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# **Eating Behaviors**



# Social comparison, negative body image, and disordered eating behavior: The moderating role of coping style



Emilie Pinkasavage <sup>a</sup>, Danielle Arigo <sup>a,b,\*</sup>, Leah M. Schumacher <sup>a</sup>

- <sup>a</sup> Department of Psychology, Drexel University, Philadelphia, PA, United States
- <sup>b</sup> Department of Psychology, The University of Scranton, Scranton, PA, United States

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#### ABSTRACT

Comparing one's body to those of individuals perceived as more attractive is common among college women, and has been associated with increases in body dissatisfaction and disordered eating. Not all college women are vulnerable to the negative influence of these upward body comparisons; however, little is known about characteristics that may distinguish more vulnerable women. Coping styles, which represent individuals' responses to negative events, are a key area of opportunity for better understanding the relationship between body comparison and weight-related experiences in this population. College women (n = 628) completed an electronic assessment of demographics, upward body comparison, body dissatisfaction, disordered eating behavior, and coping styles. Controlling for reported BMI, positive reframing coping style moderated the relationship between upward body-focused comparison and body dissatisfaction (p = 0.02), such that women who engaged in more (vs. less) positive reframing showed a weakened relationship between upward body-focused comparison and body dissatisfaction. Controlling for BMI and body dissatisfaction, both self-blaming (p = 0.02) and selfdistracting (p = 0.009) styles also moderated the relationship between upward body-focused comparison and disordered eating behaviors, such that women who more (vs. less) strongly endorsed self-blaming and selfdistracting styles appeared more susceptible to the negative influence of upward body comparison. These findings underscore the importance of upward body comparison for body dissatisfaction and disordered eating among college women, and highlight coping style as a key factor in these relationships. Increased attention to upward body comparison and coping style may improve quality of life and contribute to the prevention of disordered eating in this vulnerable population.

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# 1. Introduction

1.1. Social comparison, negative body image, and disordered eating behavior: the moderating role of coping style

The ubiquity of body dissatisfaction and weight concerns among U.S. women is well documented (Strahan, Wilson, Cressman, & Buote, 2006). College women appear to be exceptionally vulnerable to body dissatisfaction and weight concerns (Pritchard, Wilson, & Yamnitz, 2007; Strahan et al., 2006), which place them at risk for health problems such as substance abuse and depression (Tiggemann & McGill, 2004; van den Berg et al., 2007). These women are also at a high risk for disordered eating symptoms (Stice & Shaw, 2002; van den Berg et al., 2007).

Among young women, frequent comparisons of one's body to that of others may serve to prompt and maintain body dissatisfaction (Leahey, Crowther, & Mickelson, 2007). Such social comparisons often are made toward others who are perceived to have "better" physical features

(e.g., toward thin, attractive others). These *upward comparisons* highlight a woman's failure to achieve the accepted standard of attractiveness, and communicate that achieving this standard is possible (though actual achievement is unrealistic for most women). Consequent negative self-evaluations contribute to body dissatisfaction and disordered eating behaviors (Arigo, Schumacher, & Martin, 2014) which are themselves associated with weight gain, depressed mood, and lower quality of life (Tiggemann & Kuring, 2004). Although most college women make upward body comparisons, not all women are susceptible to their negative effects (Stice, Mazotti, Weibel, & Argas, 2000). Improved understanding of the personal characteristics or behaviors that identify particularly vulnerable women could inform health promotion and disordered eating prevention programs on college campuses.

# 1.2. Coping style as a potential moderator

Upward body comparisons can lead to immediate increases in negative affect and guilt (Leahey et al., 2007). If managed effectively, such feelings are transient; however, poor response to such feelings may prompt disordered eating symptoms and negatively influence quality

<sup>\*</sup> Corresponding author at: Department of Psychology, The University of Scranton, 205 Alumni Memorial Hall, Scranton, PA 18510. Tel.: +1 570 941 6174 (Office). E-mail address: danielle.arigo@scranton.edu (D. Arigo).

of life (Arigo et al., 2014). Coping style, or one's method for managing negative situations or emotions (Carver, 1997), represents one potential influence on women's responses to upward body comparisons. Coping styles typically have been categorized as either adaptive or maladaptive (Schnider, Elhai, & Gray, 2007). "Adaptive" styles include actively engaging in a behavior to overcome the negative situation, seeking out support, or positive reframing (Carver, 1997; Mahmound, Staten, Hall, & Lennie, 2012). These styles have been associated with better psychological functioning (Cash, Santos, & Williams, 2005; Mahmound et al., 2012).

