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Self-compassion moderates body comparison and appearance self-worth's inverse relationships with body appreciation

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ABSTRACT

Although research on positive body image has increased, little research has explored which variables protect body appreciation during body-related threats. Self-compassion may be one such variable. Individuals high in self-compassion are mindful, kind, and nurturing toward themselves during situations that threaten their adequacy, while recognizing that being imperfect is part of "being human." In this study, we investigated whether two body-related threats (i.e., body comparison and appearance contingent self-worth) were more weakly related to body appreciation when self-compassion was high among an online sample of 263 women (M_{age} = 35.26, SD = 12.42). Results indicated that self-compassion moderated the inverse relationships between body related threats and body appreciation. Specifically, when self-compassion was very high, body comparison and appearance contingent self-worth were unrelated to body appreciation. However, when self-compassion was low, these relationships were strong. Self-compassion, then, may help preserve women's body appreciation during body-related threats.

Introduction

Within the past decade, scholars have acknowledged the value in understanding and promoting positive body image and thus have begun investigating this construct via qualitative and quantitative designs (Frisén & Holmqvist, 2010; Tylka, 2011; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). The most comprehensive and studied aspect of positive body image is body appreciation, which is defined as holding favorable opinions toward the body regardless of its appearance, accepting the body along with its deviations from societal beauty ideals, respecting the body by attending to its needs and engaging in healthy behaviors, and protecting the body by rejecting unrealistic media appearance ideals (Avalos, Tylka, & Wood-Barcalow, 2005). This construct does not simply represent the "healthy" end of a continuum with body dissatisfaction anchoring the "unhealthy" end, but instead, has been shown to be uniquely related to various indicators of well-being (Avalos et al., 2005). Although body image researchers have extensively explored causes and correlates of body dissatisfaction, body appreciation has received less attention. However, because body appreciation entails more than the absence of dissatisfaction and has strong links to well-being, it is important to consider factors that help to achieve and sustain it. The present study explored the moderating role of self-compassion in the context of two potential challenges to body appreciation: social comparison and appearance contingent self-worth.

Self-compassion is defined as an attitude of kindness and understanding toward one's personal disappointments and struggles that includes three interconnected components: mindfulness, self-kindness, and common humanity (Neff, 2003a, 2003b). Mindfulness refers to being open to and moved by personal distress while taking a nonjudgmental attitude toward perceived inadequacies and failures. Self-kindness entails treating oneself with understanding, patience, and forgiveness, even when confronted with perceived inadequacy or disappointment. People who are self-kind affirm that they deserve love and affection. Common humanity refers to the recognition that all people are imperfect, make mistakes, and experience failure. As a result of this recognition, self-compassionate people do not feel isolated by the experience of failure or struggle. Self-compassion is different conceptually from self-esteem; self-esteem distances people from confronting their personal inadequacies which preempts their experience of distress and prompts self-enhancing illusions (Neff, 2009; Neff & Vonk, 2009).

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Substantial evidence supports self-compassion as a beneficial characteristic (Leary, Tate, Adams, Allen, & Hancock, 2007; Neff, Hsieh, & Dejitterat, 2005). Self-compassionate people report lower rates of psychological distress, such as anxiety, depression, and stress (MacBeth & Gumley, 2012). They also report higher rates of desirable characteristics, such as life satisfaction, social connectedness, perceived competence, and intrinsic motivation (Neff, 2003b; Neff et al., 2005). Self-compassion is also related to healthier body image, including lower body dissatisfaction, body shame, and body surveillance as well as higher body appreciation and body image flexibility (i.e., the ability to accept negative body-related thoughts and feelings while remaining committed to desired and valued behaviors; Daye, Webb, & Jafari, 2014; Kelly, Vimalakanthan, & Miller, 2014; Mosewich, Kowalski, Sabiston, Sedgwick, & Tracy, 2011; Wasylkiw, MacKinnon, & MacLellan, 2012). Researchers have begun to replicate these findings using experimental designs; for example, community women who received a 3-week online self-compassion meditation training program experienced greater body appreciation and lower body shame and body dissatisfaction, and maintained these improvements at a 3-month follow-up, relative to a control group (Albertson, Neff, & Dill-Shackleford, 2014).

