Self-compassion as a moderator of thinness–related pressures’ associations with thin-ideal internalization and disordered eating

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ABSTRACT

During situations that threaten personal adequacy, people high in self-compassion are kind and caring toward themselves, mindful of their distress, and recognize that being imperfect is part of the human experience. Therefore, self-compassion may offset certain disorders (e.g., eating disorders) associated with environmental threats (e.g., thinness-related pressures). In this cross-sectional study, we explored self-compassion’s associations with threats involving thinness-related pressures (from friends, family, partners, and media), thin-ideal internalization, and disordered eating among an online sample of 435 U.S. community women. Findings indicated that self-compassion buffered the links from media thinness-related pressure to disordered eating and thin-ideal internalization. Furthermore, higher self-compassion was directly associated with fewer perceived thinness-related pressures, lower thin-ideal internalization, and lower disordered eating. Collectively, these findings add to the growing conceptualization of self-compassion as beneficial to eating behavior and help justify pursuing rigorous longitudinal and clinical examinations of self-compassion as a protective factor of disordered eating.

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1. Introduction

To advance the study of eating disorders, researchers need to identify protective factors that prevent or ameliorate its risk factors (Striegel-Moore & Cachelin, 1999; Tylka & Kroon Van Diest, 2014). For instance, protective factors could help women cope with thinness-related pressures and view them as less threatening, prevent the occurrence of thin-ideal internalization, and/or reduce disordered eating directly.

One variable likely to be protective in the domain of eating behavior is self-compassion. Self-compassion is the tendency to respond to personal threats by treating oneself with kindness and nonjudgmental understanding, being open to (rather than disconnected from or ruminating on) distress, and realizing that struggles and pain are common within humanity (Neff, 2003). Self-compassion is different from self-esteem, which distances people from confronting their personal inadequacies, preempting their distress (Neff & Vonk, 2009). Much research supports self-compassion as beneficial to well-being, especially during difficult situations (Breines & Chen, 2012; Leary et al., 2007; Neff, 2003; Neff et al., 2005).

Studies have started investigating how self-compassion is beneficial to women’s eating behavior. Among college women, self-compassion is inversely linked to disordered eating (Kelly, Vimalakanthan, & Carter, 2014; Webb & Forman, 2013) and positively linked to intuitive eating (Schoenefeld & Webb, 2013). Female patients with eating disorders reported lower self-compassion than community women (Breines, Toole, Tu, & Chen, 2014; Ferreira et al., 2013), and higher increases in self-compassion early in treatment aided recovery for patients with eating disorders (Kelly, Carter, & Borairi, 2014). A self-compassion induction reduced restrained eaters’ distress and disinhibited eating after consuming snack food (Adams & Leary, 2007).

Yet, studies have not investigated how women high in self-compassion handle thinness-related pressures, which are ubiquitous for women in Western culture (Buote, Wilson, Strahan, Gazzola & Papps, 2011) and are established risk factors for thin-ideal internalization and disordered eating (Stice, 2002). By definition, those high in self-compassion respond to situations that threaten their personal adequacy by treating themselves with kindness and nonjudgmental understanding (Neff, 2003), which are inconsistent with thin-ideal internalization and disordered eating. Thus, we conceptualized thinness–related pressures as situational threats to personal adequacy and hypothesized that self-compassion would moderate by weakening the links from thinness-related pressures to thin-ideal internalization and disordered eating. Further, we hypothesized that self-compassion would be directly associated with lower thin-ideal internalization and lower disordered eating, as people high in self-compassion judge themselves less harshly and engage in less harmful behavior compared to those low on self-compassion.
(Leary et al., 2007). Last, we hypothesized that self-compassion would be inversely associated with thinness-related pressures. Because people high in self-compassion interpret difficult situations more accurately and with greater equanimity (Leary et al., 2007), they may be less likely than those low in self-compassion to perceive thinness-related pressures from interpersonal and media encounters.

