

WHEN THE RELATIONSHIP BECOMES HER: REVISITING WOMEN'S BODY CONCERNS FROM A RELATIONSHIP CONTINGENCY PERSPECTIVE

Diana T. Sanchez
Rutgers University

Tracy Kwang
University of Michigan

Given women's communally oriented socialization and social pressures to find romantic partners, many heterosexual women may derive self-worth from having romantic relationships (relationship contingency). Across two studies, we explored whether relationship contingency heightens women's body shame. Studies 1A and 1B found that relationship contingency causes body shame among women. In Study 2, relationship contingency predicted greater bulimic symptoms, which was mediated fully by greater body shame. Using both experimental methods and structural equation modeling, these studies demonstrate a link between relationship contingency and body shame that is not explained by appearance contingency (basing self-esteem on one's physical appearance). Results are discussed in terms of self-objectification theory, contingencies of self-worth, mate preferences, and close relationships.

By adulthood, most women are familiar with the romantic fairy tales of Cinderella, Snow White, and Sleeping Beauty. These stories are woven into popular culture, often retold in contemporary films such as *Pretty Woman*, *She's All That*, and *A Cinderella Story*. These narratives teach women that they will live happily ever after when they find their prince and that women must be beautiful to win their prince's affections. Fairy tales aside, women experience tremendous societal pressure to find romantic partners (Holland, 1992) to such a degree that they may internalize the need for romantic relationships and derive self-worth, in part, from having romantic relationships. This is hardly surprising considering the stigma attached to people who are not involved in relationships (Conley & Collins, 2002; DePaulo & Morris, 2006). Living in a culture that places importance on women's relationship status and their physical desirability to men, heterosexual women's tendencies to base self-esteem on having a romantic partner, hereafter referred to as relationship contingency, may predict greater body concerns.

Diana T. Sanchez, Department of Psychology, Rutgers University; Tracy Kwang, Department of Psychology, University of Michigan.

We would like to especially thank Jennifer Crocker, Dan Ogilvie, Eric Saltzman, Laurie Rudman, and Margaret J. Shih for their helpful comments during the preparation of this manuscript.

Address correspondence and reprint requests to: Diana Sanchez, Department of Psychology, Rutgers University, 53 Avenue E, Piscataway, NJ 08854-8040. E-mail: disanche@rutgers.edu

In the present study, we propose that relationship contingency predicts body shame for young women who have yet or are just beginning to develop long-term, stable relationships. We argue that women are aware of the importance men place on physical appearance in potential romantic partners (Hamida, Mineka, & Bailey, 1998; Singh & Young, 1995; Smith, Waldorf, & Trembath, 1990), and thus, body image concerns may be an adaptive way of seeking and maintaining romantic relationships. In this article, we first explore the theory and research on why women might base self-esteem on romantic relationships. Second, we explore why relationship contingency should heighten body concerns among heterosexual women. Studies 1A and 1B examine how relationship contingency salience heightens body concerns for women. Study 2 tests whether relationship contingency puts women at risk for developing eating disorders because they have lower self-esteem and higher body shame. Moreover, Study 2 will test whether having a romantic partner acts as a buffer of these negative effects. We believe that merely having a partner would not buffer the negative effects of relationship contingency because young women may still feel pressure to meet appearance ideals to maintain their relationships. This is particularly likely among our sample mostly college-aged women, who may be just beginning to develop long-term, stable relationships.

Romantic Relationships as Sources of Self-Esteem

It is widely recognized that interpersonal relationships influence self-worth. In fact, the sociometer theory of

self-esteem suggests that individual level of self-esteem merely reflects feelings of acceptance and rejection from others (Leary, Tambor, Terdal, & Downs, 1995). Although researchers have criticized the sociometer theory for failing to take into account the relative importance of specific kinds of relationships (e.g., friendships compared to romantic relationships; Kirkpatrick & Ellis, 1994), researchers widely accept that interpersonal relationships serve as an important source of self-esteem. Researchers who examine specific types of relationships argue that romantic relationships specifically may be a prominent source of self-worth (Geller, Zaitsoff, & Srikaneswaran, 2002; Murray, Griffin, Rose, & Bellavia, 2003). Thus, relationship contingency may be a prominent contingency of self-worth.

Crocker and Wolfe (2001) defined contingencies of self-worth as domains in which a person has staked his or her self-esteem. When self-esteem is contingent on a particular domain, perceived successes and failures in that domain affect self-evaluations (Crocker, Sommers, & Luhtanen, 2002). For example, students high in academic contingency display boosts and drops in self-esteem in accordance with acceptances or rejections to graduate school. People's contingencies of self-worth play a primary role in dictating behaviors as well as responses to related events (Crocker, Luhtanen, Cooper, & Bouvrette, 2003). People may experience boosts to self-esteem from maintaining and obtaining romantic relationships. The relative tendency to base self-esteem on romantic relationships may be an important factor in predicting relationship-related behaviors, including behavior in relationships (e.g., breakups, conflict resolution) and behavior to obtain relationships (e.g., dieting, working out, appearance concerns), which other contingencies of self-worth would be unable to capture.

Women's Relationship Orientation

The notions that women place great value on their interpersonal relationships and harbor greater concern for others have been repeatedly supported in theory and research on gender (e.g., Bakan, 1966; Gilligan & Brown, 1992). For example, researchers suggest that women are socialized and expected to be more communal than men, whereas men are socialized to be more agentic than women (see also Eagly, 1987). By adolescence, girls learn to put relationships first even at the sacrifice of their own desires and wishes (Gilligan & Brown, 1992). In fact, women may come to value others to such a degree that important others become intertwined in their self-concept (Cross & Madson, 1997; Josephs, Markus, & Tafarodi, 1992). For example, Josephs et al. (1992) demonstrated that women who had higher self-esteem also had better memory and knowledge of their important relationships, suggesting that women's levels of self-esteem are affected by their interpersonal relationships. In addition, women are more likely than men to describe themselves in terms of their close relationships with others (Gabriel & Gardner, 1999). Because women are

socialized to be more communally oriented, the present studies focus on women's, rather than men's, relationship contingency.

Some work on adolescent girls has addressed the extent to which they include intimate relationships as part of the basis of their self-worth. Geller and colleagues (2002) found that 69% percent of adolescent girls indicated intimate relationships were a source of self-esteem. Holland (1992) interviewed women students at two universities and found that most activities and relationships surrounded either talking about relationships or pursuing romance and romantic encounters. Because behavior is a good indicator of where an individual places his or her self-worth (Crocker et al., 2003), women's tendencies to spend a great deal of time and energy in activities focused on obtaining and maintaining romantic relationships also supports the value of exploring young women's relationship contingency. Moreover, Sedikides, Oliver, and Campbell (1994, Study 1) found that women were more likely to list self-esteem as a benefit of romantic relationships than men. Women also ranked (Sedikides et al., 1994, Study 2) and rated (Sedikides et al., 1994, Study 3) positive self-esteem as a greater benefit from romantic relationships compared to men.

Romantic Relationship Contingency and Body Concerns

We argue that heterosexual women's body concerns are fueled, in part, by their desire to be seen as attractive to men as well as the pervasive tendency for women to be sexually objectified in our culture (Fredrickson & Roberts, 1997). Thus, we propose that relationship contingency will make women particularly vulnerable to body concerns because women believe they must be thin to be beautiful and desirable to men. Women are inundated with advertisements that promote unhealthy and unattainable body images as a means to attract men (e.g., Fredrickson & Roberts, 1997). In addition, men value physical attractiveness in mates to a greater degree than women (Shackelford, Schmitt, & Buss, 2005; Singh & Young, 1995; Smith et al., 1990); thus, attending to one's physical appearance and meeting beauty ideals may be one of many effective strategies for maintaining and obtaining romantic relationships among heterosexual women. Work on actual preferences suggests that both men and women value attractiveness in their mates, with men indicating a stronger preference for attractiveness than women (Shackelford et al., 2005). One need only peruse singles ads to find that men's most cited criteria for a potential mate are physical attractiveness and weight status (see Smith et al., 1990).