Researchers are beginning to conceptualize self-compassion as a buffer, or moderator, of the relationships between distressing events and negative self-feelings (Leary et al., 2007). Moderators change the strength or direction of the relationship between two variables, asking "when or for whom" a given relationship exists (Karazsia, van Dulmen, Wong, & Crowther, 2013, p. 434). By definition, people high in self-compassion respond to situations that threaten their personal adequacy by treating themselves with kindness and nonjudgmental understanding (Neff, 2003a), and this process can help to regulate negative emotions (Leary et al., 2007). Indeed, experimental manipulations of self-compassion have been shown to increase positive affect and decrease negative feelings about the self, when compared to control groups without self-compassion inductions (Leary et al., 2007). For example, among college women who restrict their eating, those who were induced to think self-compassionately after eating a doughnut (i.e., they were told that all people eat unhealthy foods at times and asked to not to be hard on themselves because "this little amount of food doesn't matter anyway") were able to reduce their disinhibited eating relative to a control group who did not receive the self-compassion induction (Adams & Leary, 2007, p. 1129).

Because self-compassion has been shown to regulate negative emotions, it is likely that it can buffer women against factors that produce feelings of shame toward their bodies, and initial evidence supports this idea. For example, given that society defines beauty as being thin for women, elevated BMI is often linked to weight stigma (interpersonal shame by others) and internalized self-shame among women (Tylka et al., 2014). A recent study showed that self-compassion weakened the positive relationship between BMI and eating pathology and inverse relationship between BMI and body image flexibility for women (Kelly et al., 2014). The authors concluded that treating oneself with understanding and kindness served as a protective factor for women, offsetting stigma and shame associated with having an elevated BMI in a culture that values thinness. Another recent study found that self-compassion weakened the links between women's restrictive/critical caregiver eating messages (i.e., memories of their caregivers reprimanding them for eating too much and insinuating that they may be or become fat) and both body surveillance and body shame (Daye et al., 2014). These authors also concluded that self-compassion can protect women, in this case from early experiences of shame related to their bodies.

Another variable that has been shown to contribute to women's feelings of inferiority is social comparison, which is the process of using information about others to derive conclusions about the self (Festinger, 1954). People engage in social comparison in domains that personally matter—and women are heavily socialized to view appearance as such a domain (Buote, Wilson, Strahan, Gazzola, & Papps, 2011). Indeed, evidence confirms that women commonly compare their bodies to their peers (Leahey, Crowther, & Mickelson, 2007; Trottier, Polivy, & Herman, 2007). It has been well-documented via correlational and experimental research that making frequent appearance comparisons is related to more negative feelings and derogatory statements about the body (Bamford & Halliwell, 2009; Corning & Gondoli, 2012; Groesz, Levine, & Murnen, 2002; Myers & Crowther, 2009). These findings are often explained in terms of "upward comparisons." That is, when women compare themselves to someone who is thinner in cultures that value thinness, the recognition that they are heavier is likely to produce feelings of lowliness and negative self-appraisal (Major, Testa, & Bylsma, 1991). However, it is plausible that self-compassion could mitigate these well-documented effects. For example, if a woman recognizes that she is not as thin or toned as a peer or a health/fashion model, a compassionate attitude would help her to regulate feelings of inferiority and avoid self-criticism. A compassionate attitude might help her to assuage body-related distress that could emerge from the perceived discrepancy by recognizing that all bodies are different and nearly all bodies fall short of cultural ideals.

