

Disentangling Relations Between Upward Body Comparison Tendency, Self-Compassion and Body Envy on Dieting: A Moderated Mediation Analysis

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Abstract

In this cross-sectional study, it was predicted that body envy tendency would mediate the relationship between upward social comparison tendency and weight-loss dieting, such that more upward social comparisons lead to more episodes of body envy, leading to more weight-loss dieting. It was also predicted that this mediation pathway would be moderated by self-compassion and that the moderated mediation model would occur over and above body dissatisfaction. Participants were 205 female college students who filled out a questionnaire with demographic features and measures of upward social comparison tendency, body envy tendency, weight-loss dieting, self-compassion, and body dissatisfaction. The results suggest that self-compassion did not moderate the mediation model, thus no support was found for the moderated mediation model. However, exploratory analysis of 2 mediation models was carried out. The first mediation model that predicted a higher upward social comparison tendency would lead to a higher body envy tendency, leading to more weight-loss dieting was significant. The second mediation pathway that predicted that self-compassion would lead to lower body envy tendency and therefore less weight-loss dieting was also significant. Women with a high upward social comparison tendency and low self-compassion should be targeted for intervention using media literacy and self-compassion enhancement.

Keywords: upward social comparison tendency, body envy tendency, weight-loss dieting, self-compassion

Disentangling Relations Between Upward Body Comparison Tendency, Self-Compassion and Body Envy on Dieting: A Moderated Mediation Analysis

A recent cross-sectional survey study by Samman and colleagues (2012) found that 43.3% of college women engage in weight-loss dieting (WLD). In fact, WLD has been suggested to be a significant risk factor for eating disorders (McFarlane et al., 1999). In support of this, Schaumberg and Anderson (2016) found that WLD in college women predicted overall eating disorder risk. Therefore, it is important to understand why women engage in WLD and what the protective factors may be. The most empirically supported model that explains this is the sociocultural model (Tiggemann, 2012). According to the sociocultural model, WLD may arise from body dissatisfaction arising from frequent upward physical appearance comparisons, but surprisingly little attention has been paid to the mediating role of specific upward social comparison emotion (Smith, 2000). With this in mind, the first aim of this study is to examine whether body envy tendency (BET) mediates the relationship between upward social comparison tendency (USCT) and WLD, such that increasing USCT leads to an increase of BET which in turn leads to more WLD. The second aim of this study is to examine whether self-compassion, an individual difference that theoretically buffers the effect of USCT (Homan and Tylka, 2015), moderates this mediation pathway.

The sociocultural model explains how USCT leads to WLD through standards that society emphasizes. Moreover, this model outlines societal expectations for women's bodies and how the media disseminates these expectations, such as the use of photoshopped images to enhance the body's appearance. When women do not conform to this unattainable thin ideal, they experience negative emotions. Consequently, women want to get rid of these negative emotions which is why they seek WLD and unhealthy eating behaviors as a solution (Tiggemann, 2012). Central to this model is the promotion of an unachievable thin ideal,

making women compare upwards with this unattainable ideal. These comparisons to the thin ideal can have harmful consequences. Following this reasoning, a study by Hawkins and colleagues (2004) revealed that exposure to thin ideal magazine images increased body dissatisfaction, negative mood states, and eating disorder symptoms in college women. Furthermore, because of upward social comparisons, women recognize how far they are from the ideal and see WLD as the solution. When women see media images of thin women, they gain an understanding of what is valued and how far they are from that ideal. Social comparison is about how we use other people to make sense of the world and ourselves. It shows the person's place in the world compared to others and whether they should improve (Buunk et al., 2019). The perceived way to get closer to this thin ideal is to engage in WLD (Knobloch-Westerwick & Crane, 2011).

Some women appear to engage more in upward social comparisons than others. Upward body comparison means engaging in the comparison of one's physical appearance with that of a more attractive other (O'Brien et al., 2009). Lewallen and Behm-Morawitz (2016) conducted a study on fitness images on Pinterest and how this relates to upward comparison and extreme weight-loss behaviors. Their study shows that endorsement of an ideal female body type predicts higher levels of social comparison and intentions to engage in extreme weight-loss behaviors. Notably, there are individual differences in the tendency to engage in upward comparison. Namely, women with a high tendency to make upward comparisons actively seek out these comparisons (Tiggemann, 2012). Much research has focused on body dissatisfaction (Fuller-Tyszkiewicz et al., 2019), but a focus on body envy would provide more information about the cause and thus facilitate intervention. Building on this reasoning, Smith and Kim (2007) explain that body envy is a consequence of upward social comparison. Hence, the prediction is that women who engage in upward comparison with an unattainable thin ideal are more likely to experience frequent episodes of body envy.

