfaction. Global trait self-esteem also significantly contributed to the model, $\beta = 0.41, t(151) = 6.30, p < .001$, with participants who scored higher on this variable reporting higher levels of state body satisfaction.

Step 2 of the model was significant, $Fchange(2,148) = 6.84, p = .001$, and accounted for an additional 5.44% of the variance. As predicted, body weight contingent self-worth significantly contributed to the model, $\beta = -0.22, t(151) = -3.28, p < .001$, with participants who scored higher on this variable reporting lower levels of state body satisfaction. The experimental condition was not significant, $\beta = 0.10, t(151) = 1.64, p = .102$, and the squared partial correlation between experimental condition and state body satisfaction was $sr^2 = 0.02$, which is a small effect size (Cohen, 1988).

The interaction term approached significance, $\beta = 0.15, t(151) = 0.96, p = .075$, and its addition to the model in the final step marginally improved the prediction of state body satisfaction, $Fchange(1,147) = 3.17, p = .077$, accounting for an additional 1.23% of the variance. The complete model accounted for 42.87% of the variance in state body satisfaction.

Table 27

Final Regression Model for State Body Satisfaction (SCR Sample, N = 153)

Step	*R*	*R²*	Variables Entered	*b*	*SE b*	β	*t*	*Sig.*
1	0.60	0.36	(Constant)	5.27	0.10	-	55.06	.000
			BMI (Inverse)	81.85	13.24	0.40	6.18	.000
			RSES	0.11	0.02	0.41	6.30	.000
2	0.65	0.42	(Constant)	5.14	0.12	-	41.741	.001
			BMI (Inverse)	71.69	13.33	0.35	5.38	.000
			RSES	0.10	0.02	0.36	5.53	.000
			BWCSWS	-0.25	0.08	-0.22	-3.28	.000
			Condition	0.31	0.19	0.10	1.64	.102
3	0.66	0.43	(Constant)	5.14	0.12	-	42.07	.000
			BMI (Inverse)	72.90	13.25	0.36	5.50	.000
			RSES	0.10	0.02	0.37	5.72	.000
			BWCSWS	-0.36	0.10	-0.31	-3.70	.000
			Condition	0.31	0.19	0.11	1.66	.097
			BWCSWS x Condition	0.26	0.14	0.15	1.78	.075

Note. BMI (Inverse) = inverse transformed Body Mass Index; RSES = Rosenberg Self-Esteem Scale; BWCSWS = Body Weight Contingent Self-Worth Scale; Condition = experimental condition; BWCSW x Condition = interaction between Body Weight Contingent Self-Worth Scale and experimental condition.
Data for BMI were inverse transformed, requiring that the interpretation of associated regression weights be reversed.

Given the hypothesized interaction between body weight contingent self-worth and experimental condition, and because the interaction term was close to the nominal alpha level of .05, simple slopes analysis was conducted for body satisfaction (Aiken & West, 1991). The gradients of simple slopes at low (i.e., one standard deviation below the mean) and high (i.e. one standard deviation above the mean) levels of body weight contingent self-worth were -0.05 and 0.61, respectively. The simple slope was not significant at low levels of body weight contingent self-worth, $t(147) = -0.19$, $p = .846$. Contrary to predictions, at high levels of body weight contingent self-worth, there was a statistically significant positive relationship between experimental condition and body satisfaction, $t(147) = 2.44$, $p = .016$. As can be seen in Figure 1, compared to controls, participants with high levels of body weight contingent self-worth demonstrated significantly higher levels of state body satisfaction following interpersonal rejection.
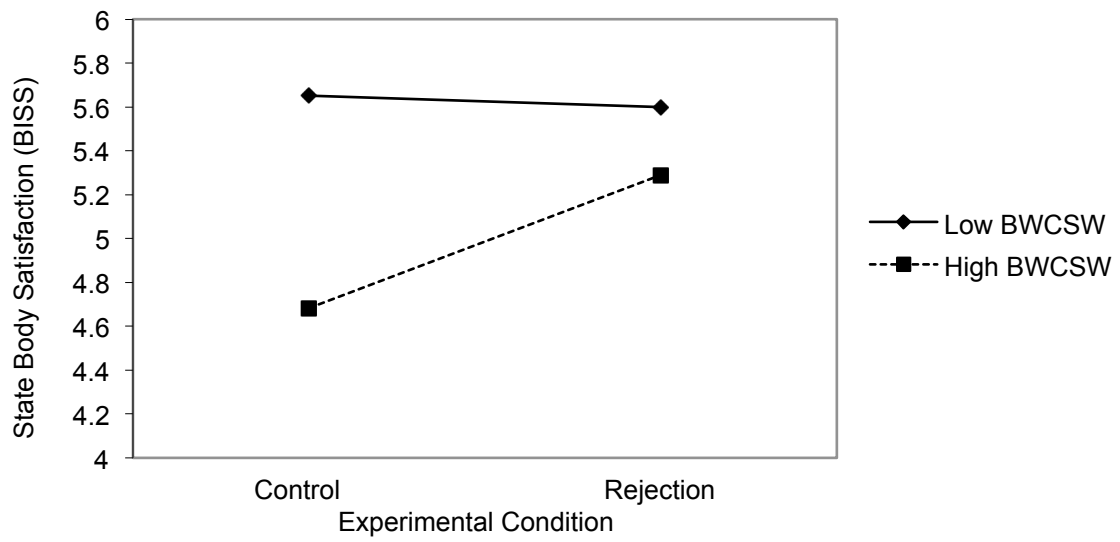
Figure 1. The relationship between experimental condition and body satisfaction at low

and high levels of body weight contingent self-worth (SCR sample).

Rejection attribution. As discussed above, participants in the rejection condition were asked to report on why they believed that the other participants did not choose to work with them. Of those in the rejection condition, five participants (7.56%) attributed the rejection to their physical appearance, whereas 61 participants (92.42%) attributed the rejection to other reasons (e.g., personality, age, university major, race/ethnicity). A chi-square analysis was conducted in order to determine whether these attribution groups differed according to their reported level of body weight contingent self-worth (high versus low median split). Results indicated that based on the odds ratio, participants with high body weight contingent self-worth were 5.04 times more likely to report that they were rejected because of their appearance compared to those with low levels of body weight contingent self-worth, though this association was not significant, $\chi^2(1) = 2.37, p = .124$.

Table 28

Summary of Hypotheses, Statistical Procedures, and Results

Hypothesis	Statistical Procedure(s) – Hierarchical Regression				
	Sample	Dependent Variable	Significant Covariates	Predictor of Interest	Results
1a. Women whose self-worth is highly based on body weight will demonstrate significantly lower levels of state self-esteem than will women whose self-worth is less contingent on body weight across conditions.	Full Sample	Global state self-esteem	Global trait self-esteem	BWCSW	Participants who scored higher on body weight contingent self-worth reported significantly lower global state self-esteem.
	SCR Sample	Global state self-esteem	Global trait self-esteem	BWCSW	Participants who scored higher on body weight contingent self-worth reported significantly lower global state self-esteem.
1b. Interpersonal rejection will result in lower levels of state self-esteem for all women. However, this effect will be significantly stronger for women whose self-worth is highly contingent on their body weight compared to those whose self-worth is less contingent on body weight.	Full Sample	Global state self-esteem	Global trait self-esteem	Condition	Non-significant
		Global state self-esteem	Global trait self-esteem	Condition x BWCSW	Non-significant
	SCR Sample	Global state self-esteem	Global trait self-esteem	Condition	Non-significant
		Global state self-esteem	Global trait self-esteem	Condition x BWCSW	Non-significant
2a. Women whose self-worth is highly based on body weight will demonstrate significantly greater attentional bias for body weight-related information than will women whose self-worth is less contingent on body weight across conditions.	Full Sample	Attentional bias for thin words	None	BWCSW	Non-significant
		Attentional bis for fat words	None	BWCSW	Non-significant
	SCR sample	Attentiional bias for thin words	None	BWCSW	Non-significant
		Attentional bias for fat words	None	BWCSW	Non-significant

Hypothesis	Sample	Measure			
2b. For women whose self-worth is highly contingent on body weight, interpersonal rejection will result in significantly greater levels of attentional bias for body weight-related information than it will for women whose self-worth is less based on body weight or for either group of women in the control condition.	Full Sample	Attentional bias for thin words	None	Condition x BWCSW	Non-significant
		Attentional bis for fat words	None	Condition x BWCSW	Non-significant
	SCR sample	Attentiional bias for thin words	None	Condition x BWCSW	Non-significant
		Attentional bias for fat words	None	Condition x BWCSW	Non-significant
2c. Women whose self-worth is highly based on body weight will demonstrate significantly greater cognitive accessibility for body weight-related information than will women whose self-worth is less contingent on body weight across conditions.	Full Sample	Cognitive accessibility for thin words	None	BWCSW	Non-significant
		Cognitive accessibility for fat words	None	BWCSW	Non-significant
	SCR sample	Cognitive accessibility for thin words	None	BWCSW	Non-significant
		Cognitive accessibility for fat words	None	BWCSW	Non-significant
2d. Women whose self-worth is highly based on body weight, interpersonal rejection will result in significantly greater levels of cognitive accessibility for body weight-related information than it will for women whose self-worth is less based on body weight or for either group of women in the control condition.	Full Sample	Cognitive accessibility for thin words	None	Condition x BWCSW	Non-significant
		Cognitive accessibility for fat words	None	Condition x BWCSW	Non-significant
	SCR sample	Cognitive accessibility for thin words	None	Condition x BWCSW	Non-significant
		Cognitive accessibility for fat words	None	Condition x BWCSW	Non-significant

Hypothesis	Sample				Results
3a. Women whose self-worth is highly based on body weight will demonstrate significantly lower levels of body satisfaction than will women whose self-worth is less contingent on body weight across conditions.	Full Sample	Body satisfaction	Global trait self-esteem	BWCSW	Participants who scored higher on body weight contingent self-worth reported significantly lower body satisfaction
	SCR Sample	Body satisfaction	Global trait self-esteem	BWCSW	Participants who scored higher on body weight contingent self-worth reported significantly lower body satisfaction.
3b. For women whose self-worth is highly based on body weight, interpersonal rejection will result in significantly lower levels of body satisfaction than it will for women whose self-worth is less based on body weight or for women of either group in the control condition.	Full Sample	Body satisfaction	Global trait self-esteem	Condition x BWCSW	Non-significant
	SCR Sample	Body satisfaction	Global trait self-esteem	Condition x BWCSW	Interaction term was marginally significant. Simple slope was significant at high, but not at low levels of body weight contingent self-worth. Compared to controls, participants with high levels of body weight contingent self-worth reported significantly higher levels of state body satisfaction following interpersonal rejection.