2. Materials and methods

2.1. Participants

Data were analyzed from 435 community women from 47 U.S. states. Average age was 28.14 (SD = 5.45, range 18–40). Participants identified as White (73.3%), Asian American (8.7%), African American (8.5%), Latina (4.8%), or multiracial (4.6%). They reported being married (33.0%), involved in a long-term relationship (40.1%), single (25.4%), or divorced/separated (14.4%). Most women (87.8%) reported at least a year of undergraduate education, and 15.4% reported at least a year of graduate education. Median annual household income fell in the $45,000–$60,000 category. Average body mass index (BMI) was 24.81 (SD = 5.31).

2.2. Measures

2.2.1. Perceived Sociocultural Pressures Scale (PSPS; Stice, Ziemba, Margolis & Mick, 1996)

The PSPS assessed participants’ thinness-related pressures from friends, family, partners, and media. Its eight items (e.g., “I’ve felt pressure from my family to lose weight”) are rated along a 5-point scale ranging from 1 (never) to 5 (always). The two item responses for each thinness source are averaged; higher scores indicate greater thinness-related pressures. Among women, the PSPS has evidenced internal consistency reliability, 2-week test–retest reliability, and construct validity (Stice et al., 1996). In our sample, Cronbach’s alphas were .82 for friend pressure, .89 for family pressure, .89 for partner pressure, and .77 for media pressure.

2.2.2. Self-compassion Scale—Short Form (SCS-SF; Raes, Pommier, Neff & Van Gucht, 2011)

The 12-item SCS-SF measured the extent participants are compassionate towards themselves. Its items (e.g., “When I am going through a very hard time, I give myself the caring and tenderness I need”) are rated along a scale ranging from 1 (almost never) to 5 (almost always). Item responses are averaged; higher scores indicate greater self-compassion. Among women, the SCS-SF was highly correlated with the original SCS (Raes et al., 2011) and demonstrated internal consistency reliability and criterion-related validity (Raes, 2011). Cronbach’s alpha was .89 in our sample.

2.2.3. Internalization subscale of the Sociocultural Attitudes towards Appearance Questionnaire (SATAQ-I; Heinberg, Thompson & Stormer, 1995)

The 8-item SATAQ-I measured participants’ thin-ideal internalization. Its items (e.g., “I wish I looked like a swimsuit model”) are rated along a scale from 1 (definitely disagree) to 5 (definitely agree). Item responses are averaged; higher scores indicate greater thin-ideal internalization. Among women, the SATAQ-I evidenced internal consistency reliability and construct validity (Heinberg et al., 1995). Cronbach’s alpha was .90 in our sample.

2.2.4. Eating Attitudes Test-26 (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1980)

The 26-item EAT-26 assessed participants’ disordered eating attitudes and behaviors. Its items (e.g., “I have gone on eating binges where I feel that I may not be able to stop”) are rated along a scale ranging from 1 (never) to 6 (always). Continuous scoring was used to allow for the full range of responses, which reduces skewness in non-clinical samples (Mazzeo, 1999). Item responses are averaged, and higher scores indicate greater disordered eating. The continuously scored EAT-26 evidenced internal consistency, stability across a 3-week period, and construct validity among women (Mazzeo, 1999). Cronbach’s alpha was .89 in our sample.

2.3. Procedure

The study was approved by the Institutional Review Board at The Ohio State University. Participants were recruited from Amazon Mechanical Turk (MTurk), whereby workers receive monetary compensation for completing “hits” (surveys and other tasks) online. MTurk is increasingly being used to collect data for psychological research, and much evidence upholds the reliability and validity of data gathered from MTurk (Buhrmester, Kwang & Gosling, 2011).

This study was advertised to female workers from the U.S. who achieved at least a 98% approval rate and completed at least 100 hits. It was described as investigating the “relations between eating habits and personality.” Interested participants were provided with links to the online consent sheet and survey. All measures were counterbalanced. Women each received $1.00 for participating.

Respondents were removed from the data set if they took the survey more than once (n = 4), reported being male (n = 2), failed at least one of three embedded validity questions (e.g., “Please do not answer this item so we know you are paying attention”; n = 16), or terminated the study before completion (n = 11).