Upward comparison is a crucial factor in experiencing envy. Smith and colleagues (1999) argued that envy “occurs when a person lacks another’s superior quality, achievement, or possession and either desires it or wishes that the other lacked it” (as cited in Van de Ven, 2016). Smith (2000) explains envy as a dual emotion that focuses on one’s disadvantage and another’s advantage. Thus, envy always involves shifting focus between the self and another person. Furthermore, envy can be seen as a combination of dwelling on one’s own inferiority that is created and highlighted by the other’s advantage (Smith, 2000). Smith and Kim (2007) explain that envy is a painful and unpleasant emotion that is accompanied by feelings of inferiority, resentment, and hostility. These feelings occur in women who are triggered by a social comparison with another woman enjoying the advantage of being thin. Upward body comparison highlights the other person’s advantage (i.e., a thin body) which in turn highlights one’s disadvantage (i.e., the distance from that thin ideal). Women feel that the other’s advantage is unfair to themselves which brings negative emotions. Thus, it is predicted that upward social comparison will lead to body envy.

Body envy has different functions at the individual and social levels, which can lead to weight-loss dieting behaviors. Furthermore, Keltner and Haidt (1999) examined the social functions of emotions at four different levels of analysis. They explain that at the individual level, an emotion informs an individual about a situation or social event. Body envy informs a woman of her inferior stance in society if she does not conform to the thin ideal, as achieving the thin ideal confers status and advantages. Not achieving this status makes a woman feel frustrated and inferior. The authors go on to explain how emotions promote conformity at a cultural level. Body envy promotes conformity because a woman wants to get to the same level as the other woman (Keltner and Haidt, 1999). Society values thinness, prompting women to conform to societal norms. Therefore, WLD is the solution because it brings women closer to the thin ideal, which enables them to experience the rewards of thinness.

Consequently, more episodes of body envy are predicted to lead to more WLD behaviors. Furthermore, it is expected women with higher USCT experience more episodes of body envy, subsequently leading to more WLD.

For some women, the mediation pathway from USCT through BET on WLD is expected to be weaker than others. Thus, self-compassion may be an individual difference that weakens the relationship between USCT and BET. Self-compassion consists of the following three main components: self-kindness, common humanity, and mindfulness (Neff, 2011). Self-kindness is about being caring and understanding of oneself instead of being critical or judgmental. Concerning upward social comparisons, self-kindness would help a woman be caring and understanding towards her body and its potential flaws. Common humanity is about the notion that everyone makes mistakes or feels inadequate sometimes. This aspect helps emphasize the perspective that no woman's body is perfect and that the woman you compare yourself with might feel like her body is inadequate sometimes. Lastly, mindfulness refers to being in the moment while not ignoring or ruminating about negative things regarding oneself. Thus, mindfulness can help a woman not to ruminate about her body or how good another woman's body looks. Self-compassion is particularly important when a person makes mistakes, fails, or feels inadequate (Neff, 2011). When a woman compares upward, she is going to feel inadequate which makes self-compassion a crucial factor in buffering this. Following this reasoning, self-compassion may decrease the amount of frustration and inferiority a woman feels after making an upward social comparison. In support of this, Homan and Tylka (2015), as well as Ntoumanis et al. (2020), found in their studies that self-compassion can act as a buffer for the frequency and negative effects of USCT. These findings suggest that self-compassion is a protective factor for USCT. Furthermore, Braun et al. (2016) examined the relationship between self-compassion and eating pathology in clinical eating-disordered patients and non-clinical populations. Their

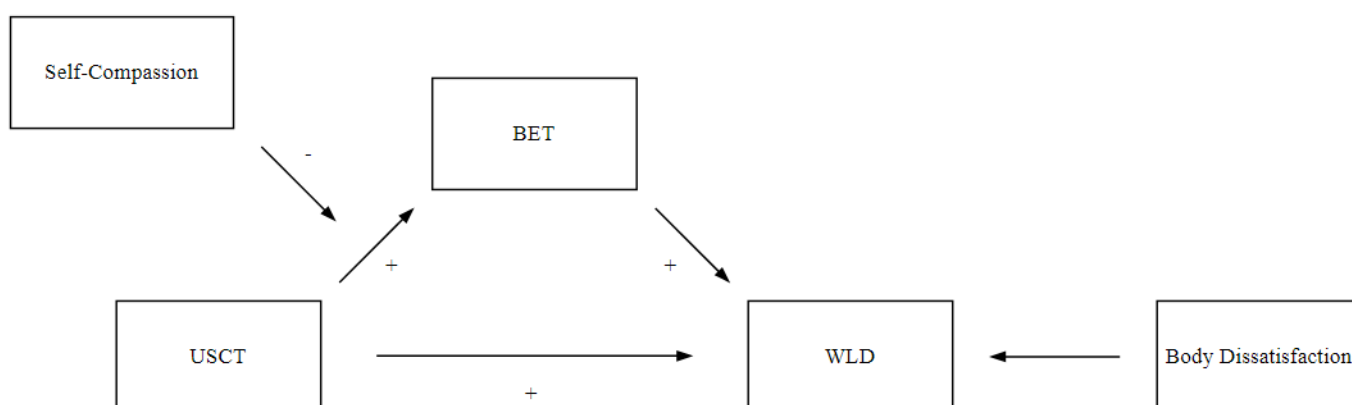
findings provide preliminary support for self-compassion as a protective factor against eating pathology. Thus, self-compassion is suggested to be a protective factor against USCT and eating pathology.