Although the focus of this article is not on actual attractiveness or body mass, there is some work that suggests that these factors do predict relationship status, only further supporting the potential connection between romantic relationships and body concerns. Physical attractiveness and body weight, as gleaned from empirical research, may play a role in determining women's relationship

status. Overweight women are 20% less likely to marry than their normal weight peers (Gaesser, 1996). Among teenage girls, increased body mass was associated with less likelihood of having romantic partners (Halpern, King, Oslak, & Udry, 2005). Many women believe they must achieve the unhealthy standards of the ideal body to obtain the happy ending of their Cinderella story. Accordingly, we argue that basing self-worth in relationships will promote heightened body shame, that is, feeling guilt and shame when one's physical appearance does not conform to cultural standards and ideals (McKinley & Hyde, 1996) because physical appearance may be tied to relationship status. Thus, we argued that priming relationship contingency would promote body shame through heightened relationship contingency (Studies 1A and 1B). In addition, we tested whether relationship contingency predicts bulimic symptoms (Study 2) and whether this link is mediated by body shame.

STUDY 1A

Study 1A examines the causal relationship between women's relationship contingency and body shame by priming relationship contingency. Previous research has found that different contexts increase the salience of contingencies in particular domains (Garcia & Crocker, in press), that is, contingencies of self-worth have both state and trait properties. Thus, we sought to create a situation in which we would prime relationship contingency and thus give rise to greater body shame. Researchers have been successful at manipulating attitudes through increasing the salience of a particular viewpoint (e.g., Cowan, Resendez, Marshall, & Quist, 2002). We expected that priming relationship contingency through increasing the salience of this domain of contingency, and thus thoughts about this particular domain, would cause increased relationship contingency, which would, in turn, increase body concerns. Thus, we tested whether priming condition affects level of body concern and whether this link is mediated by relationship contingency.

Method

Participants

Thirty-five heterosexual women ($M = 20.61$ years) enrolled in Introductory Psychology classes were recruited to participate in the study as part of a course requirement. Racial composition was as follows: 25 White (71%), 3 Black/African Americans (9%), 5 Asians (14%), and 2 Hispanic/Latinas (6%).

Measures

Contingencies of self-worth. We administered the Contingencies of Self-Worth scale (CSWS; Crocker et al., 2003) with the seven subscales from the original measure: appearance ($\alpha = .67$), approval ($\alpha = .84$), academic performance ($\alpha = .77$), religious faith ($\alpha = .97$), virtue ($\alpha = .79$), com-

petition ($\alpha = .93$), and family support ($\alpha = .65$). To measure relationship contingency, we created a 4-item romantic relationship contingency subscale modeled after the other CSWS items. An example item was "I feel worthwhile when I have a significant other (i.e., boyfriend or girlfriend)"; $\alpha = .84$ (see Appendix). To assess state levels of contingency, participants were instructed in the directions to answer questions regarding how they felt at that moment.

Body concerns. Body concerns were assessed with the body shame ($\alpha = .84$; e.g., "I would be ashamed for people to know what I really weigh.") and surveillance ($\alpha = .78$; e.g., "I rarely think about how I look.") subscales of the Objectified Body Consciousness scale (OBC; McKinley & Hyde, 1996). Each subscale consisted of eight items, each using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Procedure

Participants were randomly assigned to one of two conditions. In the experimental condition, participants ($N = 17$) were administered the CSWS with all of the romantic relationship contingency questions highlighted in yellow (priming condition). Participants in the neutral condition ($N = 18$) received the CSWS with un-highlighted relationship contingency items (neutral condition). Participants in the priming condition were instructed to pay particular attention to the highlighted items while filling out the materials. Participants in the neutral condition were asked to pay attention to all the items in the scale. Although this experimental manipulation has never been used before, we thought drawing attention to those items measuring relationship contingency would prime relationship contingency relative to other contingencies via increased salience of relationship status as a source of self-esteem. After the CSWS was collected, participants were given the OBC scale followed by a demographic questionnaire assessing gender, age, sexual orientation, and race.

Results and Discussion

To assure that our manipulation had the desired effect on relationship contingency, we tested whether women in the priming condition indicated greater relationship contingency. As intended, women in the priming condition showed greater relationship contingency than the neutral condition (see Table 1). Consistent with our hypothesis, women in the priming condition also reported greater shame than in the neutral condition. These results suggest that priming relationship contingency promotes body concerns. To test whether the effect of condition on shame was explained by heightened relationship contingency, we conducted hierarchical regression to test for mediation following rules set forth by Baron and Kenny (1986). At step 1, the effect of condition was significant ($\beta = -.42$, $p < .05$); however, when adding the effect of relationship

Table 1

Mean Differences on Outcomes by Relationship Contingency Salience for Study 1A

<i>Outcomes</i>	<i>Salient M (SD)</i>	<i>Neutral M (SD)</i>	<i>t</i>	<i>Cohen's d</i>
Relationship contingency	3.32 (1.19)	2.50 (1.19)	2.05*	0.69
Body shame	3.58 (1.16)	2.58 (1.09)	2.63**	0.88
Surveillance	5.02 (0.69)	4.40 (0.81)	2.43*	0.82
Appearance contingency	5.15 (0.71)	4.58 (1.03)	1.87	0.64
Religious faith contingency	4.21 (1.95)	3.33 (2.08)	1.29	0.44
Competition contingency	5.14 (1.10)	4.79 (1.26)	0.83	0.30
Virtue contingency	5.52 (0.86)	5.26 (0.93)	0.87	0.29
Approval contingency	4.56 (0.84)	3.94 (1.17)	1.80	0.61
Family support contingency	5.78 (0.66)	5.78 (0.73)	-0.01	0.00
Academic competence contingency	5.27 (0.50)	5.20 (0.41)	0.46	0.15

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

contingency on shame ($\beta = .51, p < .001$) at Step 2, the effect of condition became nonsignificant ($\beta = -.25, ns$).¹ Sobel's t test (1982) confirmed a significant mediation of the condition effect on body shame by relationship contingency ($t = -2.11, p < .05$). Women in the priming condition also reported a greater tendency for body surveillance than the control; however, no other priming effects were found on the other contingencies of self-worth.

Study 1A provides preliminary evidence that increasing the salience of relationship contingency promotes greater relationship contingency and body shame among women. Furthermore, the effects of salience on body shame were mediated by increased relationship contingency. These findings suggest that women's relationship contingency may indeed promote body concerns. Even though the demand characteristics of the study cannot explain the heightened body shame in the experimental condition or the mediation results, the experimental condition in Study 1A presented heightened demand, which is remedied in Study 1B. In Study 1B, we used an attitude manipulation to heighten relationship contingency.

STUDY 1B

In Study 1B, we attempted to replicate the results of Study 1A with a different priming methodology. Study 1B used a reasoning task for the priming condition whereby participants were asked to think about reasons why they feel bad without a romantic partner. Thus, we again tested whether priming condition affects level of body concern and whether this link is mediated by increased relationship contingency.