A second variable that has been associated with women's distress is appearance contingent self-worth. Given pervasive cultural messages about the importance of physical beauty (particularly thinness), it is not surprising that many women internalize this message and come to believe that their worth as a person is, at least in part, rooted in their appearance (Buote et al., 2011). People seek to attain success and avoid failure in domains that matter most to them, and when self-worth is contingent upon an external criterion such as physical appearance, appearance takes on heightened importance (Crocker, Sommers, & Luhtanen, 2002). When women invest their self-worth in appearing like an unrealistic and unattainable criterion (e.g., digitally modified media images of women), then they may experience body-related distress. Consistent with this idea, appearance contingent self-worth has been linked with higher concerns about weight or shape (Grossbard, Lee, Neighbors, & Larimer, 2009) and higher body dissatisfaction, body surveillance, and eating disturbance (Bailey & Ricciardelli, 2010; Overstreet & Quinn, 2012). Yet, self-compassion may be able to weaken these associations. Self-compassion is not based on outperforming others or congruence with external standards. Instead, it is based on accepting oneself and recognizing that shortcomings or imperfections are part of being human. Thus, it is plausible that a self-compassionate attitude will promote self-kindness and understanding rather than self-judgment and criticism when women who value appearance fail to reach certain cultural standards of attractiveness.

To date, no study has explored whether self-compassion moderates the relationships between body comparison or appearance contingent self-worth and body appreciation. Therefore, we tested four hypotheses, grounded in the literature and rationale presented above. First, we hypothesized that body comparison and appearance contingent self-worth would show inverse associations with body appreciation. Although it has been well-established that body comparison and appearance contingent self-worth are related to higher body dissatisfaction, it is unknown whether they are related to body appreciation, a distinct construct from low body dissatisfaction (Avalos et al., 2005). Second, consistent with previous research (Wasylkiw et al., 2012), we predicted that self-compassion would show a significant positive relationship with body appreciation.

Our third and fourth hypotheses were that self-compassion would moderate by weakening the inverse relationships between (a) body comparison and body appreciation, and (b) appearance contingent self-worth and body appreciation.

Method

Participants and Procedure

All procedures were approved by the first author's Institutional Review Board, and all data were collected by the first author. A brief description of the study, including estimated duration and compensation, was posted on Amazon's Mechanical Turk (MTurk) website. MTurk is a website that provides individuals with opportunities to complete online tasks for monetary compensation. It is recognized as a source of quality data for social science research, and tends to provide a greater diversity of participants when compared to college student samples (Buhrmester, Kwang, & Gosling, 2011). MTurk also has been found to be a reliable and valid method for data collection on body image specifically (Gardner, Brown, & Boice, 2012). The present study was advertised to MTurk workers from the U.S. who achieved at least a 98% approval rate and completed at least 10,000 hits. Additionally, a subset of participants was recruited from psychology courses at a small, U.S. liberal arts institution; these students received a brief email describing the study and were offered extra credit in exchange for their participation.

The study was described to all participants as an exploration of positive psychological constructs such as life orientation, self-acceptance, and body-related attitudes and behaviors. Interested participants were directed to a survey link; females were routed to the present study, whereas males were routed to another study. We limited our sample to women. Compared to men, the appearance norms women encounter in daily life have been found to be more rigid, homogenous, and pervasive, and thus impact women's body image to a greater extent (Buote et al., 2011). Thus, self-compassion may be more likely to protect women's body image from their comparison to, and the self-worth they have invested in, appearance norms.

Before proceeding, women were required to indicate that they understood the informed consent information, and that they agreed to participate. After they provided their consent, they were directed to the measures described below, which were presented in random order via the randomization function within SurveyMonkey, which hosted the survey. In exchange for completing the survey, MTurk participants were paid $2.50, and those recruited from the liberal arts college received course credit. Two attention checks were embedded in the survey (e.g., "To make sure you are paying attention, please answer strongly disagree"), and those who failed either check ($n = 15$) were not included in the data set. Also, women with large amounts of missing data ($n = 2$) were excluded from the data set. All women (including both the MTurk sample and the college sample) completed the identical survey including the attention checks.