In contrast, "maladaptive" coping styles involve avoiding searching for a solution to a problem or withdrawing from the situation (Mahmound et al., 2012). Maladaptive styles include venting (i.e., actively expressing negative emotion), self-distraction (i.e., focusing away from the problem) and self-blame (i.e., taking full responsibility for a situation; Carver, 1997; Schnider et al., 2007). College students who use maladaptive styles report higher levels of anxiety and depression, and poorer ability to adapt to stressful circumstances (Cash et al., 2005; Mahmound et al., 2012). Regarding body and eating concerns, avoidant coping has been linked to body dissatisfaction and disordered eating attitudes and behaviors in a small number of studies, though active coping techniques have not shown the expected relationships with these outcomes (Cash et al., 2005; Koff & Sangani, 1997; Sulkowski, Dempsey, & Dempsey, 2011). To our knowledge, the role of coping style has not been examined with respect to the specific relationships between upward body comparisons and (1) body dissatisfaction, and (2) disordered

The present study examined relations between upward body comparison, coping styles, and body image and disordered eating behavior in a large sample of college women. We expected an inverse relationship between upward body comparison and body image, and a positive relationship between upward body comparison and disordered eating behaviors. The moderating effects of five coping styles (selected to capture both adaptive and maladaptive coping) on these relationships were also examined. The coping styles examined were positive reframing, self-distraction, self-blame, active coping, and venting. We predicted that (1) higher (vs. lower) positive reframing and active coping (i.e., greater identification with adaptive coping styles) would weaken the relationships between upward body comparisons and body image and disordered eating behaviors, while (2) higher (vs. lower) venting, self-blame, and self-distraction (i.e., greater identification with maladaptive coping styles) would strengthen these relationships.

## 2. Method

# 2.1. Participants and procedure

Female students taking introductory psychology (n=628) at a large, private university in the Northeastern United States completed an electronic assessment of body image, eating behaviors, social functioning, and coping styles. The average participant was 19 years old (SD=1.02) with a body mass index (BMI) of 22.89 kg/m² (SD=4.03). As noted below, BMIs were calculated based on self-reported height and weight; reported BMIs ranged from 15.51 to 49.09. Participants identified as Caucasian (60%), Asian (21%), Hispanic/Latina (8%), Black/African American (7%), Native American (1%), and mixed (3%). The largest subsets of participants were freshmen (66%) and lived on campus (81%).

## 2.2. Materials and measures

## 2.2.1. Demographics questionnaire

Participants were asked to report their age, year in school, current living situation (i.e., on vs. off campus), and ethnicity, and to estimate

their current height and weight. BMI was calculated from self-reported height and weight.

## 2.2.2. Body-focused social comparison scale

This measure was created for a larger study of well-being among college women. Items were modified from a validated measure of general social comparison (Gibbons & Buunk, 1999) to assess comparisons specific to the domain of body shape (see Arigo & Smyth, 2012). The upward comparison subscale consisted of two items (i.e., "When it comes to my body, I compare myself with others whose bodies I think are better than mine," and "When I feel negatively about my body, I think of others whose bodies are BETTER than mine"), which assessed upward body comparison in two different contexts. Each item was rated from 1 (strongly disagree) to 5 (strongly agree); items were summed to create the total score (possible range = 2-10). Cronbach's alpha for this brief measure of upward comparison was 0.83, indicating good internal validity but not unnecessary item redundancy (Streiner, 2003). This measure also showed convergent validity with existing, broader measures of appearance-focused social comparison (O'Brien et al., 2009; Thompson, Heinberg, & Tantleff-Dunn, 1991; ps < 0.0001).