In summary, the prediction is that BET will play a mediating role in the relationship between USCT and WLD and that this mediation will be less strong for women higher in self-compassion. Finally, body dissatisfaction has been used as a control variable. Body envy can explain why women seek WLD over and above the impact of body dissatisfaction.

Accordingly, a study by Leahey and colleagues (2011) found that women experienced negative emotions after upward body comparison regardless of their level of body dissatisfaction. The prediction is that body envy has a unique effect on WLD, over and above body dissatisfaction. Hence, the results could provide insight into more targeted treatments to manage WLD and eating pathology by suggesting which women should be targeted for intervention.

Figure 1

Proposed moderated mediation model



Note. This figure shows the full moderated mediation model with body dissatisfaction as a control variable.

USCT: Upward Social Comparison Tendency; BET: Body Envy Tendency; WLD: Weight Loss Dieting

Methods

Participants

A convenience sample of 206 female students from a university or other higher education institution volunteered to participate in the study. One participant was removed from the analysis due to incomplete data. The final sample consists of $N = 205$ with a mean age of $M = 21.34$, $SD = 2.70$. From the acquired sample, the participants had a mean BMI of $M = 22.39$ with a standard deviation of $SD = 4.52$. 45% of participants were Dutch, 20% were German and 35% indicated having another nationality (e.g., American, Belgian, Brazilian, British, Bulgarian, Canadian, Chinese, Croatian, Colombian, Filipino, Finnish, French, Greek, Indian, Iraqi, Irish, Italian, Lithuanian, Polish, Romanian, Serbian, Slovak, Spanish, Slovenian, Turkish, Venezuelan, or mixed). A sample of ethnicities has been obtained, with 5% being Asian, 1% Black or African-American, 3% Hispanic, 85% White, 4% Mixed, and 3% indicating “other” without specification.

Measures

BET

Based on literature, a scale has been constructed to operationalize body envy tendency that consists of 8 items that measure the number of episodes of body envy the participant experiences. This is a self-constructed scale based on contemporary theories by Smith and colleagues (1999) and Crusius and colleagues (2019). Thus, the items conform to the components of envy currently recognized by theorists and researchers in the field of envy. Examples of items of this scale are: “I am often bothered when I see women who are slimmer and more defined than me” and “I tend to think it’s unfair that some women are slimmer and

more defined than me.” For this scale, a Likert scale was used where 1 = *strongly disagree* and 5 = *strongly agree*. A higher score indicated a higher tendency to experience body envy. The present study exhibited a good Cronbach’s alpha of $\alpha = .90$. For each participant, the mean score of all items was calculated.

WLD

The Diet Intent Scale (DIT) made by Stice (1998) was used to operationalize the motivation for WLD and consists of 9 items that measure dietary restraint. For example, two items from this scale were: “I take small portions (of food) in an effort to control my weight” and “I count calories to try to prevent weight gain.” A 5-point Likert scale that ranges from 1 = *never* to 5 = *always* was used. A higher score indicated a higher tendency to weight-loss diet. The scale has a Cronbach’s alpha of .94 and a temporal reliability of .92. The Cronbach’s alpha in the present study was $\alpha = .93$, indicating good internal consistency. For each participant, the mean score of all items was calculated.

Body Dissatisfaction

Body satisfaction has been operationalized using the Body Parts Satisfaction scale (Petrie et al., 2002) which indicates the extent of satisfaction the participant has regarding seven body parts. Participants rate the body parts from 1 = *extremely dissatisfied* to 6 = *extremely satisfied*. The items were reversed to measure body dissatisfaction so that a higher score indicated more body dissatisfaction. These chosen body parts (weight, arms, stomach, buttocks, hips, upper thighs, and general muscle tone) were found most salient in eating disorder research (Petrie et al., 2002). The seven body parts had a sufficient factor loading (greater than .45) to be considered under the factor of Satisfaction With Body (Petrie et al., 2002). The Cronbach’s alpha of this scale in the present study was $\alpha = .84$, which is sufficient. For each participant, the mean score of all items was calculated.

USCT

Upward social comparison tendency of the body was operationalized using the Upward Physical Appearance Comparisons Scale (UPACS). Two item examples were: “I find myself comparing my appearance with people who are better looking than me.” And “At parties or other social events, I compare my physical appearance to the physical appearance of the very attractive people.” Ten items were answered on a five-point Likert scale from *1= never* to *5= always*. A higher score indicated a higher tendency to make upward physical comparisons. The Cronbach's alpha for the female sample was $\alpha = .94$ (O'Brien et al, 2009). The Cronbach alpha in the current study was $\alpha = .95$, which is excellent. For each participant, the mean score of all items was calculated.