The final sample consisted of 263 women (221 from MTurk and 42 from the undergraduate institution). Participants ranged in age from 19 to 76 years ($M = 35.26$ years, $SD = 12.42$). Their average body mass index (BMI) was 26.23 ($SD = 6.45$), which is less than the average U.S. female BMI of 28.2 (U.S. Department of Health & Human Services, 2012). Participants' BMIs reflected the following classifications: 3.4% underweight (BMI less than 18.5), 54.6% normal weight (BMI between 18.5 and 24.9), 20.5% overweight (BMI between 25 and 29.9), and 25.5% obese (BMI of 30 and higher). Participants identified as White (77.9%), African American (10.6%), Asian American (5.3%), Latin American (4.6%), Native American (1.5%), or multiracial (1.1%). The breakdown of educational attainment was as follows: a high school degree or less (13.3%), some college (45.2%), a Bachelor's degree (30.0%), and more than a Bachelor's degree (11.4%). Most participants identified as heterosexual (87.0%); an additional 9.3% identified as bisexual and 3.4% as lesbian.

Measures

Self-compassion. The 12-item Self-Compassion Scale-Short Form (Raes, Pommier, Neff, & Van Gucht, 2011) was used to measure the extent participants are compassionate toward themselves. Its items (e.g., "I try to be understanding and patient toward those aspects of my personality I don't like") are rated on a 5-point response scale ranging from 1 (*almost never*) to 5 (*almost always*). Among undergraduate students, the short form correlated almost perfectly with the original version of the scale, had acceptable internal consistency, and demonstrated criterion-related validity via its ability to predict changes in depression over a 5-month period (Raes, 2011; Raes et al., 2011). Item responses were reversed where necessary and averaged to create a single self-compassion score, with higher scores indicating greater self-compassion. Cronbach's alpha for the current study was .91.

Body comparison. The Body Comparison Orientation subscale from the Body, Eating, and Exercise Comparison Orientation Measure (BEECOM; Fitzsimmons-Craft, Bardone-Cone, & Harney, 2012) was used to assess frequency of body-related comparisons. The subscale consists of six items (e.g., "I compare my body shape to that of my peers"), that are rated on a 7-point scale from 1 (*never*) to 7 (*always*). Item responses were averaged, with higher scores indicating greater body-related comparison. Among undergraduate women, this subscale has been shown to have internally consistent and reliable scores over a 2-week period, and demonstrate evidence of construct validity (Fitzsimmons-Craft et al., 2012). Cronbach's alpha for the current study was .95.

Body appreciation. The 13-item Body Appreciation Scale (BAS; Avalos et al., 2005) was used to assess participants' acceptance of and appreciation for their bodies. Its items (e.g., "Despite its flaws, I accept my body for what it is") are rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*). Item responses are averaged, with higher scores reflecting greater body appreciation. Among college women, scores on the BAS demonstrated internal consistency reliability and 3-week test-retest reliability, a unidimensional factor structure, and positive relationships to appearance evaluation and body esteem (Avalos et al., 2005). The BAS is currently regarded as the most comprehensive measure of positive body image (Menzel & Levine, 2011). In the present study, Cronbach's alpha was .95.

Appearance self-worth. The Contingencies of Self-Worth Scale (CSW; Crocker, Luhtanen, Cooper, & Bouvrette, 2003) is a 35-item scale that assesses seven different domains of self-worth. Only the 5-item Appearance subscale was used in this study. Participants indicated agreement with its items (e.g., "When I think I look attractive, I feel good about myself") using a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Item responses were averaged, with higher scores reflecting the importance of appearance to participants' sense of self-worth. Scores on the Appearance subscale have upheld its internal consistency reliability, construct validity, and discriminant validity among college students (Crocker et al., 2003). Cronbach's alpha for this study was .84.