# 2.2.3. Body Image Quality of Life Inventory (BIQLI)

This 19-item scale quantifies the influence of body image on a respondent's functioning and quality of life in various domains (Cash & Fleming, 2002). Respondents rate items on a scale of -3 (highly negative impact of body image) to +3 (highly positive impact of body image). Cronbach's alpha was 0.95 in the present study.

#### 2.2.4. Eating Disorders Examination Questionnaire (EDE-Q)

This 28-item self-report measure is based on the Eating Disorders Examination (Fairburn & Beglin, 1994), a widely-used clinical interview for diagnosing eating disorders. With respect to the past 28 days, participants indicate the frequency of key behavioral features of eating disorders (e.g., binge eating, definite fear of weight gain) in terms of number of episodes or number of days on which the behavior occurred (e.g., no days, 6–12 days, every day). In addition, the severity of core attitudinal aspects of eating disorder psychopathology (e.g., dissatisfaction with shape) over the past 28 days are assessed using a 7-point scale ranging from 0 (not at all) to 6 (markedly). A Global score and four subscale scores can be derived: Restraint (5 items), Eating Concern (5 items), Shape Concern (8 items), and Weight Concern (5 items). In the present study, Cronbach's alphas were 0.91 (Global), 0.83 (Restraint), 0.54 (Eating Concern), 0.88 (Shape Concern), and 0.81 (Weight Concern).

## 2.2.5. Brief COPE

This 28-item inventory assesses typical coping style on 14 dimensions (Carver, 1997). Items are rated on a scale of 1 (*I haven't been doing this at all*) to 3 (*I have been doing this a lot*). The present study focused on active coping (i.e. focusing efforts on making the situation better), venting (i.e., expressing unpleasant feelings), positive reframing (i.e., taking a positive perspective on a negative event), self-distraction (i.e., focusing on other interests or responsibilities), and self-blame (i.e., focusing on one's own flaws or mistakes). Cronbach's alphas for the current sample ranged from 0.60 (self-distraction) to 0.72 (self-blame).

# 2.3. Statistical Analyses

Descriptive statistics for upward comparison, body image quality of life, disordered eating (EDE-Q Global Score and subscales), and coping styles were examined to determine the similarity of our sample to published norms for validated scales. Pearson's *R* correlations were used to test bivariate relations between constructs of interest. Although previous examinations of upward comparison have found only modest correlations with BMI (Leahey, LaRose, Fava, & Wing, 2011), it remains possible that the extent of upward comparison may be strongly associated with

BMI (and therefore, may represent merely a proxy for BMI). To address this potential confound, correlations were tested both with and without controlling for BMI using all available data. The moderating effects of coping styles were tested with general linear models, which included interaction effects (of upward body comparison by coping style) and controlled for BMI. Outcomes were scores on the aforementioned measures of body image quality of life (BIQLI) and disordered eating (Global and subscales: Restraint, Eating Concern, Shape Concern, and Weight Concern).

#### 3. Results

On average, participants endorsed upward body comparison scores slightly above the mid-point of the scale used (M=6.80, SD=2.42). Participants' scores ranged from the scale minimum (2; strongly disagree) to its maximum (10; strongly agree), indicating that the scale was able to differentiate women who did and did not strongly identify with a tendency to make upward body comparisons. Participants also reported slightly positive body image quality of life ( $M_{\rm BIQLI}=1.97$ ) and moderate disordered eating behaviors ( $M_{\rm EDEQ}=1.75$ ), relative to previously-published averages (Cash & Fleming, 2002; Luce, Crowther, & Pole, 2008).