3. Results

3.1. Analytic strategy

The percentage of missing items was very low (M = 0.27%); consequently, we used available item analysis. All variables except age and BMI had acceptable skewness and kurtosis; univariate outliers for age and BMI were detected and their cases were removed. Five multivariate outliers detected via Mahalanobis distance were also deleted. We calculated means, SDs, and Pearson r correlations for the study variables (see Table 1).

We conducted two hierarchical moderated regressions: the first for thin-ideal internalization and the second for disordered eating. All proposed predictors, moderators, and interactions were centered. In Step 1, the four sources of thinness-related pressure (friend, family, partner, and media) were entered. In Step 2, self-compassion was entered. In Step 3, four interaction terms (each pressure source × self-compassion) were entered. For significant interactions, a simple slopes analysis was conducted to determine the associations between the predictor and criterion at −2 SD and +2 SD levels of the moderator.

3.2. Self-compassion and thin-ideal internalization

As predicted, self-compassion was directly associated with lower thin-ideal internalization, and the interaction between media thinness-related pressure and self-compassion uniquely contributed to thin-ideal internalization (see Table 2). The three remaining interactions were not significant. When self-compassion was low, media thinness-related pressure predicted thin-ideal internalization, β = .588, t (434) = 6.40, p < .001. When self-compassion was high, this association was nonsignificant, β = .136, t (434) = 1.46, p = .144. Hence, self-compassion buffered the relationship between media thinness-related pressure and thin-ideal internalization.
3.3. Self-compassion and disordered eating

As hypothesized, self-compassion was directly associated with lower disordered eating, and the interactions between (a) media thinness-related pressure and self-compassion and (b) family thinness-related pressure and self-compassion were significant (see Table 2). When self-compassion was low, media thinness-related pressure predicted disordered eating, $\beta = .588$, $t(434) = 6.40$, $p < .001$. When self-compassion was high, this association was nonsignificant, $\beta = -.171$, $t(434) = 1.93$, $p = .055$. Self-compassion therefore buffered the relationship between media thinness-related pressure and disordered eating. Due to the direction of the second interaction, it is more useful to conceptualize low family thinness-related pressure as buffering the relationship between self-compassion and disordered eating. When family thinness-related pressure was low, self-compassion was related to disordered eating in an inverse direction, $\beta = -.434$, $t(434) = -4.65$, $p < .001$, yet this relationship was nonsignificant when family thinness-related pressure was high, $\beta = -.161$, $t(434) = -1.50$, $p = .136$.

3.4. Self-compassion and thinness-related pressures

Women higher in self-compassion perceived lower thinness-related pressures from friends, family, partners, and media (see Table 1). Therefore, self-compassion was inversely related to women noticing thinness-related pressures.

Table 2
Hierarchical moderated regressions predicting thin-ideal internalization and disordered eating.

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictors</th>
<th>Criterion: thin-ideal internalization</th>
<th>Criterion: disordered eating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$t$</td>
<td>$R^2$</td>
</tr>
<tr>
<td>1</td>
<td>Thin pressure from friends</td>
<td>.130</td>
<td>2.17**</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from family</td>
<td>.008</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from partners</td>
<td>.174</td>
<td>3.29**</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from media</td>
<td>.304</td>
<td>6.45***</td>
</tr>
<tr>
<td>2</td>
<td>Thin pressure from friends</td>
<td>.126</td>
<td>2.14**</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from family</td>
<td>-.016</td>
<td>-0.29</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from partners</td>
<td>.163</td>
<td>3.15**</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from media</td>
<td>.265</td>
<td>5.61***</td>
</tr>
<tr>
<td></td>
<td>Self-compassion</td>
<td>-.180</td>
<td>-4.09***</td>
</tr>
<tr>
<td>3</td>
<td>Thin pressure from friends</td>
<td>.109</td>
<td>1.76</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from family</td>
<td>-.013</td>
<td>-0.24</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from partners</td>
<td>.186</td>
<td>3.43***</td>
</tr>
<tr>
<td></td>
<td>Thin pressure from media</td>
<td>.272</td>
<td>5.80***</td>
</tr>
<tr>
<td></td>
<td>Self-compassion</td>
<td>-.159</td>
<td>-3.49*</td>
</tr>
<tr>
<td></td>
<td>Friend pressure $\times$ self-compassion</td>
<td>-.037</td>
<td>-.062</td>
</tr>
<tr>
<td></td>
<td>Family pressure $\times$ self-compassion</td>
<td>.022</td>
<td>.41</td>
</tr>
<tr>
<td></td>
<td>Partner pressure $\times$ self-compassion</td>
<td>.078</td>
<td>1.42</td>
</tr>
<tr>
<td></td>
<td>Media pressure $\times$ self-compassion</td>
<td>-.133</td>
<td>-2.97**</td>
</tr>
</tbody>
</table>