Demographic form. Participants reported their sex (for verification of being female), age, ethnicity, sexual orientation, height (in inches), and weight (in pounds). Self-reported height and weight were converted to BMI using the following formula: $(\text{weight} \times 703)/\text{height}^2$ (U.S. Department of Health & Human Services, 2002).

Results

Prior to analyses, data were carefully screened. The percentage of missing items was very low ($M = 0.63\%$). Therefore, we performed available item analysis given that it performs as well as more complex methods (e.g., multiple imputation) when the number of missing items is low and measures are internally consistent within the sample (Parent, 2013). Next, we examined the distributions of each of the major study variables for violations of normality. Skew and kurtosis for all variables were within recommended limits for regression analyses (that is, less than 3.00 for skew and less than 10.00 for kurtosis; Kline, 2010). Four univariate outliers were detected and these values were excluded from all analyses, and two multivariate outliers were detected via Mahalanobis distance and excluded from the regression analyses. Thus, the regression analyses were based on 257 cases. Finally, there were no significant mean differences between the MTurk participants and the college participants on social comparison, appearance self-worth, body appreciation, or self-compassion (all $ps > .05$); thus, these data were combined for the analyses.

Means, standard deviations, and intercorrelations for the study variables are shown in Table 1. As hypothesized, body comparison and appearance self-worth were negatively correlated with body appreciation. Self-compassion was inversely associated with body comparison and appearance self-worth and positively associated with body appreciation. Given that BMI was associated with body appreciation, and age was associated with self-compassion and appearance contingent self-worth, we controlled for BMI and age in the regression analyses.

In order to test self-compassion as a moderator, we performed two regression-based moderation analyses. In Model 1, the predictor was body comparison, and in Model 2, the predictor was appearance self-worth. For both analyses, the moderator was self-compassion and the criterion variable was body appreciation. The interaction term was formed by multiplying the predictor by self-compassion. For both models, BMI and age were entered at Step 1 as covariates, the predictor and self-compassion were entered at Step 2, and their interaction was entered at Step 3. All variables were mean-centered. Results are summarized in Table 2.

For the first moderation analysis, self-compassion showed a significant positive relationship with body appreciation, $B = .37$ (95% CI = .30, .45), $SE = .04$, $t(252) = 9.47$, $p < .001$, and body comparison showed a significant negative relationship with body appreciation, $B = -.25$ (95% CI = −.32, −.17), $SE = .04$, $t(252) = -6.53$, $p < .001$. However, this latter association was conditional upon self-compassion, as evidenced by the significant coefficient for the interaction term in Step 3. In order to probe this conditional association, we tested the significance of the simple slopes and created a plot of the regression lines for body comparison predicting body appreciation at two levels of self-compassion (plus and minus one standard deviation from the mean). This plot is presented in Fig. 1. At low levels of self-compassion, body comparison was strongly related to poorer body appreciation, $B = -.22$ (95% CI = −.29, −.15), $SE = .03$, $t(252) = -6.47$, $p < .001$. However, at high levels of self-compassion, body comparison was more weakly associated with body appreciation, $B = -.11$ (95% CI = −.18, −.05), $SE = .03$, $t(252) = -3.39$, $p < .001$. Another way to probe a significant interaction is the Johnson-Neyman technique (Johnson & Neyman, 1936; Preacher, Curran, & Bauer, 2006). This procedure determines the value of the moderator at which the predictor no longer has a significant relationship with the criterion. For this analysis, body comparison was no longer related to body appreciation when self-compassion was 4.27 (on a 1–5 scale) or greater, $B = -.09$ (95% CI = −.17, .00), $SE = .04$, $t(252) = -1.96$, $p = .050$.