Method

Participants

Fifty women were recruited from the college community during the summer (at coffee shops, libraries, laundromats,

academic buildings, etc.) to voluntarily participate in the study ($M = 20.23$ years). Racial composition was as follows: 30 Whites (60%), 4 Black/African Americans (8%), 8 Asians (16%), 5 Hispanic/Latinas (10%), and 3 Others/Race Unspecified (6%). All participants indicated a heterosexual orientation.

Measures

Contingencies of self-worth. We administered the same relationship contingency scale ($\alpha = .79$) and the appearance contingency subscale ($\alpha = .77$) as in Study 1A. The appearance contingency measure assesses the extent to which participants base their self-esteem on their physical appearance. To assess state levels of contingency, participants were instructed to answer questions regarding how they felt at that moment.

Body concerns. This construct was assessed with the same measures as Study 1A (body shame, $\alpha = .80$; surveillance, $\alpha = .78$).

Procedure

Participants were randomly assigned to one of two conditions of an attitude manipulation. Previous research suggests that reasoning can change people's attitudes (e.g., Wilson & Schooler, 1991). Accordingly, we asked participants in the experimental condition to list two reasons why people feel worse about themselves when they do not have a significant other (e.g., boyfriend or girlfriend). We asked them to think of reasons why they would feel worse, as opposed to better, about themselves because we felt this might have a more powerful psychological effect on our participants (Power, Crocker, & Luhtanen, 2006). Participants in the neutral condition were asked to list two reasons why people feel worse about themselves when they receive a bad grade in their class. We asked participants only two reasons to make sure that the task was perceived as easy and thus personally meaningful (Schwarz, 1998).² Following the

Table 2

Mean Differences by Condition for Study 1B

<i>Subscale</i>	<i>Control</i>	<i>Prime</i>	<i>t</i>	<i>Cohen's d</i>
	Mean (<i>SD</i>)			
Relationship contingency	2.81 (0.91)	3.53 (1.22)	-2.20*	0.66
Appearance contingency	4.40 (1.12)	4.69 (1.16)	-0.93	0.27
Body shame	2.50 (1.01)	3.35 (1.31)	-2.47*	0.73
Surveillance	3.93 (0.69)	4.37 (0.97)	-1.76	0.52

* $p < .05$.

reasons task, participants were given the OBC scale and the contingency questions adapted to romantic relationships, followed by a demographic questionnaire assessing gender, age, relationship status (i.e., whether or not they are involved in a relationship), sexual orientation, and race.

Results and Discussion

To test whether our manipulation of relationship contingency was effective, we conducted a t test on relationship contingency and body shame by experimental condition. Women were significantly more likely to report greater relationship contingency in the experimental condition compared to the neutral condition (see Table 2). Consistent with Study 1A, women in the experimental condition reported higher body shame than women in the neutral condition. To test whether the effect of condition on women's body shame was explained by their heightened relationship contingency, we conducted hierarchical regression to test for mediation following rules set forth by Baron and Kenny (1986). At Step 1, the effect of condition was significant ($\beta = .35, p < .05$); however, when adding the effect of relationship contingency on body shame ($\beta = .65, p < .001$) at Step 2, the effect of condition became nonsignificant ($\beta = .144, ns$).¹ Sobel's t test confirmed a significant mediation of the condition effect on body shame by relationship contingency ($t = 2.06, p < .05$). Relationship status, that is, whether or not women were currently involved in a romantic relationship, was not statistically significant nor did it moderate these findings; therefore, we did not include it in the analyses. No difference was found between conditions for appearance contingency or body surveillance in Study 1B.

Results of Study 1B replicate the results of Study 1A with a different experimental methodology. Across both studies, we found that priming relationship contingency resulted in heightened body shame among women. In addition, the heightened body shame was mediated by increased relationship contingency under priming (Study 1A) and attitude manipulations (Study 1B). Thus, we found strong evidence that relationship contingency caused greater body shame among women.

STUDY 2

Although Studies 1A and 1B provide collectively compelling evidence that relationship contingency heightens body shame, the studies did not fully examine the devastating consequences of body shame such as symptoms of disordered eating. Thus, Study 2 examines how the link between relationship contingency and body shame predisposes women to bulimic symptoms. Among the many forms of body concerns women may experience, body shame may be the most powerful predictor of eating disorders. Previous research has demonstrated that elevated body shame caused restrained eating among women (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998). Furthermore, body shame has been significantly correlated with disordered eating; body shame not only related to restrained eating but also to bulimic symptoms and unhealthy eating attitudes (Burney & Irwin, 2000; Noll & Fredrickson, 1998). Thus, women's relationship contingency may be associated with bulimic symptoms through heightened body shame. Study 2 extends Studies 1A and 1B by testing a model of relationship contingency (see Figure 1), which includes body shame as a mediator of the relationship between relationship contingency and bulimic symptoms.

Relationship Status

In addition, the model (see Figure 1) further explores whether relationship status moderates the association between relationship contingency and body shame. Although Study 1B included relationship status and found no difference in the effect of condition on body shame or relationship contingency by relationship status, the sample size was likely too small to examine these interactions. Thus, we thought it was important to conduct an additional test of whether relationship status would act as a buffer in the link between relationship contingency and body shame.

Studies 1A and 1B suggest that women who base their self-esteem on their relationship status, that is, whether or not they have a boyfriend, are more likely to have body shame. What about women who already have a boyfriend? Coupled women have successfully achieved their objective by having a boyfriend. This relationship may buffer them from the negative effects of relationship contingency. For example, research suggests that people with a contingency in a particular domain (e.g., academic performance) show boosts in self-esteem when they are successful in that domain (e.g., receive good grades; Crocker et al., 2002). Thus, we expected women's relationship contingency to predict lower self-esteem for single women compared to coupled women. A similar argument could be made for body shame. Specifically, women who have romantic relationships may have less appearance concerns than single women because they have satisfied their self-esteem goal—they are involved in a romantic relationship. Although not all romantic relationships are equally satisfying, merely having a romantic partner could provide a self-esteem boost or

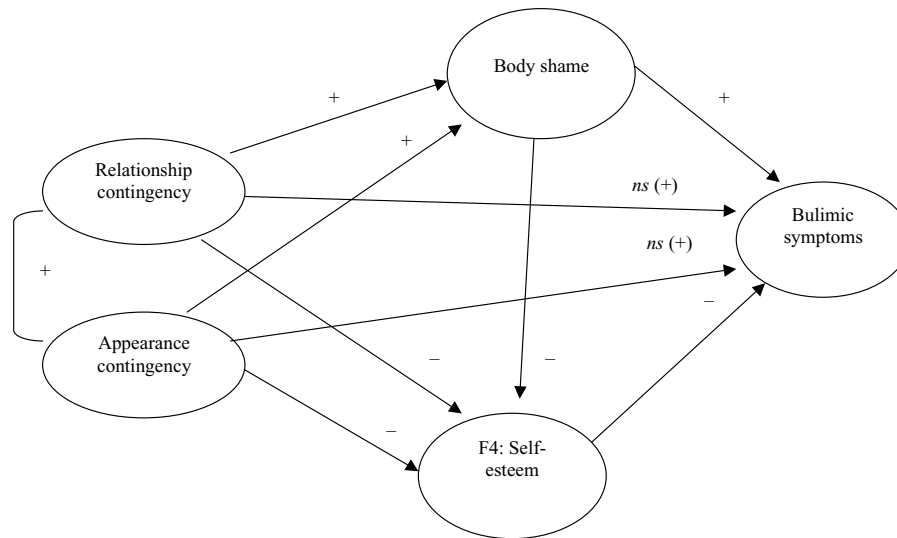


Fig. 1. Hypothesized model of relationship contingency and appearance concerns for Study 2. Parentheses represent direct effects hypotheses, that is, paths before adding mediators.

alleviate body concerns for those who base self-esteem on their relationship status. However, some women in relationships may still experience insecurities in their relationships or concerns about their physical appearance (Murray, Bellavia, Feeney, Homes, & Rose, 2001). Thus, having a relationship may not always serve as a buffer to body concerns because not all relationships are alike. Moreover, the fear of losing the relationship may drive coupled women to adopt impossible standards for their bodies in an attempt to please their significant others, regardless of the quality of their romantic relationship. Body image concerns may be both a relationship-seeking and -maintenance strategy; thus, having a romantic partner may not always quell body concerns.