Self-Compassion

The short 12-item version of the Self-Compassion Scale (Raes et al., 2011) was used to operationalize participants' self-compassion. This scale consists of six subscales that have two items each: Self-Kindness, Self-Judgement, Common Humanity, Isolation, Mindfulness, and Over-Identification. However, the total score of these subscales has been used. Two example questions from the questionnaire were: “When I'm going through a very hard time, I give myself the caring and tenderness I need” and “I'm intolerant and impatient towards those aspects of my personality I don't like.” A Likert scale from *1= strongly disagree* to *5= strongly agree* was used. Furthermore, a higher score indicated a higher level of self-compassion in an individual. The Cronbach's alpha for internal consistency was more than 0.86 in all samples and Cronbach's alpha with the long form of the SCS was bigger than 0.97 in all samples. In the current study Cronbach's alpha was $\alpha = .83$ which is sufficient. For each participant, the mean score of all items was calculated.

Procedure

The study was approved by the Ethics Committee of the Psychology department at the

University of Groningen. Before the formal data collection, a pilot study was done with a sample of six participants who were acquaintances of the researchers. The pilot study was done to assess typographical and process errors in the online questionnaire. There were no process errors. For example, the wording of one item was changed because it appeared to be confusing such as changing the word “helpings” to “portions”. Additionally, some changes were made to the punctuation. Qualtrics was used as a tool to create the questionnaire. After the questionnaire was revised it was published through SONA (i.e., online pool of Bachelor students at University of Groningen participating for course credit) and the researchers also shared the link to the survey through their own social networks. A convenience sample that consisted of friends and acquaintances was gathered. They had to give informed consent in order to participate. The online questionnaire contained demographic information (e.g., gender, age, height, weight, nationality, and ethnicity) and measures of upward social comparison, body-envy, dieting behavior, self-compassion, and body dissatisfaction. In order to avoid any invalid data, all the responses from non-female respondents, from participants that did not have at least a B2 level of English and from those who were not students at the university or other higher education institution were immediately redirected to the end of the survey. At the end of the survey participants were provided with a list of ten steps that advised them how to turn negative body thoughts into positive body image.

Statistical Analysis

The hypothesized moderated mediation model (see Figure 1) was determined by testing the significance of the direct and indirect effects of the moderator through a bootstrapping procedure (n=5000) of PROCESS macro, model 7 (Hayes, 2013). Bootstrapping was used because it is robust in normality and can be used for small sample sizes (Igartua & Hayes, 2021). Upward social comparison tendency was the predictor variable with body envy tendency as a mediator and weight-loss dieting as the outcome variable. The

moderator variable was self-compassion. Moderated mediation analyses tested the effect of a moderating variable (i.e. self-compassion) on the relationship between a predictor (i.e. upward social comparison tendency) and outcome variable (i.e. weight-loss dieting) (Igartua & Hayes, 2021). Additionally, body dissatisfaction has been controlled for. The index of the moderated mediation pathway was the difference of the indirect effect across different levels of the moderator variable self-compassion (Igartua & Hayes, 2021). The significance of the moderated mediation was supported by the bootstrapping 95% confidence interval not containing a zero (Hayes, 2015).

Results

Preliminary analysis

A casewise diagnostic ($> \pm 3 SD$) was carried out and one outlier was found. The Cooks distance of $D_i = 0.339$ was below 1 which shows this outlier is not influential and does not have to be removed from the dataset (Cook & Weisberg, 1982). The final dataset for statistical analysis is $N = 205$. Furthermore, an assumption check was carried out to check homoscedasticity, linearity, multicollinearity, independence, and normality. Moreover, no assumptions were violated (see Appendix). The scatterplot showed no serious violations of homoscedasticity and linearity. Multicollinearity was tested by calculating the VIF. The VIF of all the scales was < 10 which means this assumption has not been violated. The Durbin-Watson test was used to determine independence. The Durbin-Watson statistic is 2.16 which means the assumption is met (Clement & Bradley-Garcia, 2022). To check normality, a histogram and a normal P-P plot were used. Both the histogram and normal P-P plot showed no violations of normality. The bootstrapping method is robust for errors of normality and independence, so no further assessment was done (Wright et al., 2011). In Table 1 below, the correlations and descriptive statistics between the variables can be found.

Table 1*Pearson correlations, Means, and Standard Deviations*

	1	2	3	4	5
1. USCT	-				
2. BET	.69**	-			
3. WLD	.51**	.56**	-		
4. Body Dissatisfaction	.41**	.40**	.46**	-	
5. Self- Compassion	-.41**	-.39**	-.27**	-.35**	-
Mean	3.04	2.35	2.23	3.25	2.99
<i>SD</i>	0.98	0.97	0.95	0.84	0.64

Note. Significant correlations ($p < .001$) are indicated by two stars.