Of note, 201 participants (32%) endorsed disordered eating behaviors at or above the clinical threshold for the EDE-Q (i.e., global scores of 2.3; Fairburn & Beglin, 1994), which is similar to published norms among college women (Luce et al., 2008). In addition, 109 participants (28%) endorsed binge eating behavior over the past month ( $M_{\rm Frequency}=5.02$  episodes, SD=5.20), and 21 participants (3%) reported vomiting behavior ( $M_{\rm Frequency}=5.50$  episodes, SD=5.64). These rates also correspond to norms for college women (Luce et al., 2008). As purging was infrequent, and thus did not provide adequate variability in frequency, we did not include it as an outcome. Across participants, there was varied identification with each of the coping styles assessed (i.e., range from scale minimum to maximum). Table 1 presents full descriptive statistics.

3.1. Relations among upward comparison, eating and weight concerns, and coping style

Upward body comparison showed only a very weak correlation with BMI, indicating that upward comparisons were independent of BMI in this sample (R = 0.07, p = 0.09). As predicted, more frequent upward

**Table 1**Descriptive statistics for BMI, upward body comparison, body- and eating-related disturbance, and coping styles.

	Mean	SD	Minimum	Maximum
Body Mass Index (BMI)	22.89	4.03	15.10	49.09
Upward Body Comparison	6.80	2.42	1.00	10.00
Body Dissatisfaction	1.97	2.87	-6.00	6.00
(Body Image Quality of Life)				
Disordered Eating (EDE-Q Global Score)	1.76	1.29	0	5.85
Restraint Subscale	1.53	1.40	0	6.00
Eating Concerns Subscale	1.09	1.24	0	6.00
Shape Concerns Subscale	2.47	1.64	0	6.00
Weight Concerns Subscale	1.98	1.52	0	6.00
Binge Eating Frequency <sup>t</sup>	5.02	5.20	1.00	28.00
Purge (Vomiting) Frequency <sup>t</sup>	5.50	5.64	1.00	20.00
COPE - Positive Reframing	5.01	1.66	2.00	8.00
COPE – Self-Distraction	4.72	1.46	2.00	8.00
COPE – Self-Blame	4.25	1.71	2.00	8.00
COPE – Active Coping	5.07	1.54	2.00	8.00
COPE – Venting	4.12	1.44	2.00	8.00

Note: Minimum and maximum values refer to sample ranges; all minimum and maximum values reflect scale floors and ceilings, with the exception of EDE-Q Global (min = 0, max = 6.0) and BIQLI (min = -19.0, max = 19.0);  $^{\rm t}$  indicates that values represent means and ranges for those who endorsed any binge or purge behavior in the past month (ns = 109 and 21, respectively).

body comparison was associated with lower BIQLI (R = -0.24) and greater disordered eating behavior (Rs = 0.37-0.51), including binge eating frequency (R = 0.31, ps < 0.001). These relationships remained significant, and of moderate strength, when BMI was controlled (body image quality of life: R = -0.22; disordered eating: Rs = 0.29-0.56; ps < 0.001). Tables 2 and 3 include correlation matrices without and with BMI controlled (respectively).

## 3.2. Moderating effects of coping style

Endorsement of active coping and venting styles did not affect the observed relationships between upward body comparison and BIQLI or disordered eating behavior (Global and subscales; ps > 0.24). Controlling for BMI, the relationship between upward body comparison and BIQLI was moderated by a positive reframing coping style (F[4,607] = 6.00, p = 0.01,  $\eta_p^2 = 0.01$ ), however. Women who reported stronger tendencies toward upward body comparison and positive reframing endorsed higher BIQLI, indicating benefit associated with positive reframing. In contrast, those with stronger tendencies toward upward body comparison and lower propensity for positive reframing endorsed lower BIQLI. Controlling for BMI and BIQLI, positive reframing did not affect the relationship between upward body comparison and global disordered eating behavior (F[5,606] = 0.01, p = 0.94), specific disordered eating subscales (ps > 0.70), or binge frequency (F[5,167] = 0.1.55, p = 0.21).

