# Self-Compassion Mediates the Relationship between Attachment Anxiety and Body Appreciation in Women and Men: Evidence from Israel

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#### **Abstract**

Previous work has suggested that self-compassion mediates the relationship between attachment anxiety and body appreciation but is limited by a reliance on college women from North America. To extend existing knowledge, we examined associations between peer and romantic partner attachment anxiety, self-compassion, and body appreciation in a community sample of women and men from Israel. A total of 597 adults (353 women, 244 men; age M = 29.45 years) completed Hebrew translations of measures of romantic partner and peer attachment anxiety, self-compassion, and body appreciation. Path analysis indicated that a model in which self-compassion mediated relationships between peer and romantic partner attachment anxiety – in parallel – and body appreciation had poor fit. However, mediation analysis indicated that self-compassion mediated relationships between peer and romantic partner attachment anxiety – in isolation – and body appreciation in isolation. These results highlight the importance of considering interpersonal dynamics in models of positive body image and point to possible interventionist routes for promoting greater body appreciation.

**Keywords:** Attachment anxiety; Self-compassion; Body appreciation; Insecure attachment; Peer attachment

#### 1. Introduction

Research on *positive body image* – defined as "an overarching love and respect for the body" (Tylka, 2018, p. 9) – has grown dramatically in the past decade and there is now much wider recognition of the ways in which it is intertwined with external relationships and systems (for reviews, see Cook-Cottone, 2015; Tiggemann, 2019). One important way in which positive body image is shaped by such interpersonal dynamics is through insecure attachment (i.e., negative working models that individuals develop of important others and themselves; Bowlby, 1973). Insecure attachment includes both *attachment anxiety* (a preoccupation with feelings of unworthiness and excessive worry about the availability and responsiveness of close others) and *attachment avoidance* (a tendency to experience discomfort with intimacy, to suppress emotional responses, and to be excessively self-reliant in times of distress) (Simpson & Rholes, 1998).

It has been shown that individuals with negative working models are more likely to develop poorer self-concepts that diminish body care behaviour and increase appearance concerns (e.g., Perry et al., 2008). However, of the two constructs, it is attachment anxiety – but not attachment avoidance – that has been shown to be significantly associated with less positive body image (Frederick et al., 2015; Iannantuono & Tylka, 2012; van den Brink et al., 2016). In addition, priming anxious attachment has been shown to worsen women's, though not men's, positive body image (Homan et al., 2018). Although these studies suggest a direct link between attachment anxiety and positive body image, indirect pathways are also possible. More specifically, one important mediator is *self-compassion*, which involves a kind and gentle manner of relating to oneself during difficult experiences (Neff, 2003).

Conceptually, both attachment anxiety and self-compassion are relevant in the context of body image: both constructs entail emotional regulation strategies, and insecurely attached individuals are expected to experience greater difficulty accessing self-compassion (e.g.,

Raque-Bogdan et al., 2011). That is, the distrust, doubt, and dependence that characterised anxious attachment likely acts as a barrier to optimal care for the self and, therefore, to self-compassion (Neff & McGehee, 2010). Consistent with this view, research has demonstrated a negative association between attachment anxiety and self-compassion (Brophy et al., 2020). In addition, research has consistently showed that greater self-compassion is associated with more positive body image (for reviews, see Braun et al., 2016; Turk & Waller, 2020), which supports a conceptual mediating role for self-compassion in relation to attachment anxiety and body image.

This mediating role is supported by studies showing that self-compassion mediates the relationship between attachment anxiety and psychological well-being (e.g., Raque-Bogdan et al., 2011; Wei et al., 2011). Beyond this, one important study has shown that self-compassion also mediates the relationship between attachment anxiety and positive body image (Raque-Bogdan et al., 2016). More specifically, in a sample of first-year college women from the United States, Raque-Bogdan and colleagues (2016) found that self-compassion mediated relationships between peer and romantic attachment, respectively, and body appreciation (i.e., a facet of positive body image). In explanation, these authors suggested that individuals who are high in attachment anxiety may be preoccupied by their peer and romantic relationships, and that this anxious manner of relating to close others impairs their ability to care for the self and their bodies.

While the findings of Raque-Bogdan and colleagues (2016) are important for body image scholars and practitioners, there are several gaps in knowledge that could be filled. First, positive body image in their study was operationalised using the Body Appreciation Scale (Avalos et al., 2005), which has since been updated to mirror developments in the understanding of body appreciation in the Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015). Second, their study was limited to a sample of first-year college

women from the United States, and it is currently unclear whether their findings would generalise to men, non-college samples, and other national groups. Indeed, we see no reason to expect that the aforementioned relationships should not also characterise male body image outcomes, although this has yet to be tested empirically.