USCT: Upward Social Comparison Tendency; BET: Body Envy Tendency; WLD: Weight Loss Dieting

Moderated Mediation Analysis

The moderated mediation model was tested using model 7 from Hayes (2013). The model was not significant which means that self-compassion does not affect BET and thus the moderated mediation index was not significant ($B = -0.033$, $SE = 0.022$, 95% $CI [-0.08, 0.01]$). Self-compassion did not moderate the mediation pathway from the relationship of USCT, through BET on WLD. The hypothesis that self-compassion will decrease the strength of the

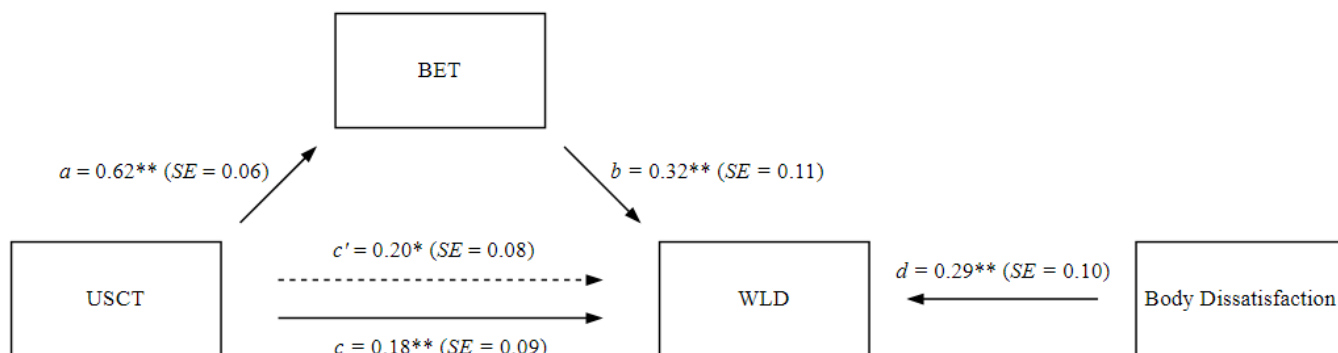
relationship between USCT and BET in individuals which will reduce WLD is therefore rejected. However, the correlations showed significant correlations between the variables, which might indicate that self-compassion and USCT independently affect WLD through BET. Two mediation pathways according to Hayes (2013) model 4 were tested. According to the first mediation pathway states, an increase in USCT leads to an increase in BET, which in turn leads to an increase in WLD. The second mediation pathway states that an increase in self-compassion will lead to a decrease in BET, which in turn leads to a decrease in WLD.

Mediation Analyses

The first mediation pathway consists of USCT which has an indirect effect on WLD through BET. This model was tested using Hayes (2013) bootstrapping model 4. This model was significant ($F(3,201) = 53.68, p < .001$) and USCT predicted 39.43% of the variance of WLD. The direct effects of USCT on BET ($B=0.62, SE=0.07, 95\% CI [0.50, 0.75], p < 0.001$), BET on WLD ($B=0.32, SE=0.11, 95\% CI [0.10, 0.55], p < 0.01$), and USCT on WLD ($B=0.18, SE=0.09, 95\% CI [0.01, 0.35]$) were shown to be significant. The indirect effect of USCT on WLD through the mediating effect of BET was also significant ($B=0.20, SE=0.08, 95\% CI [0.06, 0.36]$). The mediation analysis of USCT on WLD through BET with body dissatisfaction as a control variable can be found in Figure 2.

Figure 2

Mediation model of the relationship of USCT and WLD with BET as the mediating variable and body dissatisfaction as a control variable



Note. The coefficients of the interactions are presented. SEs are in parentheses.

Significant coefficients are marked with one star ($p < .05$) or two stars ($p < .005$).

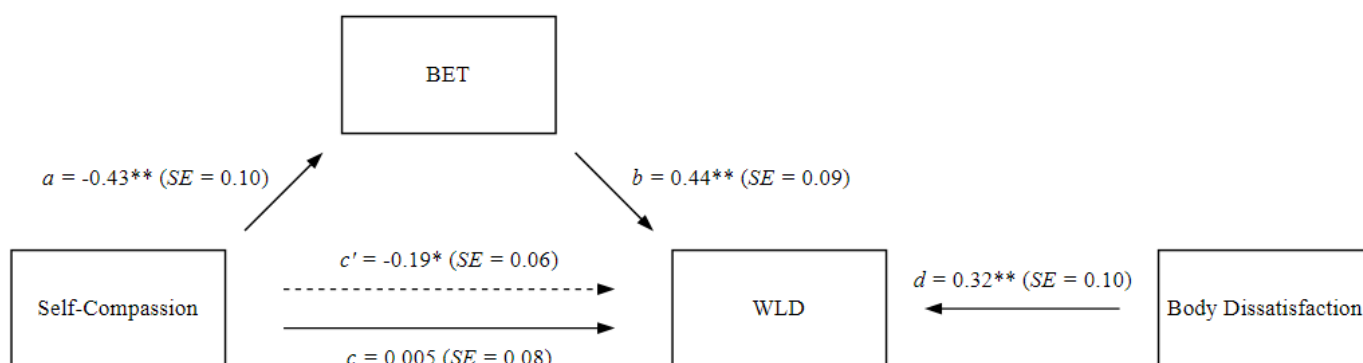
The direct effects are displayed in a continuous line, and the indirect effects are displayed in a dashed line.