DISCUSSION

Overview of the Research Findings

As discussed, the purpose of the present research was to test the general prediction that women who more extensively base their self-worth on body weight would be more negatively affected by relational devaluation on the dimensions of the self-esteem, information processing of body weight-related information, and body dissatisfaction of than would women who base their self-worth on body weight to a lesser extent. The present study revealed the following noteworthy findings:

1. There was a main effect for body weight contingent self-worth on state self-esteem in both the full sample and the SCR sample, such that women who more strongly base their self-worth on their body weight reported significantly lower global state self-esteem. Ancillary analyses for both samples revealed that participants with high body weight contingent self-worth reported low self-esteem across the appearance, performance, and social domains. There was no interaction effect between body weight contingent self-worth and experimental condition on state self-esteem.

2. For information processing of body weight-related information, there was no significant main effect for body weight contingent self-worth in either sample on attentional bias or cognitive accessibility for body weight-related words. As well, there was no interaction effect between body weight contingent self-worth and experimental condition. Incidentally, there was a main effect of experimental condition in the full sample, such that participants in the rejection group demonstrated significantly greater attentional biases away from fat words than did those in the control group.

3. For body satisfaction, the results from both samples revealed a main effect of body weight contingent self-worth, such that women who more strongly based their self-

worth on their body weight reported significantly lower levels of state body satisfaction. In addition, there was a near significant interaction effect between body weight contingent self-worth and experimental condition in the SCR sample. Simple slopes analysis revealed that for those with high levels of body weight contingent self-worth, the rejection condition resulted significantly higher levels of body satisfaction than did the control condition. Rejection appeared to have no detectable effect on women with low body weight contingent self-worth.

General Discussion

State Self-Esteem

The first aim of the present research was to directly examine the moderating role of the body weight contingency of self-worth in the effect of social rejection on state self-esteem.

Hypothesis 1a. The first hypothesis predicated that women whose self-worth is highly based on body weight would demonstrate significantly lower levels of state self-esteem than would women whose self-worth is less contingent on body weight across conditions. This hypothesis was supported. The results indicated that in general, participants who scored higher on body weight contingent self-worth reported significantly lower state self-esteem than those who scored lower on body weight contingent self-worth. This effect was significant even after global trait self-esteem was controlled.

Crocker, Luhtanen, and Sommers (2004) argued that, compared to internal contingencies of self-worth, self-esteem that is associated with external contingencies tends to be fragile and unstable because it is dependent on external events and on validation from others. The results from the present research substantiate Crocker and

Wolfe's (2001) finding that self-esteem that is contingent on external domains tends to be low. The results also support Clabaugh and colleagues' (2008) research, which demonstrated that high body weight contingent self-worth, in particular, tends to be associated with low self-esteem. Taken together, these findings strongly suggest that those who base their self-worth on external traits such as body weight possess a low global sense of self-worth.

　　　　Ancillary findings for state self-esteem. In order to better understand the effects of body weight contingent self-worth on self-esteem, secondary analyses were conducted to separately examine the appearance, performance, and social domains of state self-esteem. Appearance self-esteem refers to the evaluation of physical appearance, performance self-esteem pertains to the evaluation of ability-related issues, and social self-esteem refers to the assessment of one's social standing in relation to other people (Heatherton & Polivy, 1991). Given that body weight contingent self-worth has reliably been associated with low-self-esteem, as well as the fact that that body weight is considered to be an important domain of appearance (Clabaugh et al., 2008), it was expected that women who base their self-worth on their weight would demonstrate low levels of self-esteem in the domain of physical appearance. The results from the present research support this proposition. Participants who scored higher on body weight contingent self-worth reported significantly lower state appearance self-esteem. Unexpectedly, the results further demonstrated that participants who reported higher body weight contingent self-worth in both samples also reported lower state social self-esteem. Furthermore, those in the full sample also reported lower state performance self-esteem. Therefore, it appears that women who base their self-worth on body weight have a low sense of self-worth not only in the domain of physical appearance, but also across other

domains. Overall, it appears that basing self-worth on external traits such as body weight confers a fragile and low sense of one's value in general, not just within the domains on which self-worth is contingent.

Hypothesis 1b. The second hypothesis predicted that interpersonal rejection would result in lower state self-esteem than would neutral feedback and that this effect would be more pronounced for women whose self-worth is highly contingent on their body weight. This hypothesis was not supported. Contrary to predictions, neither the main effect of interpersonal rejection, nor the interaction effect between body weight contingent self-worth and experimental condition significantly affected state self-esteem.

In both samples tested in the present research there was no significant main effect of experimental condition on state self-esteem. The effect size for the experimental manipulation on state self-esteem ranged from trivial in the full sample to small in the SCR sample. This finding seems to indicate that state self-esteem is minimally affected by one's immediate perceptions of relational devaluation.

This failure of social threat to lower self-esteem in the present research appears to contradict the major premise of the social monitoring system. As the sociometer theory posits that self-esteem represents an internal gauge of others' acceptance, a failure of relational devaluation to influence state self-esteem presents a noteworthy challenge. However, Blackhart, Nelson, Knowles, and Baumeister (2009) suggest that rather than functioning as a state measure that is sensitive to specific incidences of social exclusion versus acceptance (Leary & Baumeister, 2000), self-esteem may reflect an *overall* assessment of the quality of one's interpersonal relationships. In other words, it may be the ratio of rejection to acceptance experiences that is important to one's general sense of self-worth. Furthermore, previous studies have shown that people are adept at dismissing

isolated threats to their self-integrity (e.g., Taylor, 1991). As such, participants' general conceptions of their relational value in the present research may have been relatively resilient to a single incident of peer rejection.

Importantly, a recent meta-analysis by Blackhart and colleagues (2008) demonstrated that across studies that compared rejected participants to a neutral control group, there was little or no impact of interpersonal rejection on self-esteem. Accordingly, the researchers suggest that the general failure of social threat to lower self-esteem may reflect a self-protective response on the part of rejected individuals. In general, people are motivated to protect and to enhance their self-esteem (e.g, Baumeister, 1998; Darley & Goethalas, 1980; Steele, 1988). In the face of threat, individuals employ self-protective responses in order to diminish the threat and to restore a perceived sense of self-worth. Such defensive reactions can be automatic, and they tend to occur outside of conscious awareness (Sherman & Cohen, 2006). Thus, it is conceivable that when faced with social threat, individuals in the present study may have cognitively dismissed, denied, or otherwise distorted their interpretations of negative feedback (e.g., Feldman-Barrett, Williams, & Fong, 2002) in order to protect their general sense of self-worth. Such defensive reactions would explain the failure of rejection to influence state self-esteem. In addition, it is entirely possible that individuals' reactions to rejection experiences may be delayed, rather than immediate (Blackhart et al., 2008). It may be that rejection influences self-esteem only after defensiveness has subsided and individuals have had time to reflect on their experiences. It is apparent that further research is needed in order to clarify the operation of defensive responding in the context of social threat, and to determine the operation of the sociometer at the state level.

Because self-esteem is tied to domains that are perceived to be most important to others, and because those who base their self-worth on their weight tend to have fragile and unstable self-esteem, it was predicted that individuals with higher body weight contingent self-worth would experience greater damage to their global self-esteem in response to relational devaluation, than would those who base their self-worth on this domain to a lesser extent. Contrary to expectations, the failure to detect such an interaction effect in the present research suggests that individuals who base their self-worth on their body weight are no more affected by interpersonal rejection in terms of their self-esteem than are those who do not base their self-worth in this domain.

Another explanation for the null finding is that the experimental manipulation was not strong enough to provoke a drop in state self-esteem in those with high body weight contingent self-worth. As discussed, the rejection manipulation did not lower self-esteem for any women in the sample. Thus, it is conceivable that because individuals with body weight contingent self-worth possess chronically low levels of self-esteem, the rather mild incident of interpersonal rejection presented in the experimental condition was not processed as threatening enough to produce a further reduction in their overall sense of self-worth. Alternatively, it may be that a more direct body image threat (e.g. weight derogation) is necessary in order to negatively impact self-esteem for those whose self-worth is based on body weight.

An additional possibility is that there was not enough power in the analysis to detect an effect. A post-hoc power analysis (Faul, Erdfelder, Buchner, & Lang, 2009) indicated that the analysis did not have enough power to detect the interaction effect for the full sample (Observed power = 0.14) or for the SCR sample (Observed power = 0.16). Given that this research represented the first attempt to examine the moderating role of

contingent self-worth in the effect of relational devaluation on state self-esteem, further research in this area is required before any firm conclusions can be made.

Information Processing of Body Weight-Related Information

The second aim of the present research was to examine the combined effect of interpersonal rejection and body weight contingency of self-worth on the information processing of body weight-related information. Given the similarity of the predictions for attentional bias and cognitive accessibility and the comparable results in the present research, hypotheses for these constructs are discussed together.