In the present study, therefore, we sought to examine associations between peer and romantic attachment, self-compassion, and body appreciation (operationalised using the BAS-2) in a community sample of women and men from Israel. Here, we focused on peers and romantic attachment given the importance of these relational forms to adult well-being generally and body image specifically (Iannantuono & Tylka, 2012). In addition, other relational forms, such as parental relationships, likely exert an indirect impact on body image outcomes via peer and romantic attachment (Patton et al., 2014). Thus, here we hypothesised that self-compassion would mediate the relationships between peer and romantic attachment anxiety – in parallel – and body appreciation. That is, we expected that self-compassion would perform a similar mediating role for both peer and romantic attachment, which would be consistent with the findings of Raque-Bogdan and colleagues (2016). We also expected these relationships to be significant in both women and men.

## 2. Method

### 2.1. Participants

Data for the present study come from a larger project conducted in Israel (Geller et al., 2020). The total participant pool consisted of 670 individuals, but 73 participants were missing substantial portions of data (> 60%), so were deleted listwise (Parent, 2013). The final dataset consisted of 353 women and 244 men who ranged in age from 18 to 80 years (M = 29.45, SD = 9.25) and in self-reported body mass index (BMI) from 15.24 to 44.08 kg/m<sup>2</sup>

(M = 23.23, SD = 3.82). The majority of participants were Jewish (92.1%) and had a tertiary education qualification (69.0%).

### 2.2. Measures

- 2.2.1. Body appreciation. Participants completed the Body Appreciation Scale-2 (Tylka & Wood-Barcalow, 2015; Hebrew translation: Geller et al., 2020), a 10-item instrument that assesses acceptance of one's body, respect and care for one's body, and protection of one's body from unrealistic beauty standards. All items were rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*) and an overall score was computed as the mean of all items, with higher scores reflecting greater body appreciation. The Hebrew version of the BAS-2 has been shown to have adequate factorial and construct validity, and adequate internal consistency (Geller et al., 2020). Here, McDonald's  $\omega$  for scores on this scale was .94 (95% CI = .91, .93).
- 2.2.2. Self-compassion. To measure self-compassion, we used the Self-Compassion Scale (SCS; Neff, 2003; Hebrew translation: Gerber et al., 2015). This is a 26-item instrument that assesses six aspects of self-compassion, namely self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. All items were rated on a 5-point scale ranging from 1 (almost never) to 5 (almost always), with responses to negative-valenced items reverse-coded. An overall SCS score was computed as the mean of all items, so that higher scores indicate greater self-compassion. Previous research has shown that total SCS scores on the Hebrew version have adequate construct validity and internal consistency (Gerber et al., 2015). Here, McDonald's  $\omega$  for scores on this scale was .92 (95% CI = .91, .93).
- **2.2.3. Attachment anxiety**. Peer and romantic attachment anxiety were measured using the 3-item Attachment Anxiety subscale of the Experiences in Close Relationships—Relationship Structures instrument (ECR-RS; Fraley et al., 2011; Hebrew translation: Gat,

2015). Participants were asked to complete this instrument twice, once for their best friend and once for their current romantic partner (or a relationship they would like to have with someone if they were not currently in a romantic relationship). All items were rated on a 7-point scale ( $1 = strongly\ disagree$ ,  $7 = strongly\ agree$ ) and overall peer and romantic attachment anxiety scores were computed as the mean of the three items. Higher scores reflect greater peer and romantic attachment, respectively. Scores on the Hebrew version of the ECR-RS have been shown to have adequate construct validity and internal consistency. Here, McDonald's  $\omega$  was .76 (95% CI = .72, .80) for peer attachment anxiety and .78 (95% CI = .74, .82) for romantic attachment anxiety.

## 2.3. Procedures

The procedures for this study have been reported elsewhere (Geller et al., 2020). In brief, all data were collected between August 2018 and May 2019 via social media networks, through a university website for course credit, or directly from areas of congregate activities (e.g., parks, train stations) in Israel. Inclusion criteria included being Israeli citizens, aged 18 years or older, and being fluent in Hebrew. Written or digital consent from all participants was obtained prior to survey completion either online or in hardcopy. The order of presentation of the scales described above was counterbalanced for each participant, and demographic items were always presented first. Data were treated confidentially and participants were fully debriefed following completion of the questionnaires.