We hypothesized that relationship contingency, regardless of relationship status, may relate to increased pressure to achieve the impossible standard of the ideal body and thus body shame. In other words, relationship contingency should predict body shame for both single women and women in relationships, because both groups have invested their self-worth in keeping and obtaining romantic partners.

Appearance Contingency

Contingencies of self-worth are often correlated. Many contingencies likely share common characteristics, such as the need for external validation (Sanchez & Crocker, 2005). Because relationship contingency heightened body concerns in Studies 1A and 1B, relationship contingency may also relate to greater appearance contingency (the tendency to base self-esteem on physical appearance). However, we predicted that basing self-esteem on romantic relationships has negative effects on body shame and disordered eating beyond that explained by the appearance contingency; con-

sequently, in the present studies, we controlled for appearance contingency when testing the hypotheses.

Study 2 tested five hypothesized paths (see Figure 1). First, we predicted that relationship contingency would be correlated with appearance contingency. Study 1A and 1B found that relationship contingency heightens appearance concerns; thus, women's relationship contingency may relate to appearance contingency. Furthermore, results of Study 1A suggested that relationship contingency has a marginal effect on appearance contingency (see Table 1). Therefore, we included a correlation between appearance and relationship contingency to account for this relationship and distinguish between the effects of relationship and appearance contingency on body shame. Second, we hypothesized that women's relationship contingency would relate to greater body shame. As in Studies 1A and 1B, we hypothesized that relationship contingency would relate to greater body shame because heterosexual women who place importance on obtaining and maintaining romantic relationships will also have greater body concerns to obtain and maintain relationships with men. Third, we predicted that relationship contingency would relate to lower self-esteem among women, especially among single women. As demonstrated in previous research (Sanchez & Crocker, 2005), contingency on external domains is related to lower self-esteem because it undermines personal autonomy and promotes conditional feelings of acceptance. Fourth, we hypothesized that body shame would relate to greater bulimic symptoms and mediate the link between relationship contingency and bulimic symptoms. Feeling shame and discontent about one's physical appearance has been linked to restrained eating and disordered eating symptoms (e.g., Noll & Fredrickson, 1998). Finally, we predicted that higher levels of self-esteem would relate to fewer symptoms of disordered eating. Sanchez and Crocker (2005) found that

low self-esteem predicted disordered eating symptoms, as have many others (e.g., Frederick & Grow, 1996). Thus, we also explored multiple mediators (Kenny, Kashy, & Bolger, 1998), such as whether self-esteem and body shame both mediate the link between relationship contingency and bulimic symptoms. We planned to replicate the fit of this model and hypothesized paths among women in relationships and single women.

Method

Participants

Participants were recruited over the Internet and from the college community. The college sample included 146 heterosexual women ($M = 18.40$ years, $SD = 0.72$) enrolled in Introductory Psychology classes who participated as part of a course requirement. To increase the age range and representativeness of our sample, we also recruited participants over the Web by posting messages on over 400 Yahoo® groups requesting volunteers to complete a study about women and relationships. In the Web sample, 294 women completed the survey ($M = 27.35$ years of age, $SD = 10.65$).³

Participation was voluntary; participants did not receive any reward or compensation in exchange for their participation. We collected data online for a 12-month period (September 2004 to September 2005). The entire sample (Web and college) consisted of 263 women in relationships, 175 single women, and 2 participants not indicating their relationship status ($N = 440$). Racial composition was as follows: 359 Whites (81.6%), 30 Asians (6.8%), 21 Black/African Americans (4.8%), 16 Hispanic/Latinas (3.6%), 6 Native Americans (1.4%), 6 (1.4%) classified themselves as "Other," and 2 people failed to indicate their race (0.5%).

Measures

Contingencies of self-worth. We administered the same CSWS containing the appearance ($\alpha = .77$) and relationship ($\alpha = .89$) contingency subscales.⁴

Self-esteem. We measured participants' global level of self-esteem using the well-validated and commonly used Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). This scale consisted of 10 items using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Body shame. Body shame was measured with the same OBC scale from Studies 1A and 1B. For the present article, we focused on body shame, not surveillance, because body shame is a well-known predictor of disordered eating (e.g., Noll & Fredrickson, 1998). The scale was reliable ($\alpha = .82$).

Disordered eating symptoms. We measured the participants' symptoms of disordered eating using the bulimia

subscale ($\alpha = .86$) of the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983). Each subscale consisted of eight items using a 6-point Likert scale ranging from 1 (*always*) to 6 (*never*). Higher scores indicated greater strength of symptoms of disordered eating.

Relationship satisfaction. To ensure that relationship contingency was not interchangeable with relationship satisfaction among those involved in relationships, we measured relationship satisfaction. Participants indicated their agreement with eight items created for the present study on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A sample item was "Right now, I am very satisfied with my romantic relationship." The scale was reliable ($\alpha = .92$).

Social desirability

To ensure that our results were not altered by social desirability concerns, we measured social desirability with the Crowne-Marlowe social desirability scale (Crowne-Marlowe, 1960). This scale consisted of 30 true/false statements. The scale was scored such that higher scores indicated greater socially desirable responding. The scale was reliable ($\alpha = .92$).

Procedure

Participants received a paper or Web version of the survey with the CSWS followed by the RSE, OBC, EDI, relationship satisfaction measure, and the social desirability measure. Demographic information (gender, relationship status, sexual orientation, race) and body mass (height, weight) were also collected and followed by the debriefing statement.

Results and Discussion

Table 3 shows correlations between the variables for the entire sample. Correlations by relationship status yielded similar results and thus are not included. We performed *t* tests to assess whether women differed by relationship status. Only one significant difference emerged: Women in

Table 3

Intercorrelations Between Measured Variables for Study 2 Among Entire Sample

Measures	1	2	3	4	5
1. Relationship	–	.44***	.36***	.27***	–.33***
2. Appearance		–	.45***	.32***	–.36***
3. Body shame			–	.55***	–.46***
4. Bulimic symptoms				–	–.40***
5. Self-esteem					–

*** $p < .001$.

relationships ($M = 5.32$, $SD = 1.12$) reported higher self-esteem than single women ($M = 5.08$, $SD = 1.18$), $t = 2.34$, $p < .05$.

Preliminary Analyses

In preliminary regression analyses, we tested whether relationship contingency related to lower self-esteem for those who were not in relationships to verify the measure. We created an interaction term by standardizing and then multiplying relationship status by contingency in relationships to test whether relationship status moderated the link between relationship contingency and self-esteem (Aiken & West, 1991). Body shame was regressed on relationship status, relationship contingency, and the interaction of status \times relationship contingency simultaneously. A main effect of status emerged ($\beta = -.13$, $p < .01$), such that single women showed lower self-esteem than those in relationships. In accordance with the construct of relationship contingency, the link between relationship contingency and self-esteem was moderated by status ($\beta = -.33$, $p < .001$). Relationship contingency was related to lower self-esteem for both groups (see Figure 1), but this link was stronger for single women ($\beta = -.47$, $p < .001$) than for women in relationships ($\beta = -.23$, $p < .001$). This finding was expected because contingency on one's relationship status should have a stronger negative relationship to self-esteem for single women.