USCT: Upward Social Comparison Tendency; BET: Body Envy Tendency; WLD: Weight Loss Dieting

The second mediation pathway consists of self-compassion which has an indirect effect on WLD through BET. This model was tested using Hayes (2013) bootstrapping model 4. The whole model was significant ($F(3,201) = 52.80, p < .001$). Self-compassion predicted 37.77% of the variance of WLD. The direct effects of self-compassion on BET ($B = -0.43, SE = 0.10, 95\% CI [-0.64, -0.23], p < 0.001$) and the direct effect of BET on WLD ($B = 0.44, SE = 0.09, 95\% CI [0.26, 0.61], p < 0.001$) were significant. The direct effect of self-compassion on WLD ($B = 0.005, SE = 0.08, 95\% CI [-0.15, 0.16]$) was shown not to be significant since 0 is in the 95% confidence interval (Hayes, 2015). The indirect effect of self-compassion on WLD through the mediating effect of BET however was significant ($B = -0.19, SE = 0.06, 95\% CI [-0.32, -0.08]$). The mediation analysis of self-compassion on WLD with BET as a mediating variable can be found in Figure 3. Consequently, an increase in USCT can lead to an increase in BET which in turn leads to more WLD thus supporting the prediction.

Figure 3

Mediation model of the relationship of Self Compassion and WLD with Body Envy as the mediating variable and body dissatisfaction as control variable



Note. The coefficients of the interactions are presented. SEs are in parentheses.

Significant coefficients are marked with one star ($p < .05$) or two stars ($p < .005$).

The direct effects are displayed in a continuous line and the indirect effects are displayed in a dashed line.

BET: Body Envy Tendency; WLD: Weight Loss Dieting

In summary, the predicted moderated mediation model such as USCT leading to WLD through BET with self-compassion as a moderator variable was not significant, which is why two mediation pathways were explored. The first significant mediation pathway displays that an increase in USCT leads to an increase in BET which in turn leads to more WLD. The second significant mediation pathway displays that an increase in self-compassion leads to a decrease in BET which in turn leads to less WLD.

Discussion

In a sample of college women, it was predicted that BET would mediate the relationship between USCT and WLD such that an increase in USCT leads to an increase in

BET which leads to more WLD. Furthermore, it was hypothesized that self-compassion would moderate this mediation pathway by decreasing the strength of the relationship between USCT and BET which would reduce WLD. In conclusion, no support was found for this moderated mediation model. However, support was found for two mediation pathways. The first mediation pathway stated that BET mediated the relationship between USCT and WLD controlled for body dissatisfaction. In other words, more frequent episodes of upward comparisons lead to more episodes of body envy which in turn leads to more WLD behaviors. The second mediation pathway consists of self-compassion leading to WLD through BET. In other words, more self-compassion leads to less BET which in turn leads to less WLD. Both mediation pathways were significant and supported the prediction. The mediation pathways occurred over and above body dissatisfaction, which emphasizes the unique effect of body envy as an upward comparison emotion on WLD.

Furthermore, there are a few possible reasons why this study's moderated mediation model was not significant. Firstly, the sample that was used in this study consisted of college women. The moderated mediation might have been significant if a clinical sample had been used. In a clinical sample, it can be expected that these individuals score higher on upward social comparison and body envy. In support of this reasoning, a study by Gyrnberg and colleagues (2019) have found that patients who suffer from anorexia nervosa reported more social comparison and body envy than healthy controls. Additional research could look at a sample of patients with an eating disorder to test the moderated mediation model. Second, and building on this reasoning, self-compassion could be argued to be lower in a clinical sample. In support of this reasoning, Kelly and colleagues (2014) have done a study about self-compassion and fear thereof in a female student sample and an eating disorder patient sample. They found that the clinical sample had a lower level of self-compassion and a higher level of fear of self-compassion than the student sample. This study suggests that women in a clinical

sample have lower levels of self-compassion and a higher fear of this. As a result, the current study should be replicated in a clinical sample to determine whether the moderated mediation model could be significant.