### 3. Results

## 3.1. Preliminary Analyses

A total of 0.3% data were missing in our retained dataset. These data were replaced using multiple imputations analysis with the *Amelia II* package for *R* (Honaker et al., 2011). Descriptive statistics and inter-scale correlations between all variables, conducted separately

for women and men, are reported in Table 1. Independent-samples *t*-tests showed that men had significantly higher body appreciation and self-compassion than women, but effect sizes were small. We also found significant correlations between all study variables in both women and men.

# 3.2. Path Analysis and Mediation

Next, we conducted path analysis in IBM SPSS AMOS 25 (Arbuckle, 2017), with maximum likelihood estimation used to estimate parameters. The hypothesised model allowed for direct paths from peer/romantic partner attachment anxiety to body appreciation and from self-compassion to body appreciation. Indirect paths were included from peer/romantic partner attachment anxiety to body appreciation via self-compassion. This model did not present good fit to these data:  $\chi^2M(1) = 53.938$ , RMSEA = .467 (90% CI = .366, .577), CFI = .775, SRMR = .156. As the direct paths from both peer and romantic partner attachment anxiety to body appreciation were non-significant, these were eliminated from the model. However, the revised model also did not present an acceptable fit to these data:  $\chi^2M(3) = 18.080$ , RMSEA = .265 (90% CI = .206, .329), CFI = .783, SRMR = .157.

As model fit was less-than-adequate, two separate mediations were conducted with pathways between peer and romantic attachment anxiety to body appreciation, via self-compassion. We used the PROCESS Procedure for SPSS v.3.4 macro (Hayes, 2018), drawing on 5,000 bootstrap samples from the total dataset. Both direct and indirect effects were estimated, with the latter considered statistically significant at the .05 level of the 95% CI when the CI does not include zero (Mallinckrodt et al., 2006). For peer attachment anxiety to body appreciation via self-compassion, the indirect effect was estimated at -.096 (95% CI = -.122, -.070). The direct effect of peer attachment anxiety to body appreciation in this mediation model was estimated at -.022, t(596) = -1.19, p = .236 (95% CI = -.058, .014), the direct effect of peer attachment anxiety to self-compassion was estimated at -.144, t(596) = -1.14

8.20, p < .001 (95% CI = -.178, -.109), and the direct effect of self-compassion to body appreciation was estimated at .667, t(596) = 16.21, p < .001 (95% CI = .586, .747).

For romantic attachment anxiety to body appreciation via self-compassion, the indirect effect was estimated at -.110 (95% CI = -.135, -.084). The direct effect of romantic attachment anxiety to body appreciation was estimated at -.008, t(596) = -0.43, p = .665 (95% CI = -.042, .027), the direct effect of romantic attachment anxiety to self-compassion was estimated at -.161, t(596) = -10.35, p < .001 (95% CI = -.192, -.131), and the direct effect of self-compassion to body appreciation was estimated at .675, t(596) = 15.93, p < .001 (95% CI = .592, .758). The unstandardized path coefficients are included in Figure 1. These findings collectively suggest that self-compassion mediated the relationship between both peer and romantic partner attachment anxiety to body appreciation. The same mediation effects were also found when data for women and men were analysed separately.<sup>1</sup>

### 4. Discussion

Previous work has shown that self-compassion mediates the relationships between peer and romantic partner attachment anxiety, respectively, and body appreciation (Raque-Bogdan et al., 2016). Our results broadly corroborate those previous findings, but also extend them through our utilisation of a more up-to-date measure of body appreciation (i.e., the BAS-2 compared to the BAS), the inclusion of community women and men (as opposed to college women alone), and the use of a sample from a new national context (i.e., Israel). Our findings are consistent with the suggestion that attachment anxiety is associated with poorer body image (Frederick et al., 2015; Homan et al., 2018; Iannantuono & Tylka, 2012; van den Brink et al., 2016), but also that self-compassion mediates the relationship between attachment anxiety and body appreciation (Raque-Bogdan et al., 2016).