A similar analysis was conducted for appearance self-worth, and the same pattern of results emerged. In Step 2, self-compassion significantly predicted body appreciation, $B = .33$ (95% CI = .24, .41), $SE = .04$, $t(252) = 7.71$, $p < .001$, and higher appearance self-worth significantly predicted lower body appreciation, $B = -.27$ (95%CI = −.35, −.19), $SE = .04$, $t(252) = -6.42$, $p < .001$. Again, this latter relationship was conditional upon self-compassion, as can be seen by the significant interaction term in Step 3. Fig. 2 illustrates this conditional association. At low levels of self-compassion (that is, one standard deviation below the mean), appearance self-worth was strongly related to lower body appreciation, $B = -.29$ (95% CI = −0.37, −0.20), $SE = .04$, $t(252) = -6.71$, $p < .001$. However, at high levels of self-compassion (one standard deviation above the mean), appearance self-worth showed a weaker relationship with body appreciation, $B = -.14$ (95% CI = −0.22, −0.07), $SE = .05$, $t(252) = -3.90$, $p < .001$. The Johnson-Neyman technique indicated that appearance self-worth had no significant relationship with body appreciation when self-compassion was equal to or exceeded 4.29, $B = -.10$ (95% CI = −.19, .00), $SE = .05$, $t(252) = -1.96$, $p = .050$.

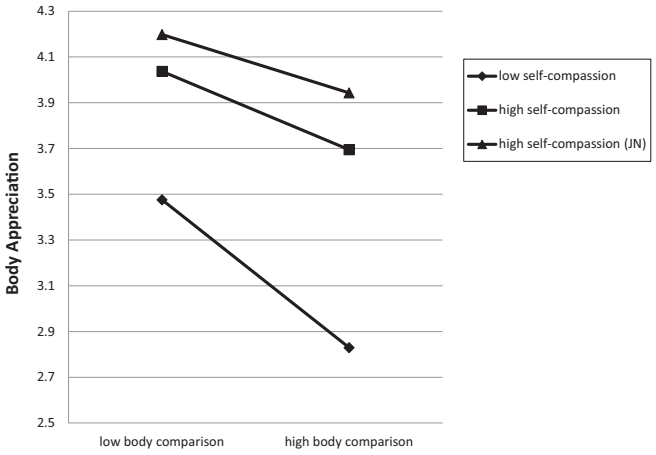

Fig. 1. Regression lines showing the relationships between body comparison and body appreciation by low (−1 *SD*) and high (1 *SD*) levels of self-compassion, as well as when this relationship is no longer significant using the Johnson-Neyman (JN) technique.

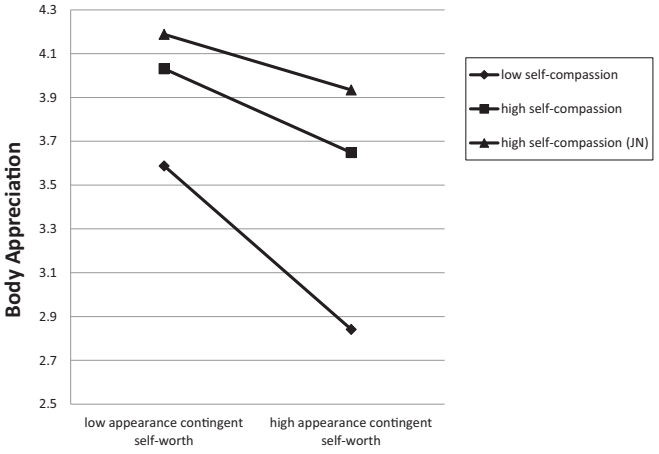

Fig. 2. Regression lines showing the relationships between appearance contingent self-worth and body appreciation by low (−1 *SD*) and high (1 *SD*) levels of self-compassion, as well as when this relationship is no longer significant using the Johnson-Neyman (JN) technique.