The first significant mediation pathway delineates that an increase in upward comparison leads to an increase in body envy which is in line with the notion that envy is an upward comparison emotion (Smith, 2000). Women compare themselves to women who have achieved the thin ideal and become envious because they want to achieve it as well. This notion is also supported by the contemporary sociocultural model (Tiggemann, 2012). This model explains how UPACT can lead to BET through sociocultural influences. Women recognize the gap between their bodies and society's highly valued thin ideal by making upward comparisons. Furthermore, Smith and Kim (2007) explain that envy consists of feelings of inferiority, unfairness, and frustration. Women get a sense of unfairness because they want the advantages and higher stance in society that the envied other has obtained by conforming to the thin ideal. Women want to look like the airbrushed images they see on social media, to which they compare themselves. However, those images are unreal and impossible to live up to. Consequently, this gives women a feeling of inferiority and unfairness. Thus, upward comparison leads to more episodes of experiencing body envy.

The second significant mediation pathway demonstrates that an increase in body envy episodes leads to an increase in WLD behaviors. The negative feelings that signify body envy explain how this emotion leads to WLD. When a woman feels envious of another woman's body, they want what the other has and might even find the other woman less deserving. The yearning for what a woman feels deprived of leads to feelings of unfairness. Women want to get rid of these uncomfortable emotions which is why they sought WLD as a solution. This also aligns with Keltner and Haidt's (1999) theory on the social functions of emotion, which posits that body envy serves to inform an individual of their inferior position. Furthermore,

Keltner and Haidt explain that on a cultural level, women want to conform. Dieting is a solution for women because it brings them closer to the thin ideal. In addition, there has been a significant positive direct effect found from USCT to WLD. USCT may exert its effect on WLD through different mechanisms than body envy. For example, USCT could lead to admiration which could lead to more WLD. Shame could also serve as a potential mediator for the relationship between USCT and WLD. Future research could investigate this to gain a better understanding of how USCT leads to WLD.

The moderator self-compassion did not moderate the mediation pathway; however, a higher tendency of self-compassion did show a decrease in BET. Logically, this can be explained by self-compassion being characterized by being kind to yourself and one's flaws. In fact, self-compassion consists of self-kindness, common humanity, and mindfulness. Self-kindness could help women be more caring towards their bodies and their potential flaws. Furthermore, common humanity could emphasize that all women feel insecure about their bodies sometimes while mindfulness helps to not overthink the comparisons a woman makes with the upward comparison target. Consequently, these three components of self-compassion can lead to fewer feelings of inferiority and unfairness which in turn leads to fewer frequent episodes of body envy. Following this reasoning, Pila and colleagues (2022) studied if self-compassion would lower body envy in a sample of adolescent girls. They found that self-compassion was associated with less frequent body envy episodes. This finding can be linked to the significant relationship found in this current study between self-compassion and body envy. Self-compassion can be seen as a buffer for BET since self-compassion does not exert its power on WLD directly but through decreasing BET. Replicating these results in a clinical sample is crucial, as can be assumed that they have a lower self-compassion score and potentially find a significant result. Additionally, body dissatisfaction has been used as a control variable in both mediation pathways. Women of all levels of body dissatisfaction

experience the negative emotions accompanied by BET. This means that the feelings of body envy are an emotional experience that is not connected to body dissatisfaction. It is important to know how the feelings of body envy can lead to WLD and to develop interventions on how to regulate these emotions.

Accordingly, the results of this study suggest that women high in USCT and low in self-compassion have a higher risk of forming eating disorders. Consequently, it would be especially beneficial to target this particular population for interventions. Media literacy, is an intervention that targets women high in USCT. This intervention has the three following goals: teach women how these images are created, encourage women to question these unrealistic images, and discuss other important non-appearance-related subjects in life. The intervention would mostly focus on showing these women media images of photoshopped pictures of women's bodies. Women could guess which pictures are edited and which ones are not, in order to better assess how realistic an image is. Furthermore, an intervention that focuses on increasing self-compassion is critical to reducing BET, since self-compassion acts as a buffer for BET. Smeets and colleagues (2014) have found that a self-compassion intervention in female college students enhanced participants' self-compassion, mindfulness, optimism, and self-efficacy. Thus, strengthening women's self-compassion would logically reduce the negative feelings that come with body envy like frustration and inferiority. Concluding, creating more self-compassion in women could create less BET which in turn decreases the amount of WLD.

Several limitations of this current study have to be considered when interpreting the results. Firstly, this is a cross-sectional study, meaning no associations that were found can be interpreted as causal. Because temporal causality cannot be guaranteed, it cannot be claimed. An experimental study can be conducted to see if the studied relations are causal. For example, researchers could place women in a laboratory setting, exposing them to images of