We also conducted preliminary regression analyses to ensure that the association between relationship contingency and body shame persisted, controlling for body mass. Body shame was simultaneously regressed on relationship status, relationship contingency, appearance contingency, body mass, and the interaction of status \times body mass. As predicted, appearance contingency ($\beta = .33$, $p < .001$) and relationship contingency ($\beta = .27$, $p < .001$) predicted body shame. Neither body mass ($\beta = .06$, $p = .70$, *ns*), relationship status ($\beta = .03$, $p = .57$, *ns*), nor the interaction between relationship status and body mass ($\beta = .12$, $p = .39$, *ns*) predicted body shame. Thus, it was not included in the final analyses.

We also conducted preliminary regression analyses to examine whether relationship contingency was merely a proxy of relationship satisfaction for coupled women. We simultaneously regressed relationship satisfaction on relationship contingency and appearance contingency for only women in relationships. Neither relationship contingency ($\beta = .04$, $p = .63$, *ns*) nor appearance contingency ($\beta = -.04$, $p = .57$, *ns*) was related to coupled women's relationship satisfaction. In addition, women's social desirability concerns were not correlated with relationship and appearance contingency, suggesting that the link between relationship contingency and body concerns was not connected to the quality of the relationship for coupled women or an artifact of social desirability concerns.

Main Analyses

We tested the hypothesized model (see Figure 1) by confirmatory latent-variable structural equation modeling (SEM) using EQS computer software, which allowed us to test paths between predictor variables and multiple dependent variables simultaneously while accounting for measurement error (Klem, 2000). In our analyses, we tested our hypotheses with the entire sample and by relationship status. The SEM for the multiple group comparisons (nested models) were performed separately on listwise covariance matrices for women in relationships and single women. For the measurement model, we randomly parceled all of the scales into two indicators (Bandalos, 2002). To test whether relationship contingency was a unidimensional construct, we conducted a factor analysis on the items measuring relationship contingency. As expected, an exploratory factor analysis using varimax rotation suggested a unidimensional structure with all items loaded highly on one factor, which explained 59.63% of the variance. The number of factors was determined by eigenvalues over 1.00. All items loaded on the factor with components greater than .7 using the exploratory analysis. We also conducted a factor analysis with all items from the CSWS to test whether the relationship subscale loaded on a different factor from the other items in the CSWS (religious faith, virtue, competence, appearance, family support, approval, and academic/work performance). Indeed, the relationship subscale items loaded on a separate factor from the other contingency items with factor loadings greater than .7. Because we had two indicators per construct in the measurement model, we also confirmed that the indicators' errors were uncorrelated and that the indicators of the construct correlated with a separate indicator of another construct, while their errors were uncorrelated (Kenny et al., 1998).

In accordance with standard SEM with EQS software (Raykov, Tomer, & Nesselrode, 1991), we report the following goodness-of-fit indices: χ^2/df , normed fit (NFI), nonnormed fit (NNFI), and comparative fit (CFI) to evaluate the model. Acceptable fit indices exceed .90. We also report the root mean square error of approximation (RMSEA) as well as the confidence interval of the RMSEA. RMSEA misfit indices should be at or below .06 (Hu & Bentler, 1999). Although χ^2 is not considered a good index for tests of fit because of its sensitivity to sample size, we report χ^2 to make comparisons between nested models (Klem, 2000).

SEM

The measurement model fit the data well with all measures parceled into two indicators, $\chi^2(25) = 35.29$, $p < .10$, *ns*; $\chi^2/df(25) = 1.41$, NFI = .98, NNFI = .99, CFI = .99, and RMSEA = .03. Moreover, the parameters had strong absolute factor loadings (see Figure 2). To test whether a direct link existed between relationship contingency and bulimic symptoms, controlling for appearance contingency, we first performed a nested model. This model included all

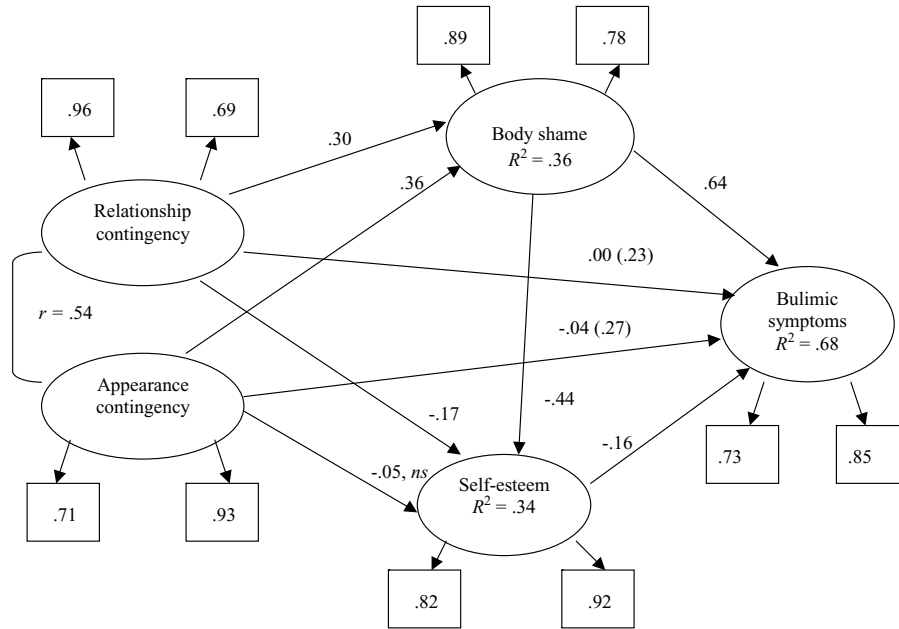


Fig. 2. Structural model on entire sample. Betas are significant at $p < .05$ unless noted otherwise. Betas in parentheses represent betas from the direct effects model, which tested the direct link between relationship contingency and bulimic symptoms before adding the paths from self-esteem and body shame to bulimic symptoms. Squares represent indicators (i.e., parcels) with factor loadings.

hypothesized paths, except the paths from body shame to bulimic symptoms and self-esteem to bulimic symptoms (referred to as the direct effects model; see Table 4), because these two factors were two possible mediators. Indeed, we found that relationship contingency related to greater bulimic symptoms, controlling for appearance contingency (betas appear in parentheses in Figure 2).

We then tested the full model, which included the previously excluded paths from body shame to bulimic symptoms and self-esteem to bulimic symptoms (see Table 4 and Figure 2). The full model fit the data well, $\chi^2(25) = 35.29, p < .10, ns; \chi^2/(25) = 1.41, NFI = .98, NNFI = .99, CFI = .99,$ and $RMSEA = .03;$ see Figure 2 and Table 4). As

hypothesized, relationship contingency related to greater body shame and lower self-esteem, controlling for the relationship between appearance contingency and body shame and self-esteem. Supporting mediation, relationship contingency no longer related to bulimic symptoms when the paths from body shame and self-esteem to bulimic symptoms were included. Sobel t tests revealed that body shame fully mediated ($Z = 3.97, p < .0001$) and self-esteem did not mediate ($Z = 1.81, p < .10$) the link between relationship contingency and bulimic symptoms.