Hypothesis 2a/c. First, a main effect for body weight contingent self-worth on information processing of body weight-related information was hypothesized. It was predicted that women whose self-worth is highly based on body weight would demonstrate significantly greater attentional bias and cognitive accessibility for body weight-related information than would women whose self-worth is less contingent on body weight across conditions. This hypothesis was not verified for attentional bias or for cognitive accessibility. The results indicated that there was no significant effect of body weight contingent self-worth on information processing bias for either thin or fat words.

These results stand in contrast to the findings of Clabaugh (2008), who demonstrated a significant negative relationship between body weight contingent self-worth and attentional bias toward thin body weight-related words. Specifically, Clabaugh found that as the tendency to base self-worth on body weight increased, the tendency to direct attention toward thin words decreased. This effect was not replicated in the current study. Given that a similar visual dot-probe task methodology was used to assess

attentional bias in both studies and that the sample sizes were comparable, it is unclear why the results are discrepant.

However, meta-analytic research by Faunce (2002) supports the findings from the present study. Following a review of the literature, Faunce concluded that although attentional biases for body-related words tend to be present for individuals with clinical and sub-clinical eating disorders, the effect sizes tend to be very small. Faunce further found that there is little evidence for attentional biases for body-related words in dieters and restrained eaters. The present research represented the first attempt to study the impact of the body weight contingency of self-worth on attentional bias for body weight-related information. Results from the present study indicated that high body weight contingent self-worth does not confer greater attentional bias for body weight related information. Thus, it appears that those who base their self-worth on their body weight may be no more likely to demonstrate attentional bias for weight related information than are dieters or restrained eaters. It should be noted, however, that although one interpretation may be that body image preoccupation in the absence of eating disorders is unrelated to attentional bias for body-related information, it is also possible that more sensitive measures are required in order to detect information processing biases in nonclinical samples.

Although little research has been conducted on the cognitive accessibility for body image information, performance on the lexical decision task is considered to be closely associated with attentional bias. Specifically, accessibility of emotionally relevant words in memory tends to be enhanced by attention for such information (Williamson, Muller, Reas, & Thaw, 1999). Thus, given the interrelation of the constructs and the lack of findings for attentional bias in the present study, it is not surprising that no significant

effects were found for cognitive accessibility for body weight-related information. If individuals were not preferentially attending to body weight-related words, it is unlikely that they would demonstrate heightened cognitive accessibility for such information. It is clear that further research is required in order to determine the circumstances under which individuals with contingent self-worth may exhibit information processing bias for contingency-related information.

Hypothesis 2b/d. Second, it was hypothesized that body weight contingent self-worth would moderate the effect of interpersonal rejection on the information processing of body weight-related information. It was predicted that for women whose self-worth is highly contingent on body weight, interpersonal rejection would result in significantly greater levels of attentional bias and cognitive accessibility for body weight-related information than it would for women whose self-worth is less based on body weight or for either group of women in the control condition. These hypotheses were not supported. Contrary to predictions, no interaction effect was found between body weight contingent self-worth and experimental condition for attentional biases or cognitive accessibility.

One explanation for these results is that, compared to those with lower body weight contingent self-worth, individuals with high body weight contingent self-worth are not more affected by interpersonal rejection in terms of information processing. If body weight contingent self-worth is not associated with information processing for body weight-related information, it is unlikely to moderate the effects of other variables, such as interpersonal rejection.

A lack of power in the present research may also have contributed to this null finding. A post-hoc power analysis indicated that the analysis for attentional bias did not have enough power to detect the interaction effect for the full sample (Observed power

for thin words = 0.09; Observed power for fat words = 0.29) or for the SCR sample

(Observed power for thin words = 0.05; Observed power for fat words = 0.10). Similarly,

the analysis for cognitive accessibility also did not have enough power for the full sample

(Observed power for thin words = 0.19; Observed power for fat words = 0.06) or for the

SCR sample (Observed power for thin words = 0.14; Observed power for fat words =

0.05). As a result, further research is necessary to determine whether stronger effects

may be observable in a larger sample.

Ancillary findings for information processing. Though not central to the research

hypotheses, a significant main effect of experimental condition was found for attentional

bias for fat words. Whereas no significant effect was found for the SCR sample, the

results for the full sample revealed that participants in the rejection condition

demonstrated significantly longer reaction times for fat words compared to neutral words,

thus indicating attentional bias away from fat words. This effect was not moderated by

body weight contingent self-worth, indicating that this association occurred for women

regardless of the extent to which they base their self-worth on their weight.

This bias away from fat words for those in the rejection condition may be

interpreted as a defensive reaction. In general, the belief that fat is negative is a

widespread public perception (e.g., Puhl & Brownell, 2001; Whitaker & Davis, 1989).

People who are overweight are commonly perceived to be unattractive and unhealthy

(Gaesser, 1996). Accordingly, research indicates that avoidance of weight gain may

function as a means of avoiding disapproval from other people (Moulton, Moulton, &

Roach, 1998). From the sociometer perspective, it may be suggested that when faced

with a threat to their relational value, participants in the present study attempted to

cognitively separate themselves from body weight-related characteristics that they

perceived to be regarded negatively by others. Due to the fact that this finding was relatively unexpected, further research is required in order to determine the effect of social threat on information processing of contingency-related information.

State Body Dissatisfaction

The final aim of the present research was to investigate the combined effects of social rejection and body weight contingency of self-worth on body dissatisfaction.

Hypothesis 3a. First, it was predicted that women who highly base their self-worth on body weight would report lower body satisfaction than would women whose self-worth is less contingent on body weight across conditions. This hypothesis was supported. The results demonstrated that for both the full sample and the SCR sample, women with higher body weight contingent self-worth reported significantly lower state body satisfaction. This effect was found even when controlling for the effect of global trait self-esteem and BMI.

This effect corroborates previous research on the association between body weight contingent self-worth and body image-associated outcomes. Clabaugh and colleagues (2008) found a significant positive relationship between body weight contingent self-worth and subjective weight, such that the more women based their self-worth on their weight, the more they reported feeling fat. As well, Clabaugh and colleagues demonstrated that the body weight contingency of self-worth was significantly correlated with body shape anxiety, whereby women with higher body weight contingent self-worth reported greater anxiety about their body shape. Taken together, these results imply that women whose sense of self-worth is based on their body weight are more likely to be insecure about their body. Though this association may seem paradoxical, Crocker and Park (2004) emphasize that the areas of life in which individuals base their self-worth are

not necessarily the domains in which they perceive themselves to be successful. Rather, contingent domains may be understood as the areas of life in which people experience the most pressure to succeed. As people with body weight contingent self-worth likely place high standards for themselves within the domain of body weight, it is not surprising that these individuals would tend to feel unconfident and self-critical about their body.

 Hypothesis 3b. The final hypothesis for body dissatisfaction predicted that for women whose self-worth is highly based on body weight, interpersonal rejection would result in significantly lower levels of body satisfaction than it would for women whose self-worth is less based on body weight or for women of either group in the control condition. Though a post-hoc power analysis indicated that the analysis did not have enough power to detect a significant interaction effect for the full sample (Observed power = 0.24) or for the SCR sample (Observed power = 0.44), the results for the SCR sample revealed a near significant interaction. Simple slopes analysis indicated no effect at low levels of body weight contingent self-worth. However, at high levels of body weight contingent self-worth, there was a significant positive relationship between experimental condition and body satisfaction such that, participants with high levels of body weight contingent self-worth demonstrated significantly *higher* levels of state body satisfaction following interpersonal rejection than did participants in the control group. This was the reversed of the anticipated effect.

 These counterintuitive results may be understood as a self-protective response. Evidence suggests that people whose self-esteem is fragile or insecure tend to be most easily threatened, and thus may be more likely to engage in ego-defensive processes (Kernis, 2003). As individuals with contingent self-worth have been shown to have particularly unstable self-esteem, they may be especially prone to engaging in self-

protective strategies when faced with threat. In support of this proposition, research by Kernis, Lakey, and Heppner (2008) demonstrated that in response to stressful interview questions about negative life experiences, those with greater general contingent self-worth responded with more defensiveness, disclosing little negative information or justifying negative behaviour by blaming others or attributing their behaviour to social norms.

Further, recent research by Boersma and Jarry (2013) demonstrated defensive responses in the domain of body image. The researchers found that in response to threat in the form of weight-based derogatory media, women who were less invested in their appearance demonstrated lower body satisfaction and appearance self-esteem when compared to control. Importantly, however, women more highly invested in their appearance did not differ across conditions. In order to explain these participants' lack of reported reaction in response to threat, Boersma and Jarry suggest that threat to a valued domain could have triggered a defensive reaction for those highly invested in their appearance. Women who were highly invested in their appearance may have attempted to cope with the threat to their self-esteem by limiting the extent to which the threat entered conscious awareness or by modifying the content of their reactions to lessen perception of the threat (Feldman-Barrett et al., 2002).

In contrast to these findings, it appears that women in the present study demonstrated a self-enhancing response to threat. Similar compensatory effects have been demonstrated in previous research. For example, research by Jarry and Kossert (2007) exposed female participants to a self-esteem threat consisting of false success or failure feedback on an intellectual task. Participants then viewed media images depicting products or thin models. The results demonstrated that after viewing the thin images, the

women who received failure feedback reported being less invested and more satisfied with their appearance than did women who received success feedback. Jarry and Kossert concluded that in order to maintain a global sense of self-worth in the face of self-esteem threat, exposure to thin ideal may have inspired women to engage in compensatory self-enhancement by drawing on appearance as an alternative source of self-worth.