thin female bodies. They are encouraged to contemplate the comparison, experience feelings of body envy, and express their intention to engage in WLD. In this experiment the variable that will be manipulated is USCT. The second limitation is the use of a convenient student sample. The ability to generalize these results to other populations is limited. The study's findings should be replicated in other student and non-student populations. Third, ethnicity was not taken into account in this study. Warren and Akoury (2020) argue that marginalized groups might have protective factors for the thin-ideal internalization and disordered eating such as internalizing different beauty ideals or experiencing the thin-ideal as unattainable. Future research should look at ethnicity and the protective factors it might have against thin-ideal internalization and eating pathology. Fourth, the body envy scale was self-constructed based on contemporary theories. The scale showed good reliability; however, convergent validity with other envy scales should be investigated. Lastly, a theoretical limitation regarding the concept of envy should be considered when interpreting the results of this study. There have been many studies done on the proposed two forms of envy; malicious and benign envy. Research is conflicted on the existence of these two forms of envy. Crusius and colleagues (2019) have investigated malicious and benign envy and defined them as the following. Benign envy delineates upward motivation and malicious envy delineates hostility against others. The measure used for envy is more similar to benign envy since the focus is more on motivation than hostility. However, future research could look at malicious envy to find out what the dominant response to envy is.

To conclude, the moderated mediation model which states that an increase in USCT leads to an increase in BET, which then leads to an increase in WLD moderated by self-compassion is not significant. However, the mediation model, which states that more USCT leads to more BET, which then leads to more WLD, is significant. A second mediation pathway that states that self-compassion reduces the amount of BET, which then reduces the

amount of WLD, is significant. Women with a high upward comparison tendency and a low level of self-compassion should be targeted for intervention. Media literacy and a self-compassion intervention are needed to protect women against WLD and eating pathology.

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Appendix

Figure 1

Histogram of regression standardized residuals

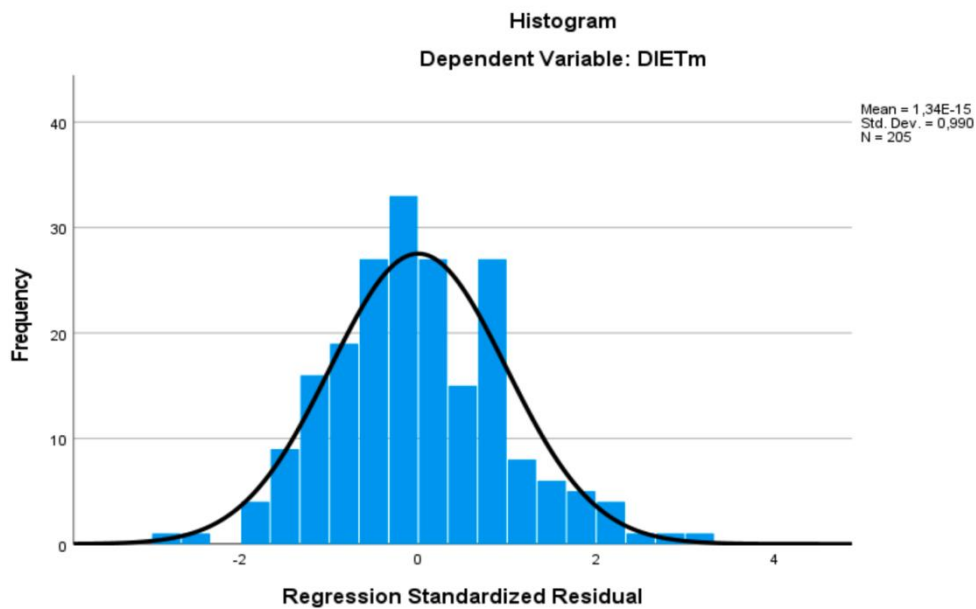


Figure 2

Normal P-P plot of regression standardized residuals

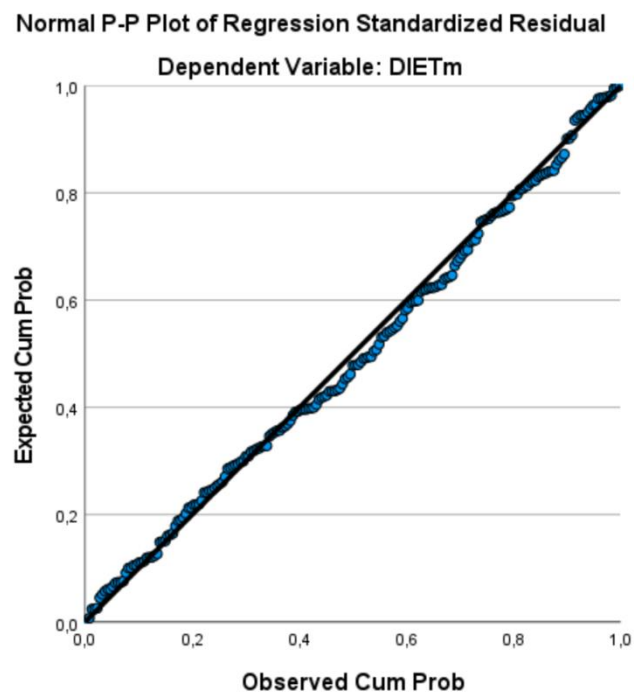


Figure 3

Scatterplot of regression standardized predicted values