To test the fit of this model for women in relationships and single women separately, we tested the fit of the covariance matrices for both groups constraining all paths, factor

Table 4
Fit Statistics and Chi-Square Comparisons for All Models Tested in Study 2

		χ^2	<i>df</i>	<i>NNFI</i>	<i>CFI</i>	<i>RMSEA</i>
Entire sample						
Measurement model		35.29	25	.99	.99	.03
Direct effects model	Path from body shame and self-esteem to bulimic symptoms excluded	151.72*	27	.89	.93	.11
Full model		35.29	25	.99	.99	.03
Relationship status comparison:						
Direct effects model	Path from body shame and self-esteem to bulimic symptoms excluded	190.59*	67	.91	.93	.07
Full model		78.42	65	.99	.99	.02
Unrestrained model	All constraints release	64.71	55	.99	1.0	.02

Note. NNFI = nonnormed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation. * $p < .001$.

loadings, and covariances to be equal and examined modification indices for potential differences among the two groups (Bentler, 1989). First, we conducted a direct effects model to ensure that relationship contingency related to bulimic symptoms for both groups. As expected, we found that relationship contingency predicted greater bulimic symptoms for both single ($\beta = .27, p < .05$) and coupled women ($\beta = .24, p < .05$), controlling for appearance contingency's link to bulimic symptoms for single ($\beta = .23, p < .05$) and coupled women ($\beta = .25, p < .05$). We found that the full model fit the data well for both groups, $\chi^2(65) = 78.42, p < .15, ns; \chi^2/(52) = 1.21, NFI = .96, NNFI = .99, CFI = .99, \text{ and } RMSEA = .02$. Analysis of the modification indices suggested that no constraints needed to be released. Furthermore, the final model was compared to the unrestrained model; the difference in χ^2 was nonsignificant, $\chi^2(10) = 9.00$, also indicating that no other constraints should be released.

As hypothesized, relationship contingency was associated with significantly greater body shame ($\beta = .27, p < .05; \beta = .33, p < .05$) and lower self-esteem ($\beta = -.18, p < .05; \beta = -.20, p < .05$) for both women in relationships and single women, respectively, controlling for the relationship between appearance contingency and body shame ($\beta = .35, p < .05; \beta = .37, p < .05$) and global self-esteem ($\beta = -.05, ns; \beta = -.04, ns$). Body shame predicted lowered self-esteem for women in relationships and single women ($\beta = -.45, p < .05; \beta = -.47, p < .05$, respectively). Furthermore, body shame ($\beta = .65, p < .05; \beta = .63, p < .05$) and self-esteem predicted bulimic symptoms ($\beta = -.14, p < .05; \beta = -.15, p < .05$), rendering the link between relationship contingency ($\beta = .01, ns$) and bulimic symptoms nonsignificant for coupled and single women. Sobel *t* tests revealed that body shame fully mediated ($Z = 4.15, p < .0001$) and self-esteem did not significantly mediate ($Z = 1.79, p < .10$) the link between relationship contingency and bulimic symptoms.

This study investigated the associations among romantic relationship contingency, appearance contingency, body shame, self-esteem, and disordered eating. As predicted, relationship contingency predicted lower self-esteem and greater body shame for both women in relationships and single women. Furthermore, we found support for mediation of the link between relationship contingency and symptoms of disordered eating by body shame, not self-esteem, although self-esteem did predict greater disordered eating symptoms. These findings suggest that basing self-esteem on romantic relationships puts women at risk for the development of disordered eating and that this effect is independent of basing self-esteem on appearance.

GENERAL DISCUSSION

In a society where women are constantly exposed to images of the idealized and unattainable female body, women can easily compare themselves to these images and experience shame about their bodies (Wolf, 1991). Comparisons with

these idealized images frequently leave women feeling not only fat, but also a failure for not being able to emulate these images (Silberstein, Striegel-Moore, & Rodin, 1987). Physical beauty is very important to men when choosing a mate (Singh & Young, 1995). Because of the greater emphasis men place on physical beauty for their mates, heterosexual women feel pressure to fulfill cultural standards of beauty to obtain and maintain a romantic relationship. Other research has indicated that heterosexual women are not alone in facing this pressure; much like heterosexual women, gay men also feel pressure to look attractive (Bailey, Gaulin, & Agyei, 1994), whereas lesbians may place less emphasis on physical attractiveness (Seiver, 1994). Appearance concerns seem to come, in part, from the desire to appeal to men in a romantic context. Consistent with this theory, we found that heterosexual women's relationship contingency caused greater body shame. In addition, we showed that the relationship between relationship contingency and bulimic symptoms was mediated by body shame. Thus, increased body shame puts women whose self-esteem is contingent on their relationship status at risk for symptoms of eating disorders (Noll & Fredrickson, 1998). Furthermore, the link between relationship contingency and body shame persisted after controlling for several other factors, including appearance contingency, global self-esteem, body mass, and relationship status.

Costs of Relationship Contingency

The studies here suggest that women's relationship contingency predicts greater appearance worries and pressure as measured by body shame, appearance contingency, and surveillance. In addition, we found that body shame fully mediated the link between relationship contingency and bulimic symptoms, suggesting that relationship contingency may predispose women to symptoms of disordered eating through both of these mechanisms. Because body shame and appearance focus have been linked to numerous psychological costs from depression to poorer performance on academic performance tasks (Hebl, King, & Lin, 2004; Tiggemann & Kuring, 2004), it is possible that relationship contingency may be linked to other potentially costly outcomes. At the same time, women may receive some benefits from relationship contingency. Because women's relationship contingency was related to appearance contingency, generally, women should also derive greater pride from their physical appearance when it meets cultural ideals. In addition, greater relationship contingency may predict greater relationship longevity and a tendency to work harder to resolve romantic conflicts. Although relationship contingency did not predict relationship satisfaction in Study 2, relationship contingency may be related to adult attachment styles that may moderate these links.

Relationship Status

In addition, we explored the possibility that relationship status moderates the link between relationship contingency

and body shame. Specifically, we recognized the alternate possibility that coupled women's relationship contingency would not predict body shame because they have already achieved the goal of finding romantic partners. Instead, we found support for our original hypothesis that both single and coupled women's relationship contingency was associated with body shame. Appearance concern may be both a way to seek relationships for single women and a way to maintain relationships for coupled women; thus, relationship contingency may predict body shame for both groups. Future studies should examine whether relationship contingency predicts relationship-seeking behavior for single women (e.g., greater tendency to go to bars, etc.) and greater relationship-maintenance behavior for coupled women (e.g., greater fidelity) outside the domain of appearance.

The overall tendency for relationship contingency to relate to lower self-esteem among the young women in our sample, particularly the single women, suggested that self-esteem is yet another mechanism through which relationship contingency was associated with symptoms of disordered eating. Relationship contingency may be associated with lower self-esteem because basing self-esteem on external factors may lead to unstable feelings of self-worth and an overall feeling of conditional acceptance. This is true of other external contingencies that require attaining goals that are outside one's personal control (Sanchez & Crocker, 2005).

In the present studies, we found evidence suggesting that relationship status moderated the link between relationship contingency and self-esteem; however, this moderation pattern did not persist in the SEM. That is, releasing the equality constraint on the path from relationship contingency to self-esteem in the comparative model did not significantly improve the fit of the model. However, regression analyses suggested that relationship contingency was associated with lower self-esteem for both single and coupled women, although that the pattern was stronger for single women. We can only conclude that the moderation pattern was relatively weak given that this pattern did not persist in the SEM, which takes into account, simultaneously, the multiple paths and links between all of the variables.