The results from the present research also are consistent with Steele's (1988) self-affirmation theory, which posits that when faced with threats to their self-integrity, individuals make self-important sources of identity more salient. In order to maintain an overall sense of self-worth, threats to specific domains can be effectively dealt with by affirming the self within a valued domain, even if this domain is not directly related to the threat itself. For individuals who base their self-worth on their weight, self-esteem threat may make body image salient as an alternative source of self-esteem. Accordingly, it is not unexpected that following relational devaluation, women with high body weight contingent self-worth would bolster their self-concept within the valued domain of body image. Indeed, Deci and Ryan (1995) suggest that people whose self-worth is highly contingent often will go to great lengths to avoid threats to their self-esteem, even to the extent that they will distort their performance or abilities.

As the sociometer theory predicts that efforts to maintain or to enhance self-esteem are intended primarily as interpersonal strategies that function to increase one's relational value, the private bolstering of body satisfaction for high body weight contingent self-worth individuals seems to present a challenge to this position. However, Leary (2005a) suggests that because of the importance of social acceptance to individuals' sense of self-worth, people learn from a young age to utilize strategies that promote their perceived relational value to other people. In order to defend against the

consequences of rejection by others, people with contingent self-worth may attempt to magnify qualities that they perceive to be most socially important. Thus, when faced with threat, the private self-reported increase in body satisfaction for those with body weight contingent self-worth in the present study may reflect an attempt to bolster these individuals' self-perceived relational value.

It is important to note that because the main interaction term in the present research did not reach significance, these results should be interpreted with caution. Moreover, given that the results in this study were the reverse of what was originally hypothesized, further research is needed in order to determine the circumstances under which individuals with contingent self-worth respond defensively in response to social threat.

Rejection attribution. Following rejection, participants were asked to report on why they believed that the other participants did not choose to work with them. This question was included to determine whether participants would attribute the rejection to their physical appearance or to some other factor. It may be expected that because of the importance of body weight for women whose self-worth is based on this domain, these women would be more likely to attribute negative social responses to their physical appearance. In both samples tested in the present study, the proportion of participants with high body weight contingent self-worth who attributed the rejection to their appearance was relatively, though not significantly, higher than it was for those with low body weight contingent self-worth group. Thus, it may be that higher body weight contingent self-worth confers a greater tendency to believe that appearance plays an important role in one's relational value. It is important to note that the proportion of participants who reported that they believed that they were rejected because of their

appearance in the present study was very low (less than 10% in both samples), which may have made significant differences between groups difficult to detect. As well, it may be the case that participants in general were not comfortable explicitly reporting that they believed that their appearance played a role in their social exclusion. It is clear that further research on individual differences in self-worth contingencies and attributions for rejection is required.

Strengths and Limitations of the Present Research

Research Strengths

Overall, there were several strengths of the present research that warrant discussion. The first strength was the use of an in vivo rejection manipulation. In comparison to indirect rejection manipulations, such as relived and imagined rejection, the demarcated rejection procedure implemented here was conducted in a direct and face-to-face manner. Thus, this type of rejection manipulation is more likely to be similar to instances of social threat that individuals might experience in the real world.

Another strength was the inclusion of a neutral control group. In contrast to the present research, the majority of past research on interpersonal rejection has tended to compare rejection to acceptance effects. Consistent with the recommendations of Gerber and Wheeler (2009), the neutral control condition in the present study functioned as a baseline against which the rejection outcomes could be evaluated. It should be noted, however, that although inclusion of a neutral control group represented a methodological strength in the present research, greater differences between conditions might be observed in research where rejection is instead compared to acceptance (e.g. Blackhart et al., 2009).

A further strength of this study was the utilization of both direct and indirect outcome measures. Given the problems associated with self-report measures, such as

demand characteristics and response bias, inclusion of cognitive measures in the present

study allowed for an indirect test of participants' automatic and unconscious reactions.

Though no effects were detected using the visual dot probe or the lexical decision task in

the present research, future researchers would likely benefit from including a variety of

direct and indirect techniques.

 Research Limitations

There are also a number of limitations that should be taken into consideration

when interpreting the results of the present investigation. First, the experimental

manipulation of rejection appears to have been relatively ineffective. Although the

rejection manipulation altered participates' mood in the expected directions, the

manipulation did not reliably decrease positive affect nor did it increase negative affect to

a significant degree. One possibility for this finding is that because the majority of the

sample was both highly educated and likely familiar with psychological concepts,

participants may have been able to leverage their knowledge from psychology courses to

help protect against the adverse effects of the rejection manipulation.

Nonetheless, it is important to note that a meta-analysis by Blackhart and

colleagues (2009) found minimal evidence that rejected participants in experimental

research feel appreciably worse compared to neutral controls. The researchers

demonstrated that on the whole, experimental manipulations of rejection initiated a shift

away from positive and toward negative affect, however, this shift tended to result in a

relatively neutral though slightly positive emotional state. Thus, the researchers conclude

that larger sample sizes are necessary to detect mood effects in rejection research.

A further limitation pertains to the sample in the present study. Due to the

relatively small population of psychology students within the university, it became

apparent during testing that many participants were familiar with one another and that some were friends. Because this was recognized late into testing, it was not accounted for in the present study. It is possible that familiarity between participants may have muted the effects of the rejection either by making it less believable or by increasing participants' perceptions of available social support. Accordingly, future rejection researchers may consider using a broader sample or taking participants' relationships into account.

An additional limitation in the present research pertains to the questionnaire measures administered in this study. Some of the important variables in this study were assessed using self-report questionnaires (i.e., body weight contingent self-worth, state self-esteem, and body dissatisfaction). As a result, it is possible that participants' responses may have been influenced by demand characteristics or response biases. In addition, it is important to keep in mind that what people endorse on a self-report questionnaire may not necessarily reflect how they would respond in real-world situations. As such, results associated with self-report should be interpreted with caution.

Another limitation concerns the cognitive tasks used to assess information processing. Based on the literature, it would be expected that individuals who base their self-worth on their weight would be more likely to show information processing biases for body weight-related information. However, such an effect was not found in the present research. Future researchers may be more likely to detect automatic processing effects with more sensitive cognitive measures.

Finally, although undergraduate students are commonly used as participants in social psychology research, this presents a limitation to the generalizability of the research findings. Whereas the present sample consisted entirely of female undergraduate students, it is possible that individuals from other populations may respond differently.

Although the sample in the present study was fairly diverse in terms of ethnic background, group sizes were not sufficient to allow for comparisons between ethnic groups. Thus, it would be useful for future researchers to use a broader and more diverse sample where possible.

Future Directions and Implications

In order to address the relative ineffectiveness of the rejection manipulation in the present study, future researchers may wish to implement different rejection induction techniques. For example, a meta-analysis by Gerber and Wheeler (2009) indicated that ostracism paradigms, in which the rejection occurs without direct mention (i.e., the participant is spontaneously excluded or ignored), tend to induce stronger effects on arousal and self-esteem compared to demarcated rejection inductions. The researchers suggest that ostracism may be a powerful form of rejection because of the lack of delineation between acceptance and rejection. Ostracism is thought to be particularly distressing because one is made to feel insignificant and invisible (e.g., Williams, 2007). In addition, a separate meta-analysis by Blackhart and colleagues (2009) found that relived rejection manipulations, in which participants remember a past rejection experience, elicited stronger effects on self-esteem compared to laboratory inductions of rejection. As well, imagined rejection, whereby participants imagine a hypothetical rejection scenario, induced slightly stronger effects on negative affect than did other types of rejection experiences. Thus, it may be that relived and imagined rejection experiences are more poignant because they are personal. Compared to experimental manipulations in which all participants are rejected in the same way, relived and imagined rejection are likely to be more reflective of real-world social threat that an individual has experienced in the past or fears experiencing in the future. It is also important to note that demarcated

rejection manipulations conducted in the laboratory typically involve rejection by strangers; stronger effects may be associated with reliving or imagining rejection by close, or important others (Murray, Holmes, & Collins, 2006; Tesser, Miller, & Moore, 1988). Accordingly, one possibility for future research is to examine whether individuals with contingent self-worth show different responses to other forms of social threat.

Although the inclusion of a control group represents a strength in the present research, future researchers may consider examining contingencies of self-worth within the context of social acceptance. Such research may help to determine whether contingencies of self-worth play a different moderating role in the effect of social acceptance compared to rejection. Further, as suggested by Leary (1990), acceptance and exclusionary feedback is best understood as a continuum rather than a dichotomy. Thus, another possibility is to examine the role of contingent self-worth across a range of acceptance and exclusionary feedback (Downs, 1997). Such research could provide more information regarding the operation of the social monitoring system.

It may also be fruitful for future researchers to consider implementing behavioural outcome measures to assess the consequences of social threat. Research using behavioural measures may demonstrate effects that are not detectable with affective self-report measures. As suggested by Gerber and Wheeler (2009), interpersonal rejection tends to have a larger impact on behaviour than on mood. Accordingly, as the body weight contingency of self-worth is associated with self-reported restrained eating (Clabaugh et al., 2008), and research has shown that restrained eaters tend to consume more food following threat to their self-image (e.g., Heatherton et al., 1993; Polivy & Herman, 1999), it may be interesting to test whether individuals with higher body weight

contingent self-worth demonstrate increased or decreased eating behaviour following social threat.

It is important to keep in mind that people from different backgrounds may respond in varying ways to social threat. As well, evidence suggests that women from different ethnic backgrounds differ in terms of the extent to which they base their self-worth on their body weight (Clabaugh et al., 2008). Thus, future research may examine the effects of interpersonal rejection on the body image-related outcomes for individuals of different ethnicities. Such research may clarify further how responses to perceived relational devaluation vary for individuals from different social and cultural backgrounds.

Because body weight contingent self-worth is a recently developed construct, it represents a new approach to investigating body image disturbance and paves the way for further exploration. In terms of practical implications, the results from the present research suggest that interventions that prevent or decrease the tendency for individuals to base their self-worth on their body weight may help reduce the risk for adverse psychological outcomes. Because the body weight contingent self-worth has been shown to be linked with low global self-esteem and body image disturbances, such interventions may help to reduce the risk for eating pathology in particular. Prevention programs aimed at challenging sociocultural norms regarding body weight, as well as efforts aimed at strengthening internal and global perceptions of self-worth may be effective in minimizing the tendency for individuals to base self-worth on body weight.