Discussion

Consistent with previous research (Wasylkiw et al., 2012), this study revealed that self-compassion was positively related to body appreciation. Unique to the present study, we found that both

Table 1
Means, standard deviations, and intercorrelations for major study variables.

Variable	*M*	*SD*	Range	1	2	3	4	5
1. Self-compassion	3.12	0.78	1–5	–				
2. Body comparison	3.79	1.50	1–7	−.42***	–			
3. Body appreciation	3.46	0.81	1–5	.62***	−.52***	–		
4. Appearance self-worth	4.51	1.31	1–7	−.55***	.68***	−.56***	–	
5. Body mass index	26.23	6.45	15.84–49.87	−.07	.07	−.37***	.02	–
6. Age	35.26	12.42	19–76	.13*	−.10	.03	−.16*	.14*

Note. $N = 263$ (except BMI where $N = 259$).
* $p < .05$.
*** $p < .001$.

frequency of body-related social comparisons and staking one's self-worth in appearance showed negative relationships with body appreciation, and self-compassion moderated these associations. In other words, self-compassion appeared to help protect women's body appreciation in the face of two common factors that have been previously linked with negative feelings about the body.

One of the key elements of body appreciation is protecting the body by rejecting (in lieu of internalizing) unrealistic media appearance ideals (Avalos et al., 2005). Qualitative research (i.e., Frisén & Holmqvist, 2010; Holmqvist & Frisén, 2012; Wood-Barcalow et al., 2010) has revealed that adolescents and women with positive body image were able to filter out negative appearance-related information—including body-related comparisons—in a manner that helped protect their positive feelings toward their bodies. In light of the present findings, we suspect that self-compassion may aid in this process. Instead of harshly judging discrepancies that emerge from body-related comparisons, perhaps self-compassion facilitates a kind and accepting response, which then preserves body appreciation. Although the present study focused on comparing one's body with peers, it is likely that self-compassion also helps women to filter out pervasive, idealized media images and other powerful cultural messages about the desirability of thinness. Given our findings, it may be worthwhile to test this idea experimentally by activating body comparison and determining whether participants' levels of self-compassion then protect their state body appreciation.

In regard to appearance contingent self-worth, it may be that self-compassion helps women to realize that there is no one universal standard of beauty. Because self-compassion entails the recognition that all people share in the human experience, there is room for diversity when it comes to personal appearance. Consistent with this idea, it has been shown that self-compassion is positively connected to women adopting a broad conceptualization of beauty, or perceiving that a wide variety of stylistic choices as well as body shapes and sizes are beautiful (Tylka & Iannantuono, 2015). Therefore, valuing appearance to women high in self-compassion may be more about finding their own "personal style" and taking care of their bodies via grooming and healthy behaviors than striving to achieve narrowly defined western cultural appearance ideals (Parker et al., 1995). Self-compassion, then, may help women build and maintain body appreciation, even when they value their appearance.

Our finding that the inverse relationships between body comparison and body appreciation and appearance contingent self-worth *disappear* at relatively high levels of self-compassion (4.27 and 4.29 on a 1–5 scale, respectively) is remarkable, given that the bivariate relationships between both variables and body appreciation were strong (i.e., $r = -.52$ for body comparison and $r = -.56$ for appearance contingent self-worth). Whereas these values are high, they are each less than 1.5 standard deviations above the sample mean for self-compassion, with both wedged between an *agree* response (4) and a *strongly agree* response (5) to the self-compassion items. This finding highlights the clinical importance of nurturing self-compassion among women, particularly because evidence suggests that self-compassion interventions are effective. For example, after receiving an 8-week mindfulness self-compassion workshop, community adults experienced gains in self-compassion and well-being, which were maintained at a year follow-up (Neff & Germer, 2013). Similarly, an online 3-week self-compassion meditation training program produced improvements in the way community women felt about their bodies (Albertson et al., 2014). There are also nascent therapies, such as compassionate mind training (Gilbert & Irons, 2005) and acceptance and commitment therapy (Hayes, Luoma, Bond, Masuda, & Lillis, 2005) that explicitly capitalize on increasing self-compassion or its elements. Given that self-compassion can be increased via interventions, attempts should be made to increase the accessibility of such interventions for community and college women.