Limitations and Future Directions

The tendency for relationship status to attenuate the link between relationship contingency and self-esteem suggests a provocative future direction for work examining the consequences of relationship contingency. The attenuation effect suggests the possibility that the stability and security of women's romantic relationships may play an important moderating role in the link between relationship contingency and self-esteem as well as body shame. Although we did not find evidence that relationship contingency was associated with relationship satisfaction or moderated by relationship satisfaction in our coupled women, our samples

were young women, many of whom were college age and likely unmarried. Thus, it remains to be seen whether basing self-esteem on stable, committed long-term relationships among older women results in more positive outcomes than found among young women in the present samples. Moreover, examining the dynamics between women and their partners may also help us understand how some women become more relationship contingent than others. For example, some male partners may cultivate a dynamic with their partners that make them feel more contingent on their partners for happiness and confidence. The dynamics between partners and the stability of the relationships were beyond the scope of the present paper but represent important questions that remain unanswered.

The studies presented used self-report measures, and many of the findings are correlational in nature; thus, causality and social desirability concerns apply. Although social desirability as measured by the Crowne-Marlowe (1960) measure did not alter the data presented in the present studies, the usual caveats regarding self-report measures apply, and future research should include less obtrusive measures of relationship importance and body concerns. On the issue of causality, Studies 1A and 1B tested one causal direction; however, we cannot rule out the possibility that the link between relationship contingencies, body concerns, and self-esteem are reciprocal; feeling vulnerable about one's body could drive compensatory needs for connection (Wolf, 1991).

Also, the present studies included only heterosexual women. An important remaining question concerns the extent to which men's self-esteem is contingent on romantic relationships and whether relationship contingency promotes men's body concerns as well. Although previous work suggests that women are socialized to be more communal (Eagly, 1987), and more specifically, that women are more relationally interdependent (consider the self in relation to close and important others; Gabriel & Gardner, 1999), scholars should not assume that men do not value interpersonal relationships (Baumeister & Sommer, 1997). Accordingly, men may base self-worth on romantic relationships because of the many benefits associated with having romantic relationships. For example, companionship predicts better health status (Sarason & Sarason, 2001). Some qualitative work suggests that men may highly value romantic relationships with women, yet struggle against stereotypical role fulfillment, placing them at odds with expressing this perceived vulnerability (Tolman, Spencer, Harmon, Rosen-Reynoso, & Streipe, 2004). In addition, men and women may both benefit from having romantic relationships because having romantic relationships may help them avoid the unfortunate stigmatization and discrimination of those who remain single (DePaulo & Morris, 2006; Morris, DePaulo, Herter, & Ritter, 2006). However, men's relationship contingency may not predict body shame to the extent that it does for women because women are more strongly socialized to prioritize their appearance, especially with regard

to attracting romantic partners. Questions regarding the reasons why people may derive self-esteem from relationships (e.g., avoiding social sanction, meeting gender ideals/social norms, emotional intimacy), as well as possible gender differences in both level of relationship contingency and the associated consequences, remain questions for future research.

An additional direction of future research is the implications for same-sex-attracted men and women. We argue that the link between relationship contingency and body shame is born, in part, out of the need to appeal to men; however, it is possible that the connection between women's relationship contingency and body concerns could also be explained by other factors, such as an overall tendency toward public perfectionism. Many argue that being involved in romantic relationships is more socially acceptable than being single (Conley & Collins, 2002; DePaulo & Morris, 2006); thus, relationship contingency may underlie a tendency to derive self-worth from conforming to social and cultural norms. Therefore, relationship contingency could be related to body concerns because of the desire to be perceived as perfect by others more generally, not men specifically. Moreover, perfectionism has been tied to symptoms of disordered eating (e.g., Hewitt, Flett, & Ediger, 1995). Studies sampling gay men and lesbian women may help tease apart some of the mechanisms (e.g., male gaze) behind these variables.

Conclusions

Previous research on body concerns and eating disorders has given short shrift to the relational nature of body concerns for heterosexual women. That is, women's experiences of body shame are about more than just their physical appearance—body shame is also driven in part by the connection between one's physical appearance and ability to attract a romantic partner. Women strive for thinness ideals to be beautiful, and part of this striving to be beautiful is connected to the desire to obtain and maintain romantic relationships. In our culture, women are expected to marry and single women are made to feel inadequate and deficient as they age. Researchers must thoroughly consider the lengths to which women will go, perhaps at the sacrifice of their physical health, to obtain romantic relationships when self-worth is on the line.

Initial submission: November 6, 2006

Initial acceptance: May 8, 2007

Final acceptance: July 5, 2007

NOTES

1. Controlling for appearance contingency did not alter the mediation results.
2. Four people failed to list any reason and were not included in the final analyses because they may have perceived the task as difficult and thus not personally meaningful.
3. A total of 369 people began the survey, that is, 80% of participants completed the entire survey without skipping questions

or leaving portions incomplete. We found no significant differences in age, relationship status, appearance contingency, or relationship contingency between those who had complete and incomplete data.

4. Measures were reliable for both women in relationships and single women.

REFERENCES

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Bailey, J. M., Gaulin, S., & Agyei, Y. (1994). Effects of gender and sexual orientation on evolutionarily relevant aspects of human mating psychology. *Journal of Personality and Social Psychology, 66*, 1081–1093.
- Bakan, D. (1966). *The duality of human existence: Isolation and communion in Western man*. Boston: Beacon Press.
- Bandalos, D. L. (2002). The effects of item parceling on goodness-of-fit and parameter estimate bias in structural equation modeling. *Structural Equation Modeling, 9*, 78–102.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Baumeister, R. F., & Sommer, K. L. (1997). What do men want? Gender differences and two spheres of belongingness: Comment on Cross and Madson (1997). *Psychological Bulletin, 122*, 38–44.
- Bentler, P. M. (1989). *EQS: Structural equations program manual*. Los Angeles: BMDP Statistical Software.
- Burney, J., & Irwin, H. J. (2000). Shame and guilt in women with eating-disorder symptomatology. *Journal of Clinical Psychology, 56*, 51–61.
- Conley, T. D., & Collins, B. E. (2002). Gender, relationship status, and stereotyping about sexual risk. *Personality and Social Psychology Bulletin, 28*, 1483–1494.
- Cowan, G., Resendez, M., Marshall, E., & Quist, R. (2002). Hate speech and constitutional protection: Priming values of equality and freedom. *Journal of Social Issues, 58*, 247–263.
- Crocker, J., Luhtanen, R. K., Cooper, M. L., & Bouvrette, S. A. (2003). Contingencies of self-worth in college students: Measurement and theory. *Journal of Personality and Social Psychology, 85*, 894–908.
- Crocker, J., Sommers, S. R., & Luhtanen, R. K. (2002). Hopes dashed and dreams fulfilled: Contingencies of self-worth and admissions to graduate school. *Personality and Social Psychology Bulletin, 28*, 1275–1286.
- Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychological Review, 108*, 593–623.
- Cross, S., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin, 122*, 5–37.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*, 349–354.
- DePaulo, B. M., & Morris, W. L. (2006). The unrecognized stereotyping and discrimination against singles. *Current Directions in Psychological Science, 15*, 251–254.
- Eagly, A. (1987). *Sex differences in social behavior: A social role interpretation*. Hillsdale, NJ: Erlbaum.