Self-blame (F[3,615] = 0.23, p = 0.82) and self-distraction (F[3,617] =0.03, p = 0.86) did not moderate the relationship between upward body comparison and BIQLI. Controlling for BMI and BIQLI, however, both self-blame (F[5,606] = 3.73, p = 0.05,  $\eta_p^2$  = 0.01) and self-distraction (F[5,608] = 4.90, p = 0.03,  $\eta_p^2$  = 0.01) moderated the relationship between upward body comparison and overall disordered eating behavior. Upward body comparison was more strongly associated with disordered eating at high levels of self-blame and self-distraction, suggesting that these coping styles may be associated with harmful eating behaviors in college women (See Fig. 1 for the effect of selfblame). In particular, self-blame moderated the effect on eating concerns (F[5,606] = 6.26, p = 0.01,  $\eta_p^2$  = 0.01), but did not influence relations with other disordered eating subscales (ps > 0.08). In contrast, self-distraction showed moderating effects only on restraint (F[5,606] =4.18, p = 0.04,  $\eta_p^2 = 0.01$ ) and shape concern (F[5,608] =4.44, p = 0.04,  $\eta_p^2 = 0.01$ ). Neither self-blame nor self-distraction were associated with relations between upward body comparison and binge frequency (ps > 0.16).

## 4. Discussion

Upward appearance comparisons are associated with the development of body dissatisfaction and eating pathology among college women (Arigo et al., 2014), though vulnerability to the negative effects of comparisons varies (Leahey et al., 2007). A small body of evidence has linked coping style to body dissatisfaction and disordered eating behaviors (e.g., Cash et al., 2005; Sulkowski et al., 2011); however, its role in the relationship between upward body comparisons and body image/eating outcomes is yet unknown. The results of the present study provide further evidence to support the positive association between upward appearance comparisons (focused specifically on body size and shape) and body and eating concerns, over and above the effects of BMI.

In addition, these results suggest that women who use positive reframing to cope with negative events may show a weakened relationship between upward comparison and body dissatisfaction, relative to those with less of a tendency to use this style. Shifting emphasis to positive interpretations of stressful circumstances can improve mood, and has been associated with benefits such as reduced cardiovascular reactivity to stressors (Tugade, Fredrickson, & Barrett, 2004). To our knowledge, this is one of the only studies to show a beneficial effect of positive reframing on body concerns. Positive reframing of upward body

 Table 2

 Correlation coefficients for relationships between BMI, upward body-focused social comparison, body image quality of life, eating pathology, and coping.

	SCBUP	BIQLI	EDE-Q Global	Binges	EDE-Q Restraint	EDE-Q Eating Concern	EDE-Q Weight	EDE-Q Shape	Cope Venting	Cope Positive Reframing	Cope Self- Blame	Cope Self- Distraction	Cope Active
BMI SCBUP BIQLI EDE-Q Global Binges EDE-Q	0.07	-0.17*** -0.24*** -	0.20*** 0.51*** -0.39***	0.16** 0.31*** -0.32*** 0.38***	0.09* 0.39*** -0.20*** 0.81***	0.15*** 0.37*** -0.37*** 0.87*** 0.48*** 0.63***	0.24*** 0.48*** -0.39*** 0.92*** 0.32*** 0.59***	0.23*** 0.54*** -0.40*** 0.94*** 0.40*** 0.65***	0.05 0.06 -0.12** 0.11** 0.07 0.07	-0.03 0.01 0.18*** 0.05 -0.13* -0.13*	0.07 0.23*** -0.36*** 0.36*** 0.34*** 0.35***	-0.03 0.04 -0.04 0.12** 0.05 0.05	-0.02 0.10* 0.09* 0.06 -0.08 -0.08
Restraint EDE-Q Eating Concern EDE-Q Weight EDE-Q Shape						-	0.75***	0.76*** 0.90***	0.12** 0.11** 0.11**	0.04 0.30 0.30	0.36*** 0.37*** 0.37***	0.10* 0.14*** 0.14***	0.02 0.04 0.06