This study contains limitations that set the stage for additional research. First, we used a cross-sectional, correlational design which precludes conclusions regarding causal direction. Only experimental designs can conclusively demonstrate causation. Experimental studies, as well as longitudinal research investigating associations between self-compassion, body appreciation, body

Table 2
Summary of regression results predicting body appreciation with self-compassion as a moderator.

	ΔR^2	*B*	*SE*	95% CI	*t*	*p*
Model 1 Predictors (Step 3)						
Age		−.002	.003	−.007, −.004	−0.53	.594
BMI		−.039	.005	−.049, −.028	−7.28	<.001
Body comparison		−.166	.025	−.215, −.116	−6.56	<.001
Self-compassion		.467	.050	.369, .565	9.38	<.001
Body comparison × Self-compassion	.009	.067	.029	.009, .124	2.29	.023
Model 2 Predictors (Step 3)						
Age		−.002	.003	−.008, .003	−0.87	.383
BMI		−.041	.005	−.051, −.031	−7.80	<.001
Appearance self-worth		−.217	.032	−.279, −.154	−6.81	<.001
Self-compassion		.410	.054	.303, .516	7.58	<.001
Appearance self-worth × Self-compassion	.014	.091	.032	.022, .155	2.83	.005

Note. $N = 257$. For Model 1, total R^2 at Step 3 = .56, $p < .001$. For Model 2, total R^2 at Step 3 = .57, $p < .001$.

comparison, and appearance contingent self-worth over time, are needed before self-compassion is solidified as a protective factor for body appreciation. A second limitation was that we relied upon self-report data. Although each of the measures used have been shown to be relatively free of social desirability responding, it is possible that women were not completely honest in their responses. The anonymous nature of the survey may have minimized this problem, but it is still important to acknowledge. Third, although this sample was more diverse than the typical U.S. college student only sample, there is still a need to examine whether the present study's findings are generalizable across diverse samples.

Fourth, although we found evidence of moderation, effect sizes were small but similar to interactions examined via non-experimental research designs (McClelland & Judd, 1993). Other studies that have explored the moderating effect of self-compassion have also reported small effect sizes (Kelly et al., 2014; Daye et al., 2014). Part of the reason for these small effect sizes may be that self-compassion is not a prominent aspect of American culture. Self-compassion derives from Buddhist thought (Neff, 2003a), and it has been shown that there are cultural differences in self-compassion. Specifically, individuals in Thailand (a country in which 95% of the population identifies as Buddhist) experienced higher levels of self-compassion than American individuals, probably because the Buddhist worldview emphasizes compassion for self and others, and failures and imperfections are viewed as a natural part of life (Neff, Pisitsungkagarn, & Hsieh, 2008). In contrast, while American culture often emphasizes the importance of "feeling good about oneself" (which is consistent with self-kindness), it is a highly individualistic culture (Twenge, Campbell, & Gentile, 2013). The important element of shared humanity may not be central to the typical American worldview. Thus, it is possible that the small effect sizes are the result of cultural differences in the way that self-compassion is experienced. An interesting direction for future research would be to explore whether self-compassion buffers body-related threats cross-culturally.

Despite these limitations, this study makes an important contribution to the growing literature exploring self-compassion and body image. Our findings offer incremental yet preliminary insight into the importance of self-compassion for potentially shielding women's positive body image against appearance-related threats. Interventions to increase self-compassion have been shown to be effective, with some even improving body appreciation (Albertson et al., 2014), and the present study joins others (i.e., Daye et al., 2014; Kelly et al., 2014) to collectively support the conceptualization of self-compassion as a protective factor of body image and one to nurture among women.

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