CONCLUSIONS

The overarching aim of the present research was to investigate the body weight contingency of self-worth within the context of the social monitoring system. The main hypothesis was that following social threat, women who base their self-worth on body weight would demonstrate lower self-esteem and body satisfaction, as well as greater information processing biases for body weight-related information, than would women whose self-worth is less contingent on their weight.

In support of past research, the results indicated that higher body weight contingent self-worth was related to lower self-esteem and greater body dissatisfaction. Contrary to predictions, body weight contingent self-worth was not associated with attentional bias or cognitive accessibility, nor did it moderate the impact of rejection on state self-esteem or information processing for body-weight information. However, the results did provide preliminary evidence that individual differences in the extent to which women base their self-worth on their body weight may affect body satisfaction in the face of social threat, but the findings were the reverse of those predicted. What is clear is that the psychological mechanisms that underlie responses to interpersonal rejection are multifaceted and complex.

The present research allows for a better understanding of the social nature of body weight concern in women, and further sheds light on the consequences of social rejection on conceptions of the self. Research in this area is particularly important, given that body weight preoccupation is associated with a number of negative outcomes. The results from the present study suggest that it is worthwhile for researchers to continue to investigate the circumstances under which contingencies of self-worth may influence the consequences of interpersonal rejection.

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Appendix A

PARTICIPANT POOL RECURITMENT ADVERTISEMENT

Title: Study 1: Personality and Mood States in University Students; Study 2: Individual Differences and Decision-Making in University Students
Researchers: Lauren O'Driscoll, Dr. Josee Jarry
Duration: Study 1: 30 minutes / Study 2: 60 minutes
Credits: Study 1: 0.5 credits / Study 2: 1 credit

The purpose of Study 1 is to examine the factors that influence mood states in university students. More specifically, the relationship between personality and mood will be examined. This study is completed in an on-line survey format. You will be asked to complete a series of questionnaires related to mood and personality. This study will take approximately 30 minutes to complete and will be done in one session.

The purpose of Study 2 is to examine the factors that influence decision-making in university students. More specifically, individual differences in decision-making abilities will be examined. Study 2 will be conducted in the lab. You will complete a group conversation exercise, followed by two cognitive tasks and a brief questionnaire on a computer. You may also be asked to participate in a group decision-making task. Study 2 will take approximately 90 minutes to complete and will be done in one session.

Participants who complete Study 1 and Study 2 will receive 2.0 bonus points for 120 minutes of participation towards the psychology participant pool, if registered in the pool and enrolled in one or more eligible courses.

Appendix B

BODY WEIGHT CONTINGENCY OF SELF-WORTH SCALE

INSTRUCTIONS: Please respond to each of the following statements by circling your answer using the scale from "1 = Strongly disagree" to "7 = Strongly agree." If you haven't experienced the situation described in a particular statement, please answer how you think you would feel if that situation occurred.

1) My sense of self-worth suffers whenever I think I am not at an ideal body weight.

2) My self-esteem does not depend on whether or not I feel I am at an ideal body weight.

3) My self-esteem is influenced by my body weight.

4) My self-esteem would suffer if my body weight was not ideal.

5) My self-esteem is unrelated to how I feel about my body weight.

6) When I am at an ideal body weight, I feel good about myself.

7) It is important to my self-respect that I am at an ideal body weight.

8) Knowing that I am at an ideal body weight raises my self-esteem.

Appendix C

STATE SELF-ESTEEM SCALE

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 this 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 = not at all   2 = a little bit   3 = somewhat   4 = very much   5 = 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 D

COGNITIVE TASK WORD LISTS

Visual Dot Probe Task: Practice Trial Stimuli

Practice Word Pairs
Attire/Coupon
Bedside/Lenient
Content/Bottles
Filed/Drier
Galaxy/Heroic
Keyhole/Hairpin
Projects/Cheerful
Remarks/Posture
Scarf/Swell
Worthy/Oyster

Visual Dot Probe Task: Experimental Stimuli

Thin/Neutral Word Pairs	Fat/Neutral Word Pairs	Filler Neutral Word Pairs
Athletic/Cupboard	Ample/Clock	Campus/Spiral
Dainty/Kettle	Big/Car	Creature/Interior
Delicate/Calendar	Bloated/Laundry	Extension/Batteries
Firm/Book	Broad/Radio	Handle/Series
Fit/Cup	Bulging/Curtain	Journal/Boulder
Lean/Lamp	Bulky/Towel	Layer/Ruler
Light/Table	Chubby/Pillow	Lipstick/Panorama
Narrow/Bottle	Fat/Box	Measurement/Description
Petit/Candle	Flabby/Lounge	Racket/Umpire
Skinny/Carpet	Fleshy/Bucket	Passageway/Transition
Slender/Lantern	Heavy/Plant	Pastel/Tokens
Slight/Stairs	Huge/Desk	Pond/Crew
Slim/Tile	Large/Money	Preparation/Approximate
Small/House	Massive/Blanket	Pyramid/Tissues
Taut/Comb	Obese/Bench	Scans/Casks
Thin/Step	Overweight/Dishwasher	Signature/Fireplace
Tiny/Bowl	Paunchy/Ashtray	Slope/Bench
Toned/Broom	Plump/Shelf	Storeroom/Blueprint
Trim/Sink	Round/Chair	Tract/Arena
Waif/Vase	Tubby/Ruler	Varnish/Mileage

Lexical Decision Task: Practice Trial Stimuli

Practice Words	Practice Non-Words
Corridor	Dildebeest
Flash	Dort
Rugby	Gorsened
Thimbles	Jounds
Tip	Smap

Lexical Decision Task: Experimental Stimuli

Thin Words	Fat Words	Neutral Words	Non-Words	
Bony	Beefy	Accord	Alacus	Glodhopper
Brittle	Chunky	Banjo	Acandon	
Fragile	Doughy	Chord	Acrasive	Glustering
Frail	Enormous	Depot	Agruptly	Jark
Lanky	Hefty	Dominion	Apjourns	Koard
Lightweight	Lumpy	Frosts	Athuct	Loax
Scrawny	Porky	Grassland	Averpe	Lond
Skeletal	Potbellied	Gust	Bilp	Lubbles
Stringy	Pudgy	Oases	Birt	Mirculate
Teeny	Puffy	Knots	Bitser	Phugging
Weightless	Stuffed	Locker	Blankeced	Plipper
Wiry	Surplus	Lotions	Boxwoid	Plunt
		Tassels	Bronchimip	Polic
		Novels		Prum
		Plaids	Camejot	Robalt
		Postcard	Cantaloate	Slase
		Raindrops	Celittle	Sliss
		Rotary	Darrots	Sluster
		Sabre	Dentaw	Sonkers
		Saloons	Dervix	Telgium
		Turnpike	Duodenug	Toalesces
		Wool	Feplore	Toin
		Woodcarver	Fluing	Trink
		Whistle	Fonates	Twip
			Frace	Yolt

Appendix E

BODY IMAGE STATES SCALE

For each of the items below, check the box beside the one statement that best describes how you feel **RIGHT NOW AT THIS VERY MOMENT**. Read the items carefully to be sure the statement you choose accurately and honestly describes how you feel right now.

1. Right now I feel...
☐ *Extremely dissatisfied* with my physical appearance

☐ *Mostly dissatisfied* with my physical appearance

☐ *Moderately dissatisfied* with my physical appearance

☐ *Slightly dissatisfied* with my physical appearance

☐ *Neither dissatisfied nor satisfied* with my physical appearance

☐ *Slightly satisfied* with my physical appearance

☐ *Moderately satisfied* with my physical appearance

☐ *Mostly satisfied* with my physical appearance

☐ *Extremely satisfied* with my physical appearance

2. Right now I feel...
☐ *Extremely dissatisfied* with my body size and shape

☐ *Mostly dissatisfied* with my body size and shape

☐ *Moderately dissatisfied* with my body size and shape

☐ *Slightly dissatisfied* with my body size and shape

☐ *Neither dissatisfied nor satisfied* with my body size and shape

☐ *Slightly satisfied* with my body size and shape

☐ *Moderately satisfied* with my body size and shape

☐ *Mostly satisfied* with my body size and shape

☐ *Extremely satisfied* with my body size and shape

3. Right now I feel...

☐ *Extremely dissatisfied* with my weight

☐ *Mostly dissatisfied* with my weight

☐ *Moderately dissatisfied* with my weight

☐ *Slightly dissatisfied* with my weight

☐ *Neither dissatisfied nor satisfied* with weight

☐ *Slightly satisfied* with my weight

☐ *Moderately satisfied* with my weight

☐ *Mostly satisfied* with my weight

☐ *Extremely satisfied* with my weight

4. Right now I feel...

☐ *Extremely* physically *attractive*

☐ *Very* physically *attractive*

☐ *Moderately* physically *attractive*

☐ *Slightly* physically *attractive*

☐ *Neither attractive nor unattractive*

☐ *Slightly* physically *unattractive*

☐ *Moderately* physically *unattractive*

☐ *Very* physically *unattractive*

☐ *Extremely* physically *unattractive*

5. Right now I feel...

☐ *A great deal worse* about my looks than I usually feel

☐ *Much worse* about my looks than I usually feel

☐ *Somewhat worse* about my looks than I usually feel

☐ *Just slightly worse* about my looks than I usually feel

☐ *About the same* about my looks as usual

☐ *Justly slightly better* about my looks than I usually feel

☐ *Somewhat better* about my looks than I usually feel

☐ *Much better* about my looks than I usually feel

☐ *A great deal better* about my looks than I usually feel

6. Right now I feel that I look...

☐ *A great deal better* than the average person looks

☐ *Much better* than the average person looks

☐ *Somewhat better* than the average person looks

☐ *Just slightly better* than the average person looks

☐ *About the same* as the average person looks

☐ *Justly slightly worse* than the average person looks

☐ *Somewhat worse* than the average person looks

☐ *Much worse* than the average person looks

☐ *A great deal worse* than the average person looks

Appendix F

DEMOGRAPHICS QUESTIONNAIRE

Age: _____   Gender: _____

Relationship Status:

Single ☐   In a relationship/cohabiting   ☐   Married/common law   ☐

Divorced/separated   ☐   Widowed   ☐

Ethnic Background:

Aboriginal	☐	South Asian	☐	Arab or West Asian	☐
African	☐	European	☐	Caribbean	☐
East Asian	☐	South or Central American	☐		

Other (please specify):_____

Have you ever been diagnosed with an eating disorder?
Yes   ☐   No   ☐

School enrolment: Full time student   ☐   Part time student   ☐
Years in University:

First year	☐	Third year	☐	More than 4 years	☐
Second year	☐	Fourth year	☐		

Including your current psychology course, how many psychology
courses have you taken so far? _____

What is/are your university major(s)? _____

What is/are your university minor(s)? _____

Your occupation:

Full time	☐	**and**	Clerical	☐	Labourer	☐
Part time	☐		Professional	☐	Self-employed	☐
			Owner/manager	☐	Unemployed	☐
			Other: _____			

Mother or guardian's occupation:

Full time	☐	**and**	Clerical	☐	Labourer	☐
Part time	☐		Professional	☐	Self-employed	☐
			Owner/manager	☐	Unemployed	☐
			Other: _____			

Father or guardian's occupation:

Full time	☐	**and**	Clerical	☐	Labourer	☐
Part time	☐		Professional	☐	Self-employed	☐
			Owner/manager	☐	Unemployed	☐
			Other: _____			

Appendix G

BECK DEPRESSION INVENTORY-II

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today.** Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
 0   I do not feel sad.
 1   I feel sad much of the time.
 2   I am sad all the time.
 3   I am so sad or unhappy that I can't stand it.

2. Pessimism
 0   I am not discouraged about my future.
 1   I feel more discouraged about my future than I used to be.
 2   I do not expect things to work out for me.
 3   I feel my future is hopeless and will only get worse.

3. Past Failure
 0   I do not feel like a failure.
 1   I have failed more than I should have.
 2   As I look back, I see a lot of failures.
 3   I feel I am a total failure as a person.

4. Loss of Pleasure
 0   I get as much pleasure as I ever did from the things I enjoy.
 1   I don't enjoy things as much as I used to.
 2   I get very little pleasure from the things I used to enjoy.
 3   I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
 0   I don't feel particularly guilty.
 1   I feel guilty over many things I have done or should have done.
 2   I feel quite guilty most of the time.
 3   I feel guilty all of the time.

6. Punishment Feelings
 0   I don't feel I am being punished.
 1   I feel I may be punished.
 2   I expect to be punished.
 3   I feel I am being punished.

7. Self-Dislike
 0   I feel the same about myself as ever.
 1   I have lost confidence in myself.
 2   I am disappointed in myself.
 3   I dislike myself.

8. Self-Criticalness
 0   I don't criticize or blame myself more than usual.
 1   I am more critical of myself than I used to be.
 2   I criticize myself for all my faults.
 3   I blame myself for everything bad that happens.

9. Suicidal Thought or Wishes
 0   I don't have any thoughts of killing myself.
 1   I have thoughts of killing myself, but I would not carry them out.
 2   I would like to kill myself.
 3   I would kill myself if I had the chance.

10. Crying
 0   I don't cry anymore than I used to.
 1   I cry more than I used to.
 2   I cry over every little thing.
 3   I feel like crying, but I can't.

11. Agitation
 0   I am no more restless or wound up than usual.
 1   I feel more restless or wound up than usual.
 2   I am so restless or agitated that it's hard to stay still.
 3   I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest
 0   I have not lost interest in other people or activities.
 1   I am less interested in other people or things than before.
 2   I have lost most of my interest in other people or things.
 3   It's hard to get interested in anything.

13. Indecisiveness
 0   I make decisions about as well as ever.
 1   I find it more difficult to make decisions than usual.
 2   I have much greater difficulty in making decisions than I used to.
 3   I have trouble making any decisions.

14. Worthlessness
 0   I do not feel I am worthless.
 1   I don't consider myself as worthwhile and useful as I used to.
 2   I feel more worthless as compares to other people.
 3   I feel utterly worthless.

15. Loss of Energy
 0   I have as much energy as ever.
 1   I have less energy than I used to have.
 2   I don't have enough energy to do very much.
 3   I don't have enough energy to do anything.

16. Changes in Sleeping Pattern
 0   I have not experienced any change in my sleeping pattern.
 1a I sleep somewhat more than usual.
 1b I sleep somewhat less than usual.
 2a I sleep a lot more than usual.
 2b I sleep a lot less than usual.
 3a I sleep most of the day.
 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability
 0   I am no more irritable than usual.
 1   I am more irritable than usual.
 2   I am much more irritable than usual.
 3   I am irritable all the time.

18. Changes in Appetite
 0   I have not experienced any change in my appetite.
 1a My appetite is somewhat less than usual.
 1b My appetite is somewhat greater than usual.   .
 2a My appetite is much less than before.
 2b My appetite is much greater than usual.   .
 3a I have no appetite at all.
 3b I crave food all the time.

19. Concentration Difficulty
 0   I can concentrate as well as ever.
 1   I can't concentrate as well as usual.
 2   It's hard to keep my mind on anything for very long.
 3   I find I can't concentrate on anything.

20. Tiredness or Fatigue
 0   I am no more tired or fatigued than usual.
 1   I get more tired or fatigued more easily than usual.
 2   I am too tired or fatigued to do a lot of the things I used to do.
 3   I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex
 0   I have not noticed any recent change in my interest in sex.
 1   I am less interested in sex than I used to be.
 2   I am much less interested in sex now.
 3   I have lost interest in sex completely.

Appendix H

ROSENBERG SELF-ESTEEM SCALE

Please record the appropriate answer per item, depending on whether you strongly agree, agree, disagree, or strongly disagree with it.

3	2	1	0
strongly agree	agree	disagree	strongly disagree

_____1. I feel that I am a person of worth, at least on an equal plane with others.

_____2. I feel that I have a number of good qualities.

_____3. All in all, I am inclined to feel that I am a failure.

_____4. I am able to do things as well as most people.

_____5. I feel that I do not have much to be proud of.

_____6. I take a positive attitude toward myself.

_____7. On the whole, I am satisfied with myself.

_____8. I wish I could have more respect for myself.

_____9. I certainly feel useless at times.

_____10. At times I think that I am no good at all.

Appendix I

ADULT REJECTION SENSITIVITY QUESTIONNAIRE

The items below describe situations in which people sometimes ask things of others.
For each item, **imagine that you are in the situation, and then answer the questions that follow it.**

1. You ask your parents or another family member for a loan to help you through a difficult financial time.

How concerned or anxious would you be over whether or not your family would want to help you?

very unconcerned   very concerned

1   2   3   4   5   6

I would expect that they would agree to help as much as they can.

very unlikely   very likely

1   2   3   4   5   6

2. You approach a close friend to talk after doing or saying something that seriously upset him/her.

How concerned or anxious would you be over whether or not your friend would want to talk with you?

very unconcerned   very concerned

1   2   3   4   5   6

I would expect that he/she would want to talk with me to try to work things out.

very unlikely   very likely

1   2   3   4   5   6

3. You bring up the issue of sexual protection with your significant other and tell him/her how important you think it is.

How concerned or anxious would you be over his/her reaction?

very unconcerned   very concerned

1   2   3   4   5   6

I would expect that he/she would be willing to discuss our possible options without getting defensive.

very unlikely   very likely

1   2   3   4   5   6

4. You ask your supervisor for help with a problem you have been having at work.

How concerned or anxious would you be over whether or not the person would want to help you?

very unconcerned   very concerned

1   2   3   4   5   6

I would expect that he/she would want to try to help me out.

very unlikely   very likely

1   2   3   4   5   6

5. After a bitter argument, you call or approach your significant other because you want to make up.

How concerned or anxious would you be over whether or not your significant other would want to make up with you?

very unconcerned   very concerned

1   2   3   4   5   6

I would expect that he/she would be at least as eager to make up as I would be.

very unlikely   very likely

1   2   3   4   5   6

6. You ask your parents or other family members to come to an occasion important to you.

How concerned or anxious would you be over whether or not they would want to come?

very unconcerned   very concerned
1   2   3   4   5   6

I would expect that they would want to come.

very unlikely   very likely
1   2   3   4   5   6

7. At a party, you notice someone on the other side of the room that you'd like to get to know, and you approach him or her to try to start a conversation.

How concerned or anxious would you be over whether or not the person would want to talk with you?

very unconcerned   very concerned
1   2   3   4   5   6

I would expect that he/she would want to talk with me.

very unlikely   very likely
1   2   3   4   5   6

8. Lately you've been noticing some distance between yourself and your significant other, and you ask him/her if there is something wrong.