Note: \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001; BMI = Body Mass Index; SCBUP = Upward body-focused social comparison; BIQII = Body Image Quality of Life Inventory; EDE-Q global = - Eating Disorder Examination Questionnaire global; Binges = a question on the EDE-Q about binge episode frequency; EDE-Q Restraint = restrain subscale; EDE-Q Eating Concern = - eating concern subscale; EDE-Q Weight = Weight subscale; EDE-Q Shape = shape subscale; Cope Venting = Brief Cope Venting Subscale; Cope Positive Reframing = Brief Cope positive reframing subscale; Cope Self-Blame = Brief Cope self-blame subscale; Cope Self-Distraction = Brief Cope self-distraction subscale; Cope Active = Brief Cope active subscale.

comparisons (e.g., by creating downward comparisons on non-appearance dimensions such as intelligence or substance; Lew, Mann, Myers, Taylor, & Bower, 2007) may reduce psychological engagement and physical arousal, thereby buffering against increases in body dissatisfaction.

In contrast, controlling for the influence of body dissatisfaction, women who identify more strongly with the use of self-blame and self-distraction in response to negative events may show a strength-ened relationship between upward body comparison and eating pathology. These findings are consistent with previous research indicating that tendencies toward positive reframing are related to positive mental health outcomes (Mahmound et al., 2012; Schnider et al., 2007), while tendencies toward self-blame and self-distraction are associated with worsening psychological and physical health (Pritchard et al., 2007), as well as greater body and eating concerns (Koff & Sangani, 1997).

This study also is the first to delineate relations between these coping styles and particular aspects of disordered eating behavior. The effect of self-blame was specific to eating concerns, whereas the effect of self-distraction was observed for restrained eating and shape concerns. It is possible that eating behaviors are perceived as under greater individual control than other concerns; as a result, young women who blame themselves in response to an upward body comparison may attempt to address the "problem" (i.e., body dissatisfaction) by focusing on their eating behaviors. Those who attempt to distract themselves from the negative affect or body dissatisfaction that arises from upward body comparisons may do so by focusing on avoiding food (restraint) or

placing excessive attention on body shape. Attempts to avoid or distract oneself from body-related distress in these ways are consistent with acceptance (vs. avoidance) models of body dissatisfaction and eating pathology. These approaches posit that individuals engage in disordered eating behaviors (including restrained eating and excessive focus on shape) to avoid fully experiencing difficult thoughts, feelings, and sensations (e.g., Hayes & Pankey, 2002; Sandoz, Wilson, Merwin, & Kellum, 2013).

Interestingly, none of the included coping styles moderated the relationship between upward body comparison and weight concerns. Active coping and venting also did not moderate the observed relationships, suggesting that these coping styles may not be particularly relevant to understanding the relationship between upward body comparisons and body image or eating behavior. For example, active copers attempt to directly address the problem or stressor. As immediate resolution of an upward body comparison is not possible (i.e., changing one's own body takes time, and changing someone else's body is impractical), young women who typically rely on this style may shift their attention to more controllable stressors. Given the cross-sectional and between-person nature of the present findings, such within-person explanations are speculative, and require experimental and/or longitudinal methods for clarification.

The current study benefitted from a large, diverse sample and the use of validated measures of body dissatisfaction, disordered eating, and coping styles. Use of a new measure of upward body comparison, though not optimal, allowed for specification of comparisons related

**Table 3**Correlation coefficients for relationships between BMI, upward body-focused social comparison, body image quality of life, eating pathology, and coping (controlling for BMI).

	SCBUP	BIQLI	EDE-Q Global	Binges	EDE-Q Restraint	EDE-Q Eating Concern	EDE-Q Weight	EDE-Q Shape	Cope Venting	Cope Positive Reframing	Cope Self- Blame	Cope Self- Distraction	Cope Active
SCBUP	-	-0.23***	0.57***	0.29***	0.43***	0.46***	0.53***	0.57***	0.01	-0.04	0.21***	0.06	0.07
BIQLI		_	-0.40***	-0.29***	-0.23***	-0.37***	-0.38***	-0.42***	-0.06	0.23***	-0.39***	-0.07	0.15*
EDE-Q Global			-	0.34***	0.78***	0.87***	0.91***	0.94***	0.06	-0.03	0.45***	0.18**	0.06
Binges				_	0.11	0.44***	0.28***	0.36***	0.06	-0.13*	0.33***	0.05	-0.08
EDE-Q					_	0.56***	0.55***	0.64***	-0.01	0.05	0.22***	0.08	0.12
Restraint													
EDE-Q Eating						_	0.74***	0.77***	0.08	-0.04	0.47***	0.16**	0.02
Concern													
EDE-Q							-	0.89***	0.06	-0.07	0.45***	0.19**	0.04
Weight													
EDE-Q Shape								-	0.11	-0.06	0.45***	0.20***	0.05