- Frederick, C. M., & Grow, V. M. (1996). A mediational model of autonomy, self-esteem, and eating disordered attitudes and behaviors. *Psychology of Women Quarterly*, *20*, 217–228.
- Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, *22*, 173–206.
- Fredrickson, B. L., Roberts, T., Noll, S. M., Quinn, D. M., & Twenge, J. M. (1998). That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. *Journal of Personality and Social Psychology*, *75*, 269–284.
- Gabriel, S., & Gardner, W. L. (1999). Are there "his" and "hers" types of interdependence? The implications of gender differences in collective versus relational interdependence for affect, behavior, and cognition. *Journal of Personality and Social Psychology*, *77*, 642–655.
- Gaesser, G. (1996). *Big fat lies: The truth about your weight and your health*. New York: Fawcett Columbine.
- Garcia, J. A., & Crocker, J. (2007). Women of color in the college: Effects of identity and context on contingent self-worth. In A. J. Fuligni (Ed.), *Contesting stereotypes and creating identities: Social categories, social identities, and educational participation*. (pp. 160–179). New York: Russell Sage Publisher.
- Garner, D. M., Olmstead, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders*, *2*(2), 15–34.
- Geller, J., Zaitsoff, S. L., & Srikaneswaran, S. (2002). Beyond shape and weight: Exploring the relationship between non-body determinants of self-esteem and eating disorder symptoms in adolescent females. *International Journal of Eating Disorders*, *32*, 344–351.
- Gilligan, C., & Brown, L. (1992). *Meeting at the crossroads: Women's psychology and girls' development*. Cambridge, MA: Harvard University Press.
- Halpern, C. T., King, R. B., Oslak, S. G., & Udry, J. R. (2005). Body mass index, dieting, romance, and sexual activity in adolescent girls: Relationships over time. *Journal of Research on Adolescence*, *15*, 535–559.
- Hamida, S. B., Mineka, S., & Bailey, J. M. (1998). Sex differences in perceived controllability of mate value: An evolutionary perspective. *Journal of Personality and Social Psychology*, *74*, 953–966.
- Hebl, M. R., King, E. B., & Lin, J. (2004). The swimsuit becomes us all: Ethnicity, gender, and vulnerability to self-objectification. *Personality and Social Psychology Bulletin*, *30*, 1322–1331.
- Hewitt, P. L., Flett, G. L., & Ediger, E. (1995). Perfectionism traits and perfectionistic self-presentation in eating disorder attitudes, characteristics, and symptoms. *International Journal of Eating Disorders*, *18*, 317–326.
- Holland, D. C. (1992). How cultural systems become desire: A case study of American romance. In R. G. D'Andrade & C. Strauss (Eds.), *Human motives and cultural models* (pp. 61–89). New York: Cambridge University Press.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1–55.
- Josephs, R. A., Markus, H. R., & Tafarodi, R. W. (1992). Gender and self-esteem. *Journal of Personality and Social Psychology*, *63*, 391–402.
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (vol. 1, 4th ed., pp. 233–265). New York: McGraw-Hill.
- Kirkpatrick, L. A., & Ellis, B. J. (1994). An evolutionary-psychological approach to self-esteem: Multiple domains and multiple functions. In M. B. Brewer & M. Hewstone (Eds.), *Self and social identity* (pp. 52–77). Malden, MA: Blackwell.
- Klem, L. (2000). Structural equation modeling. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding MORE multivariate statistics* (pp. 227–260). Washington, DC: American Psychological Association.
- Leary, M., Tambor, E., Terdal, S., & Downs, D. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, *68*, 518–530.
- McKinley, N. M., & Hyde, J. S. (1996). The objectified body consciousness scale. *Psychology of Women Quarterly*, *20*, 181–215.
- Morris, W. L., DePaulo, B. M., Herter, J., & Ritter, L. (2006). Perception of people who are single: A developmental life tasks model. Manuscript submitted for publication.
- Murray, S. L., Bellavia, G., Feeney, B., Homes, J. G., & Rose, P. (2001). The contingencies of interpersonal acceptance: When romantic relationships function as a self-affirmational resource. *Motivation and Emotion*, *25*, 163–189.
- Murray, S. L., Griffin, D. W., Rose, P., & Bellavia, G. (2003). Calibrating the sociometer: The relational contingencies of self-esteem. *Journal of Personality and Social Psychology*, *85*, 61–84.
- Noll, S. M., & Fredrickson, B. L. (1998). A mediational model linking self-objectification, body shame, and disordered eating. *Psychology of Women Quarterly*, *22*, 623–636.
- Power, C. M., Crocker, J., & Luhtanen, R. (2006). The ups and downs of appearance-contingent self worth and gendered psychological well-being. Manuscript submitted for publication.
- Raykov, T., Tomer, A., & Nesselroade, J. R. (1991). Reporting structural equation modeling results in psychology and aging: Some proposed guidelines. *Psychology and Aging*, *6*, 499–503.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. New York: Princeton University Press.
- Sanchez, D. T., & Crocker, J. (2005). How investment in gender ideals affects well-being: The role of external contingencies of self-worth. *Psychology of Women Quarterly*, *29*, 63–77.
- Sarason, B. R., & Sarason, I. G. (2001). Ongoing aspects of relationships and health outcomes: Social support, social control, companionship, and relationship meaning. In J. Harvey & A. Wenzel (Eds.), *Close romantic relationships: Maintenance and enhancement* (pp. 277–298). Mahwah, NJ: Erlbaum.
- Schwarz, N. (1998). Accessible content and accessibility experiences: The interplay of declarative and experiential information in judgment. *Personality and Social Psychology Review*, *2*, 87–99.

- Sedikides, C., Oliver, M. B., & Campbell, W. K. (1994). Perceived benefits and costs of romantic relationships for women and men: Implications for exchange theory. *Personal Relationships, 1*, 5–21.
- Shackelford, T. K., Schmitt, D. P., & Buss, D. M. (2005). Universal dimensions of human mate preferences. *Personality and Individual Differences, 39*, 447–458.
- Siever, M. D. (1994). Sexual orientation and gender as factors in socioculturally acquired vulnerability to body dissatisfaction and eating disorders. *Journal of Consulting and Clinical Psychology, 62*, 252–260.
- Silberstein, L. R., Striegel-Moore, R. H., & Rodin, J. (1987). Feeling fat: A woman's shame. In H. B. Lewis (Ed.), *The role of shame in symptom formation* (pp. 89–108). Hillsdale, NJ: Erlbaum.
- Singh, D., & Young, R. K. (1995). Body weight, waist-to-hip ratio, breasts, and hips: Role in judgments of female attractiveness and desirability for relationships. *Ethiology & Sociobiology, 16*, 483–507.
- Smith, J. E., Waldorf, V. A., & Trembath, D. L. (1990). "Single White male looking for thin, very attractive . . ." *Sex Roles, 23*, 675–685.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290–312). San Francisco: Jossey-Bass.
- Tiggemann, M., & Kuring, J. K. (2004). The role of body objectification in disordered eating and depressed mood. *British Journal of Clinical Psychology, 43*, 299–311.
- Tolman, D. L., Spencer, R., Harmon, T., Rosen-Reynoso, M., & Striepe, M. (2004). Getting close, staying cool: Early adolescent boys' experiences with romantic relationships. In N. Way & J. Chu (Eds.), *Adolescent boys: Exploring diverse cultures of boyhood* (pp. 235–255). New York: New York University Press.
- Wilson, T. D., & Schooler, J. (1991). Thinking too much: Introspection can reduce the quality of preferences and decisions. *Journal of Personality and Social Psychology, 60*, 181–192.
- Wolf, N. (1991). *The beauty myth: How images of beauty are used against women*. New York: Anchor Books.

APPENDIX: RELATIONSHIP CONTINGENCY SUBSCALE

- When I do not have a significant other (i.e., boyfriend or girlfriend), I feel badly about myself.
- I feel worthwhile when I have a significant other (i.e., girlfriend or boyfriend).
- When I have a significant other (i.e., boyfriend or girlfriend), my self-esteem increases.
- My self-esteem depends on whether or not I have a significant other (i.e., boyfriend or girlfriend).