How concerned or anxious would you be over whether or not he/she still loves you and wants to be with you?

very unconcerned   very concerned
1   2   3   4   5   6

I would expect that he/she would show sincere love and commitment to our relationship no matter what else may be going on.

very unlikely   very likely
1   2   3   4   5   6

9. You call a friend when there is something on your mind that you feel you really need to talk about.

How concerned or anxious would you be over whether or not your friend would want to listen?

very unconcerned   very concerned
1   2   3   4   5   6

I would expect that he/she would listen and support me.

very unlikely   very likely
1   2   3   4   5   6

Appendix J

POSITIVE AND NEGATIVE AFFECT SCHEDULE

This scale consists of a number of words that describe different feeling and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way *right now*, that is, *at the present moment*. Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

_____interested

_____distressed

_____excited

_____upset

_____strong

_____guilty

_____scared

_____hostile

_____enthusiastic

_____proud

_____irritable

_____alert

_____ashamed

_____inspired

_____nervous

_____determined

_____attentive

_____jittery

_____active

_____afraid

Appendix K

INFORMED CONSENT FORM – ONLINE SURVEY

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **Personality and Mood States in University Students**

You are asked to participate in a research study conducted by Lauren O'Driscoll, supervised by Dr. Josée Jarry, from the Department of Psychology at the University of Windsor. The results of this study will be used to fulfil the requirements of a Master's thesis.

If you have any questions or concerns about this research, please feel to contact the primary investigator, Lauren O'Driscoll at odriscl@uwindsor.ca, or the faculty supervisor, Dr. Josée Jarry at (519) 253-3000, extension 2237.

PURPOSE OF THE STUDY

The purpose of this study is to examine the factors that influence mood states in university students. More specifically, the relationship between personality and mood will be examined.

PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following things. By consenting below you are indicating that you wish to participate in the present study. Upon reading and endorsing this consent form, you will be directed to an online survey that consists of several questionnaires. The survey will take approximately 30 minutes to complete and will be completed in one session.

After completing the online survey, you will be directed to a subsequent form where you can fill in your personal information for verifying your bonus credit. Successful completion of the online survey will qualify you for a separate study that is currently being conducted in the University of Windsor department of psychology.

POTENTIAL RISKS AND DISCOMFORTS

During the course of your participation, you will be asked some questions that may be personal in nature. A risk associated with this study is the possibility of thinking about personal issues that may cause some emotional and psychological concerns for you. If you do experience discomfort, you are welcome to contact the primary investigator, Lauren O'Driscoll, to address your concerns.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

The benefit of participating in this research is the opportunity to learn about and contribute to psychological research. As well, you may find that you learn more about yourself through participating in this research.

COMPENSATION FOR PARTICIPATION

Participants will receive 0.5 bonus points for 30 minutes of participation towards the psychology participant pool, if registered in the pool and enrolled in one or more eligible courses.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. Note that we must collect your name and student number at the end of the study in order for you to receive bonus credit for your participation. Your data will be kept separate from your name and student number. Both files will be encrypted and stored in the University of Windsor data servers. Your data will be retained for 10 years, after which point it will be securely deleted from the servers.

PARTICIPATION AND WITHDRAWAL

Your participation in this study is completely voluntary. If you decide to participate, you are free to withdraw from further participation in this research at any time without having to give a reason, and without penalty. A decision not to participate will not affect your academic standing or your relationship with the university. You may refuse to answer any questions that you are not comfortable answering. Following your participation, you may exercise the option of removing your data from this study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings for this study will be available to participants, and will be posted on the University of Windsor REB website.

Web address: www.uwindsor.ca/reb
Date when results are available: October 2013

SUBSEQUENT USE OF DATA

These data from this study may be used in subsequent studies, in publications and in presentations. If published, only group data will be reported and no individual will be identified in any publication of the results.

RIGHTS OF RESEARCH PARTICIPANTS

This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

CONSENT OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

"I understand the information provided for the study, 'Personality and Mood States in University Students' as described herein. The nature and purposes of the research have been clearly explained, and I understand what is being proposed and what my participation in this study will involve. I will print a copy of this consent form for my own reference."

I have read the letter of information and consent, and I agree to participate in this study. By selecting 'Yes' below, I am providing my informed consent.

□Yes
□No

Before proceeding to the study, be sure to print a copy of this consent form for your own reference. Please click 'Next' to proceed to the study.

Appendix L

CONTINGENCIES OF SELF-WORTH SCALE

INSTRUCTIONS: Please respond to each of the following statements by circling your answer using the scale from "1 = Strongly disagree" to "7 = Strongly agree." If you haven't experienced the situation described in a particular statement, please answer how you think you would feel if that situation occurred.

		Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1.	When I think I look attractive, I feel good about myself.	1	2	3	4	5	6	7
2.	My self-worth is based on God's love.	1	2	3	4	5	6	7
3.	I feel worthwhile when I perform better than others on a task or skill.	1	2	3	4	5	6	7
4.	My self-esteem is unrelated to how I feel about the way my body looks.	1	2	3	4	5	6	7
5.	Doing something I know is wrong makes me lose my self-respect.	1	2	3	4	5	6	7
6.	I don't care if other people have a negative opinion about me.	1	2	3	4	5	6	7
7.	Knowing that my family members love me makes me feel good about myself.	1	2	3	4	5	6	7
8.	I feel worthwhile when I have God's love.	1	2	3	4	5	6	7
9.	I can't respect myself if others don't respect me.	1	2	3	4	5	6	7
10.	My self-worth is not influenced by the quality of my relationships with my family members.	1	2	3	4	5	6	7
11.	Whenever I follow my moral principles, my sense of self-respect gets a boost.	1	2	3	4	5	6	7

12.	Knowing that I am better than others on a task raises my self-esteem.	1	2	3	4	5	6	7
13.	My opinion about myself isn't tied to how well I do in school.	1	2	3	4	5	6	7
14.	I couldn't respect myself if I didn't live up to a moral code.	1	2	3	4	5	6	7
15.	I don't care what other people think of me.	1	2	3	4	5	6	7
16.	When my family members are proud of me, my sense of self-worth increases.	1	2	3	4	5	6	7
17.	My self-esteem is influenced by how attractive I think my face or facial features are.	1	2	3	4	5	6	7
18.	My self-esteem would suffer if I didn't have God's love.	1	2	3	4	5	6	7
19.	Doing well in school gives me a sense of self-respect.	1	2	3	4	5	6	7
20.	Doing better than others gives me a sense of self-respect.	1	2	3	4	5	6	7
21.	My sense of self-worth suffers whenever I think I don't look good.	1	2	3	4	5	6	7
22.	I feel better about myself when I know I'm doing well academically.	1	2	3	4	5	6	7
23.	What others think of me has no effect on what I think about myself.	1	2	3	4	5	6	7
24.	When I don't feel loved by my family, my self-esteem goes down.	1	2	3	4	5	6	7
25.	My self-worth is affected by how well I do when I am competing with others.	1	2	3	4	5	6	7
26.	My self-esteem goes up when I feel that God loves me.	1	2	3	4	5	6	7

27.	My self-esteem is influenced by my academic performance.	1	2	3	4	5	6	7
28.	My self-esteem would suffer if I did something unethical.	1	2	3	4	5	6	7
29.	It is important to my self-respect that I have a family that cares about me.	1	2	3	4	5	6	7
30.	My self-esteem does not depend on whether or not I feel attractive.	1	2	3	4	5	6	7
31.	When I think that I'm disobeying God, I feel bad about myself.	1	2	3	4	5	6	7
32.	My self-worth is influenced by how well I do on competitive tasks.	1	2	3	4	5	6	7
33.	I feel bad about myself whenever my academic performance is lacking.	1	2	3	4	5	6	7
34.	My self-esteem depends on whether or not I follow my moral/ethical principles.	1	2	3	4	5	6	7
35.	My self-esteem depends on the opinions others hold of me.	1	2	3	4	5	6	7

Appendix M

INFORMED CONSENT FORM – LABORATORY SESSION

University
of Windsor

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **Individual Differences and Decision-Making in University Students**

You are asked to participate in a research study conducted by Lauren O'Driscoll, supervised by Dr. Josée Jarry, from the Department of Psychology at the University of Windsor. The results of this study will be used to fulfil the requirements of a Master's thesis. If you have any questions or concerns about this research, please feel to contact the primary investigator, Lauren O'Driscoll at odriscl@uwindsor.ca, or the faculty supervisor, Dr. Josée Jarry at (519) 253-3000, extension 2237.

PURPOSE OF THE STUDY

The purpose of this study is to examine the factors that influence decision-making in university students. More specifically, individual differences in decision-making style will be examined.

PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following things. By signing this consent form you are indicating that you wish to participate in the present study. Upon reading and endorsing this consent form, you will be asked to complete a group conversation exercise with other participants in this study. You will complete two cognitive tasks, where you will to respond to a series of word-related stimuli on a computer. You also will complete several brief questionnaires on a computer. This will be followed by a group decision-making task. The entire session will last approximately 90 minutes.

POTENTIAL RISKS AND DISCOMFORTS

During the course of your participation, you will be asked some questions that may be personal in nature. You may also experience discomfort in response to your interactions with other participants. A risk associated with this study is the possibility of thinking about personal issues that may cause some emotional and psychological concerns for you. You will be provided with the opportunity to discuss these concerns thoroughly with the experimenter. If you have any concerns you wish to discuss with an independent party, please feel free to contact the Student Counselling Centre at 519-253-3000 Ext. 4616.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

The benefit of participating in this research is the opportunity to learn about and contribute to psychological research. As well, you may find that you learn more about yourself through participating in this research.

COMPENSATION FOR PARTICIPATION

Participants will receive 1.5 bonus points for 90 minutes of participation towards the psychology participant pool, if registered in the pool and enrolled in one or more eligible courses.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. To ensure confidentiality, you will

be identified by participant number only, and there will be no identifying features on the questionnaires. Your data will be kept separate from your name and student number. Computer data will be encrypted and password protected, and will be stored on secure online data servers. Hard-copy data will be securely stored in a locked filing cabinet. Your data will be retained for 10 years, after which point computer data will be securely deleted from the servers and hard-copy data will be shredded.

PARTICIPATION AND WITHDRAWAL

Your participation in this study is completely voluntary. If you decide to participate, you are free to withdraw from further participation in the research at any time without having to give a reason, and without penalty. A decision not to participate will not affect your academic standing or your relationship with the university. You may refuse to answer any questions that you are not comfortable answering. Following your participation, you may exercise the option of removing your data from this study. The investigator may withdraw you from this research if circumstances arise which warrant doing so (e.g., very incomplete questionnaires).