Note: \*p < 0.05; \*\*p < 0.001; \*\*\*p < 0.001; BMI = Body Mass Index; SCBUP = Upward body-focused social comparison; BIQLI = Body Image Quality of Life Inventory; EDE-Q global = Eating Disorder Examination Questionnaire global; Binges = a question on the EDE-Q about binge episode frequency; EDE-Q Restraint = restrain subscale; EDE-Q Eating Concern = eating concern subscale; EDE-Q Weight = Weight subscale; EDE-Q Shape = shape subscale; Cope Venting = Brief Cope Venting Subscale; Cope Positive Reframing = Brief Cope positive reframing subscale; Cope Self-Blame = Brief Cope self-distraction subscale; Cope Active = Brief Cope active subscale.

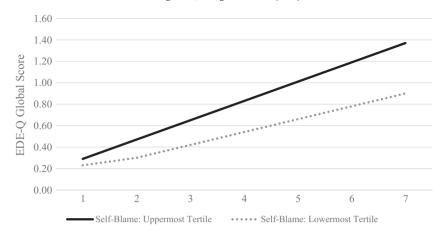


Fig. 1. Relationship between upward body comparison and disordered eating behaviors (EDE-Q global score) by level of identification with a self-distraction coping style. For illustration, self-distraction scores were split into tertiles, with the highest and lowest tertiles displayed here. This model controlled for the effect of body dissatisfaction and BMI.

to body size and shape versus general appearance. This brief measure also showed good internal consistency and concurrent validity. Testing relations between upward body comparison and BMI, and controlling for the effect of BMI in all analyses, allowed us to identify upward body comparison as an independent influence on body dissatisfaction and disordered eating behavior. These findings provide further support for the unique risk conferred by upward body comparison (cf. Arigo et al., 2014).

The present study relied on self-reported and cross-sectional data for an initial investigation of these relationships. As a result, causal conclusions cannot be drawn, and additional research using objective, longitudinal, and experimental methods is needed. We also did not examine the full range of possible coping styles (choosing instead to focus on specific styles), and effect sizes for moderating effects were quite small. Thus, several other styles and psychosocial experiences may be relevant to the relationships between upward body comparison and negative body and eating outcomes.

These limitations notwithstanding, findings from this study provide preliminary evidence to suggest that the use of self-blame and self-distraction may indicate greater susceptibility to negative body comparisons, and confer heightened risk for body dissatisfaction and disordered eating among college women. The use of positive reframing may buffer against such effects. As brief educational programs can improve coping efforts among college students (Steinhardt & Dolbier, 2008), coping style may be an optimal target of eating disorder prevention and/or intervention efforts on college campuses.

## 5. Footnotes

1. Analyses were part of a larger study, which included several other self-report measures (see Arigo et al., 2014). As one key aspect of this study, the Body-Focused Comparison Scale (BFCS) was designed and in use prior to the validation of the UPACS (O'Brien et al., 2009). The BFCS also is specific to body shape and size (which was of particular interest), whereas the UPACS captures comparisons made on other dimensions of appearance. When the UPACS was published, both the UPACS and PACS (Thompson et al., 1991) were added to the larger study, and were used to evaluate the BFCS for convergent validity.

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#### Contributors

All authors contributed to writing the manuscript, EP also conceptualized the study; DA supervised data collection and conducted statistical analyses; LS contributed to theoretical integration.

#### **Conflict of Interest**

None.

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