First, it is important to note that we failed to find adequate fit for our hypothesised model, which stands in contrast to the findings of Raque-Bogdan and colleagues (2016). One reason for this is that we extended our hypothesised model to allow for direct paths between attachment anxiety and body appreciation, something which the aforementioned study did not do. However, these paths were not significant; their elimination did not substantive improve model fit, which is where our findings most notably diverge from those of Raque-Bogdan and colleagues (2016). That is, where Raque-Bogdan and colleagues (2016) found evidence of parallel mediation, our findings instead suggest that self-compassion mediated the relationships between peer and romantic attachment, respectively, and body appreciation in isolation. One possible reason for this discrepancy fit with previous work is that our tested model may have been over-fitted, leading to poor fit indices (an issue we discuss further below).

Nevertheless, our findings are consistent with those of Raque-Bogdan and colleagues (2016) in suggesting that peer and romantic attachment anxiety, respectively, are associated with lower self-compassion, which in turn shapes the experience of body appreciation. More specifically, individuals who are high in attachment anxiety are fearful of abandonment and easily overwhelmed by the thought of rejection, and tend to have negative self-perceptions (Mikulincer et al., 2003). These anxieties in relating to friends and romantic partners likely enhances negative working models in the form of lower compassion for the self, which in turn is associated with lower body appreciation. This theorising is consistent with previous discussions of the roles that both attachment anxiety and self-compassion play *vis-à-vis* body image (Braun et al., 2016; Brophy et al., 2020; Raque-Bogdan et al., 2011, 2016; Turk & Waller, 2020).

One important strand of our work is the reliance on a sample from outside North

America. This is notable because the similarity of our findings with those of Raque-Bogdan

and colleagues (2016) suggest that the relationships between attachment anxiety, self-compassion, and body appreciation may be stable across diverse cultural groups. Of course, this suggestion needs to be tested in more diverse national and cultural settings, especially as social identity groups will likely differ in how they are expected to treat the self. Although self-compassion is linked to well-being outcomes across cultural groups, some research also suggests that the cultural features that are associated with self-compassion also differ across national groups (Neff et al., 2008). As such, it will be important to consider the extent to which self-compassion mediates relationships between attachment anxiety and body appreciation in other cultural sites.

Our study is also limited in a number of additional ways. First, unlike Raque-Bogdan and colleagues (2016), we did not include a measure of maternal attachment anxiety. In their study, Raque-Bogdan and colleagues (2016) reported that peer/romantic attachment anxiety and self-compassion, respectively, serially mediated the relationship between maternal anxiety and body appreciation. The omission of a measure of maternal attachment anxiety in the present study may help to explain why our tested models had less-than-adequate fit (i.e., our models were insufficiently complex). Future work may find it useful to include measures of parental attachment anxiety, although it should also be noted that relationships between parental attachment anxiety and body appreciation have tended to be weak (Raque-Bogdan et al., 2016). Alternatively, it may be useful to examine whether self-compassion mediates the relationships between parental, peer, and romantic partner attachment, respectively, and body appreciation in parallel rather than serially.

Second, although our work extends existing research by considering these issues in a community sample from a hitherto under-researched national group, as well as in both women and men, we cannot claim that our sample is representative of the wider Israeli population. Generalising our findings should, therefore, only be done with caution. Further,

our use of the BAS-2 was an important improvement on previous work and suggest that previous findings (Raque-Bogdan et al., 2016) are robust across the different measures of body appreciation. Conversely, because previous work has only established indices of validity for total SCS scores on the Hebrew version, rather than its facets (Gerber et al., 2015), we were unable to examine which specific facets of self-compassion play a mediatory role. Including an appropriate and validated measure of multi-dimensional self-compassion would be a useful endeavour in future work.

These issues notwithstanding, our work extends existing knowledge by showing that self-compassion mediates relationships between peer and romantic partner attachment anxiety, respectively, in a new national group and in both women and men. These findings highlight the importance of considering external relationships and interpersonal dynamics in models of positive body image (Cook-Cottone, 2015; Tiggemann, 2019). From a more interventionist perspective, it may be important to assist individuals who are high in attachment anxiety to activate security-enhancing interactions, resulting from actual or imagined interactions with sensitive and responsive attachment figures, in order to promote attachment security and revise maladaptive working models (Mikulincer & Shaver, 2020). Doing so may be expected to lead to downstream positive impacts on self-compassion and the development of more positive body image. Likewise, interventions that are designed to develop greater self-compassion may also be expected to promote healthier body image (e.g., Albertson et al., 2014).