Note. $N = 435$. Two hierarchical regressions are shown; values in the columns left of the vertical dashed line represent one hierarchical regression with thin-ideal internalization as the criterion, and values in the columns right of the vertical dashed line represent one hierarchical regression with disordered eating as the criterion. The values presented above do not control for age and BMI, although the significance levels of these values were not altered when age and BMI were controlled.

Our findings support that self-compassion is connected to eating behavior in beneficial ways for community women. Self-compassion was inversely related to two central risk factors of eating disorders as well as disordered eating itself, suggesting that self-compassion is inconsistent with perceiving thinness-related pressures, internalizing the socially prescribed “thin ideal” as a personal standard, and reporting disordered eating attitudes and behaviors. Furthermore, media thinness-related pressure was not related to thin-ideal internalization and disordered eating for women high in self-compassion. That is, when women high in self-compassion are confronted with the omnipresent media images of the thin ideal (Buote et al., 2011), they are less likely to interpret these images as thinness-related pressure, adopt the thin ideal as a personal standard, and engage in disordered eating. Collectively, these findings extend broad assertions that self-compassion helps individuals interpret situations as less of a personal threat and therefore judge themselves less harshly when they deviate from societal expectations (Leary et al., 2007) to the more specific domain of eating behavior.

Our findings highlight the clinical importance of nurturing self-compassion in community women. Evidence suggests that self-compassion interventions are effective. After receiving an 8-week mindfulness self-compassion workshop, community adults experienced gains in self-compassion and well-being, which were maintained at a 1-year follow-up (Neff & Germer, 2013). Mindfulness-based approaches have also been found to decrease binge eating.
and emotional eating across many samples (Katterman, Kleiman, Hood, Nackers &Corsica, 2014).

However, we also found that self-compassion has its limits. When self-compassion interacted with media thickness–related pressure to predict thin-ideal internalization and disordered eating, the percent-ages of variance accounted for by the interactions were relatively low. Self-compassion did not mitigate contributions from interpersonal (friends, family, and partners) thickness-related pressures to thin-ideal internalization and disordered eating. Self-compassion’s inverse relationship with disordered eating was non-significant when family thickness–related pressure was high. These findings emphasize that societal interventions targeting sources of thickness-related pressure (especially family members) are also vital. One program incorporating these interventions, BodySense, was found to reduce gymnasts’ perceived thickness-related pressure within the sport climate (Buchholz, Mack, McVey, Feder &Barrowman, 2008).

This study contains limitations. First, while cross-sectional research is a useful first step to understand the complex associations between self-compassion, eating disorder risk factors, and disordered eating behaviors, longitudinal research investigating these associations over time is needed before self-compassion is solidified as a protective factor. Second, we exclusively used self-report measures. Third, although this sample is more diverse than the typical college sample, we still need to examine whether self-compassion operates in the same way across all social identities.

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Contributors
The first author designed the study, conducted literature searches, wrote the protocol, collected the data, and led the process of data interpretation and article preparation. The second and third authors drafted sections of the Introduction, Methods, and Discussion. All authors contributed to and have approved the final version of the article.

Conflict of interest
All authors declare that they have no conflicts of interest.

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