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings for this study will be available and posted on the University of Windsor REB website.
Web address: www.uwindsor.ca/reb.
Date when results are available: October 2013

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations. If published, only group data will be reported and no individual will be identified in any publication of the results.

RIGHTS OF RESEARCH PARTICIPANTS

This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

"I understand the information provided for the study, 'Individual Differences and Decision-Making in University Students' as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I will print a copy of this consent form for my own reference."

SIGNATURE OF PARTICIPANT

_____
Name of Participant

_____
Date

SIGNATURE OF INVESTIGATOR
"In my judgement, the participant is voluntarily and knowingly giving informed consent to participate in this research study. These are the terms under which I will conduct research."

_____

_____
Date

Appendix N

CONVERSATION TASK TOPICS

Places to study on or off campus - What are some places for students to study on or off campus? - What places to study do students seem to like more than others? - In your opinion, what is the best place for students to study on or off campus?
Interesting subjects or courses - What are some interesting subjects or courses that students can take at UWindsor? - What subjects or courses at UWindsor do students seem to enjoy more than others? - In your opinion, what is the most interesting subject or course that students can take at the University of Windsor?

Appendix O

GROUP MEMBER SELECTION FORM

In the spaces below, please provide the names of two participants whom you would most like to work with during the final task of the experiment. Keep in mind that your selections are <u>not</u> rankings - the order that you list your preferred group members does not matter.

Group member 1_____

Group member 2_____

Appendix P

MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE (FORM C)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is **true** or **false** as it pertains to you personally.

1. It is sometimes hard for me to go on with my work if I am not encouraged. _____

2. I sometimes feel resentful when I don't get my way. _____

3. On a few occasions, I have given up doing something because I thought too little of my ability. _____

4. There have been times when I felt like rebelling against people in authority even though I knew they were right. _____

5. No matter who I'm talking to, I'm always a good listener. _____

6. There have been occasions when I took advantage of someone. _____

7. I'm always willing to admit when I make a mistake. _____

8. I sometimes try to get even rather than forgive and forget. _____

9. I am always courteous, even to people who are disagreeable. _____

10. I have never been irked when people expressed ideas very different from my own. _____

11. There have been times when I was quite jealous of the good fortune of others. _____

12. I am sometimes irritated by people who ask favors of me. _____

13. I have never deliberately said something that hurt someone's feelings. _____

Appendix Q

INFORMATION AND DEBRIEFING FORM

University
of Windsor

**LETTER OF INFORMATION FOR DEBRIEFING AND CONSENT TO DATA
RETENTION**

**The Body Weight Contingency of Self-Worth and The Social Monitoring System:
Implications for Self-Esteem, Information Processing, and Body Dissatisfaction**

Thank you for your participation in this study. Before explaining the true purpose of this research, it is important that you understand why it is necessary for some kinds of psychological studies not to tell people all about the purpose of the study at the very beginning. In some kinds of studies, if we tell people what the purpose of the experiment is and what we predict about how they would react under particular conditions, they might deliberately do whatever they think we want them to do, just to help us out and give us the results that they think we want. If that happened, their reactions would not be a good indication of how they might react in a situation in everyday life, where they didn't think they were being studied. It is also possible that the opposite might occur and that people might think that if we predicted that they would do a certain thing, they might deliberately not do it to show us that we can't figure them out. This would also make the results invalid, because again, what people would be responding to is what they thought we were looking for rather than responding naturally.

You were told that that you have just participated in a study investigating individual differences and decision-making. This was untrue.   In actual fact, the study that you just participated in is looking at how interpersonal rejection affects self-esteem, information processing, and body satisfaction. We are particularly interested in the reactions of women who base much their self-esteem on their body weight, this is also known as *body weight contingent self-worth*. It is hypothesized that women who base their self-worth on how much they weigh will be particularly sensitive to the effects of interpersonal rejection. Specifically, it is predicted that after experiencing rejection from others, women whose self-worth is highly based on body weight will report lower levels of self-esteem and body satisfaction, and will demonstrate enhanced information processing for body weight-related information, compared to those women who do not base their self-worth on body weight.

It is important for you to know that the group assignment feedback that you received this study is completely bogus. It really does not mean anything, and furthermore, the feedback I gave you is completely false. We told you that you would have to choose group members for a final decision-making task, in actual fact this task does not exist. Basically, after you selected whom you wanted to work with, we told all participants that they would have to work alone for the remainder of the experiment. Participants in the control condition were told that the experimenter made a mistake assigning them to a group. Participants in the rejection condition were told that all of the other participants chose not to work with them. None of this is true, we made that up completely. In fact, I do not know how many of the other participants chose to work with you, and the information I gave you about the selections made by the other participants does not mean anything. So, don't give it a second thought, as I said, none of this

means anything about you.

How people feel about their body is important because negative body image feelings are a major trigger for eating disorders. So, it is important for psychologists to have as much information as possible about that. That is why we are conducting this study. However, we were afraid that if we told you that we wanted to see how being rejected would influence your feelings about your body, you would not feel rejected. I hope you can see how it was important for people in this study to think it was about something else.

As in most psychological research, we are interested in how the average person reacts in this situation. We need to test many people and combine their results in order to get a good indication of how the average person reacts under the different conditions. In order for us to draw any conclusions, we have to combine the data we got from you with data we get from other people so that we have enough data to draw conclusions. What this means is that there will be many people participating in this study. It is going to be necessary for us to ask you not to say anything about the study to anyone else. If you talked to someone else about the study and told them all the things I just told you and then they were in the study, their reactions wouldn't be spontaneous and natural, and their results couldn't be used and combined with your data and those from other people. If that happened, we wouldn't have enough data to make conclusions about the average person, so the whole study really would be for nothing. I hope you can see why it is extremely important that I ask you not to say anything about the study. You might think that it won't make a difference if you talk to your roommate about it because they'll never be in the study, but your roommate might say something to someone else who might be in the study. So, I would like to ask you not to say anything about the study, other than you did some cognitive tasks and filled out some questionnaires until at least the end of the semester.

We hope you found your experience of participating in this study interesting. I would be glad to answer any questions you might have. If you are interested in learning more about research on interpersonal rejection, a good resource is: Gerber, J., & Wheeler, L. (2009). On being rejected: A meta-analysis of experimental research on rejection. *Perspectives on Psychological Science, 4,* 468-488. To learn more about contingencies of self-worth, a good resource is: Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychological Review, 108*, 593-623.

CONTACT INFORMATION

If you have any concerns at all about the study itself, or are interested in receiving more information, please feel free to contact the primary investigator, **Lauren O'Driscol**l, at odriscl@uwindsor.ca, or the faculty supervisor, **Dr. Josée Jarry** at (519) 253-3000, ext. 2237.

If you wish to talk about any issues that came to your attention today, I encourage you to discuss your reactions with me. If you wish to talk to an outside party, please feel free to contact the **University of Windsor Student Counselling Centre** at 519-253-3000 Ext. 4616. Other helpful resources in the community include the **Community Crisis Centre of Windsor** at 519-973-4435, and the **Windsor-Essex County Distress Centre** at 519-256-5000.

This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the **Research Ethics Coordinator**, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca. Any complaint you

make will be treated in confidence and investigated, and you will be informed of the outcome.

CONSENT TO DATA RETENTION

If you consent below, the data you have provided will be used in this study. You are free to decide not to consent without having to give a reason and without penalty. If you do not consent, the data will be destroyed.

"I have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to allow my data to be used in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep."

SIGNATURE OF PARTICIPANT

_____
Name of Participant

_____
Date

SIGNATURE OF INVESTIGATOR

_____

_____
Date

Appendix R

INFORMED CONSENT FORM – WEIGHT AND HEIGHT MEASUREMENT

University
of Windsor

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH

You have just participated in a research study conducted by Lauren O'Driscoll, supervised by Dr. Josée Jarry, from the Department of Psychology at the University of Windsor entitled: The Body Weight Contingency of Self-Worth and The Social Monitoring System: Implications for Self-Esteem, Information Processing, and Body Dissatisfaction.

As a component of the larger study you have just completed, you are being asked to allow this investigator to obtain a measure of your height and weight, so that your body mass index (BMI) can be calculated.

The information you provide will remain confidential and will be disclosed only with your permission. To ensure confidentiality, you will be identified by participant number only, and your data will be kept separate from your name and student number. These data may be used in subsequent studies, in publications and in presentations. If published, only group data will be reported and no individual will be identified in any publication of the results.

Taking part in this final component of the study is completely voluntary. If you do not wish to be weighed and/or have your height measured, you are free to refuse without any penalty or loss of bonus credit.

This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

Again, if you have any questions or concerns about this research, please feel to contact the primary investigator, Lauren O'Driscoll at odriscl@uwindsor.ca, or the faculty supervisor, Dr. Josée Jarry at (519) 253-3000, ext. 2237.

If you are willing to participate in this component of the study and understand all that will be asked of you in participating, please sign your name following this consent statement:

"I am willing to allow the investigator to measure my weight and height. I understand that all information I provide will be used for research purposes only and that my confidentiality will be assured. I also realize I am free to withdraw from this study at any time without penalty."

SIGNATURE OF PARTICIPANT

_____
Name of Participant

_____
Date

SIGNATURE OF INVESTIGATOR

_____

_____
Date

VITA AUCTORIS

Lauren O'Driscoll attended the University of Toronto where she obtained an Honours Bachelor of Science degree in 2009, specializing in Psychology and majoring in Criminology. She subsequently completed an Honours Bachelor of Science-Psychology degree at Macquarie University in 2010.   She is currently a Master's candidate in the Clinical Psychology-Adult Track program at the University of Windsor.