#### **Footnotes**

<sup>1</sup>For women, peer attachment anxiety to body appreciation via self-compassion, the indirect effect was estimated at -.072 (95% CI = -.106, -.041). The direct effect of peer attachment anxiety to body appreciation in this mediation model was estimated at -.023, t(352) = -0.93, p

= .353 (95% CI = -.070, .025), the direct effect of peer attachment anxiety to self-compassion was estimated at -.115, t(352) = -4.85, p < .001 (95% CI = -.161, -.068), and the direct effect of self-compassion to body appreciation was estimated at .629, t(352) = 11.83, p < .001 (95% CI = .524, .733). For romantic attachment anxiety to body appreciation via self-compassion, the indirect effect was estimated at -.093 (95% CI = -.126, -.063). The direct effect of romantic attachment anxiety to body appreciation was estimated at -.011, t(352) = -0.47, p = .638 (95% CI = -.055, .034), the direct effect of romantic attachment anxiety to self-compassion was estimated at -.147, t(352) = -7.15, p < .001 (95% CI = -.187, -.106), and the direct effect of self-compassion to body appreciation was estimated at .632, t(352) = 11.46, p < .001 (95% CI = .523, .740).

For men, peer attachment anxiety to body appreciation via self-compassion, the indirect effect was estimated at -.134 (95% CI = -.178, -.094). The direct effect of peer attachment anxiety to body appreciation in this mediation model was estimated at -.015, t(243) = -.50, p = .616 (95% CI = -.072, .048), the direct effect of peer attachment anxiety to self-compassion was estimated at -.182, t(243) = -7.90, p < .001 (95% CI = -.230, -.134), and the direct effect of self-compassion to body appreciation was estimated at .746, t(243) = 10.58, p < .001 (95% CI = .599, .873). For romantic attachment anxiety to body appreciation via self-compassion, the indirect effect was estimated at -.131 (95% CI = -.176, -.090). The direct effect of romantic attachment anxiety to body appreciation was estimated at .001, t(243) = 0.49, p = .961 (95% CI = -.053, .056), the direct effect of romantic attachment anxiety to self-compassion was estimated at -.174, t(243) = -7.56, p < .001 (95% CI = -.219, -.128), and the direct effect of self-compassion to body appreciation was estimated at .752, t(243) = 10.79, p < .001 (95% CI = .615, .890).

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Table 1

Means, Standard Deviations and Inter-Scale Correlations between All Study Variables,
Reported for Women in the Top Diagonal and Men in the Bottom Diagonal.

		(1)	(2)	(3)	(4)
(1) Body appreciation			.55*	18*	22*
(2) Self-compassion		.61*		25*	34*
(3) Peer attachment anxiety		29*	44*		.47
(4) Romantic attachment anxiety		27*	44*	.45*	
Women	M	3.54	2.99	2.95	3.44
	SD	0.80	0.69	1.50	1.67
Men	M	3.73	3.25	2.84	3.21
	SD	0.75	0.61	1.25	1.53
t		3.01	4.72	0.85	1.71
p		.003	< .001	.396	.088
d		0.25	0.40	0.08	0.14

*Note.* \* p < .001.

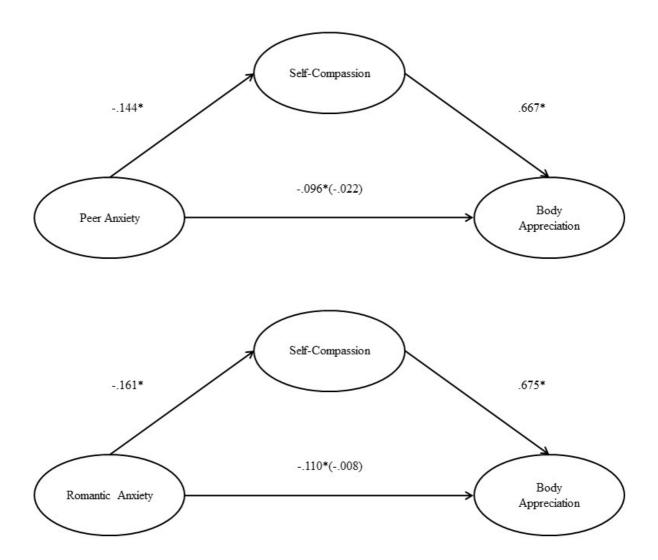


Figure 1

Mediation models for peer and romantic partner attachment anxiety, respectively, via self-compassion, to body appreciation. The path coefficients are included for the direct effect (i.e., the coefficient inside the parenthesis) and indirect effects (i.e., coefficient outside the parenthesis. \* p < .05. *Note*. Peer Anxiety = peer attachment anxiety, Romantic Anxiety = romantic partner attachment anxiety.