

BINGE EATING CONCERNS LINK TO INFLUENCES ON SELF-EVALUATION

HALLEY E. WOODWARD AND TERESA A. TREAT

University of Iowa

This study investigated eating- and weight-related correlates of systematic over- and undervaluation of self-reported self-evaluation influences in a mostly overweight and obese female community sample ($n = 115$). Participants completed Likert scale, rank-ordering, and pairwise forced-choice measures of self-evaluation influence importance, and a questionnaire assessing binge eating concerns (BEC); height and weight were measured for body mass index (BMI). Only rank-ordering and forced-choice methods constrained choices among influences. Women with BEC overvalue shape, weight and facial attractiveness, and undervalue being a good person and religion/spirituality. Likert scale and forced-choice tasks suggest women with BEC overvalue appearing put together. Intelligence, personality, and (on the forced-choice task) family are undervalued on constraining measures among women with BEC. Systematic over- and undervaluation of relevant influences is found in women with BEC; overvaluation of shape and weight may come with costs. Continued use of constraining measures will enhance our understanding of women's self-evaluation influences.

Overvaluation of shape and weight, that is, the undue influence of shape and weight on self-evaluation, plays an important role in disordered eating (DE) symptomatology. Overvaluation of shape and weight constitutes a diagnostic criterion for both anorexia nervosa

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Address correspondence to Halley Woodward, Department of Psychology, University of Iowa, 11 Seashore Hall E, Iowa City, IA 52240-1407; E-mail: halley-woodward@uiowa.edu or Dr. Teresa Treat; Email: teresa-treat@uiowa.edu

and bulimia nervosa (American Psychiatric Association, 2013) and has been deemed the core feature that distinguishes eating disorders from other classes of psychopathology (e.g., Fairburn et al., 2008). Overvaluation of shape and weight was recommended as a diagnostic criterion for binge eating disorder (BED) in the DSM-5 (e.g., Hrabosky, Masheb, White, & Grilo, 2007) and predicts relapse following treatment, greater DE symptom severity, and poorer outcomes within clinical and community samples (Fairburn, Peveler, Jones, Hope, & Doll, 1993; Goldschmidt et al., 2010; Ojserkis, Sysko, Goldfein, & Devlin, 2012). Little work to date has examined what may be overlooked when body weight and shape are so important. Self-evaluation influences (e.g., shape and weight) appear to guide behavior such that more time is invested in activities relevant to important influences (Crocker, 2002). Thus, overvaluation of shape and weight may manifest as a great deal of time invested in body-related activities, to the exclusion of activities in pursuit of other potential self-evaluation influences. For example, if a person spends six hours daily exercising and planning meals in pursuit of shape- and weight-based self-esteem, she has six fewer hours in her day to invest in important relationships. One must necessarily make choices about how to spend the finite resource of time, but certain self-evaluation influences may be undervalued systematically by those who struggle with DE (Woodward, Rizk, Wang, & Treat, 2014). Little is known about what may be normatively underprioritized among women who are overweight and obese, or who have concerns about binge eating. Overvaluation of shape and weight can serve as a marker of more severe pathology in BED (Grilo, Masheb, & White, 2010). Among those with BED, overvaluation of shape and weight predicts poorer treatment outcomes, greater DE and depressive symptoms, increased distress, lower self-esteem, more negative prognosis, and impaired functioning (Grilo, Masheb, & Crosby, 2012; Grilo et al., 2010; Grilo, White, Barnes, & Masheb, 2013; Grilo, White, & Masheb, 2012; Mond, Hay, Rodgers, & Owen, 2007). Obese and normal-weight BED patients do not differ in overvaluation of shape and weight (Goldschmidt et al., 2011), suggesting that weight per se does not drive overvaluation among those who binge eat. In sum, overvaluation of shape and weight is an important and problematic correlate of BED. This work tends to utilize the Eating Disorder Examination (EDE), a clinical interview that assesses the importance of weight and shape to self-evaluation in the context of other influences (Fairburn, Cooper, & O'Connor, 2008). Participants

generate a series of attributes that affect how they feel about themselves and put them in order of importance; the clinical interviewer then rates overvaluation of weight and of shape depending on their placement within each participant's list of attributes. The EDE calls for formal estimates of the importance of only shape, weight, and control over eating. Therefore, it is unclear what may be routinely undervalued among those concerned about their binge eating, as well as what attributes may be overvalued beyond weight, shape, and control over eating.

Recently, Woodward and colleagues (2014) examined eating- and weight-related correlates of both over- and undervaluation in the self-evaluations of undergraduate women using several questionnaire-based measures (i.e., Likert scale rating, rank-ordering, and pairwise forced-choice tasks; a subset of participants also completed the Shape and Weight Based Self-Esteem Scale; SAWBS; Geller, Johnston, & Madsen, 1997). All four measures permitted estimation of systematic under- and overvaluation of specific domains. However, only rank-ordering, pairwise forced-choice, and SAWBS constrained participants' selection of self-evaluation influences, so that not every potential influence could be selected as highly influential, though SAWBS combined weight and shape into a single attribute. Across measurement strategies, DE was linked systematically to greater importance of shape and weight in the self-evaluations of undergraduate women. DE was related to enhanced importance of physical appearance to self-evaluations, but only when selection of self-evaluation influences was unconstrained (i.e., on the Likert scale ratings). When women ranked or chose among influences, DE positively predicted the importance of shape and weight, but not other appearance-related indicators. In other words, when the measurement strategy forced shape, weight, and other appearance-related indicators to compete with one another—as they do in the real world—then shape and weight trumped facial attractiveness and appearing put together for those with DE. Moreover, the two primary constraining measures (i.e., rank ordering, forced choice) revealed systematic, DE-linked undervaluation of intelligence, academic performance, and personality. Finally, body size per se was not associated with overvaluation of shape or weight, consistent with prior work. However, those with higher BMI showed stronger associations between DE and the importance of body-relevant domains.

This earlier work relied on a sample of undergraduate women (Woodward et al., 2014), which limited variability in both BMI and difficulties with binge eating. Thus, the present study seeks to examine the extent to which BMI and the emotional, cognitive, and behavioral experiences associated with binge eating (i.e., binge eating concerns; BEC) are related to systematic self-reported over- and undervaluation of shape, weight, and other self-evaluation domains within a more representative sample of adult women from the community who show much greater variability in both BMI and BEC. Furthermore, we evaluate whether the method used to measure influences on self-evaluation can provide different windows onto which attributes are over- and underprioritized.

To this end, we administer three questionnaire-based measures of influences on self-evaluation, two of which constrain participants' choices so that not all potential influences can be prioritized. Such constraining measures enhance ecological validity, as in reality it is very difficult to pursue every valued area in one's life with patent fervor (Crocker, 2002). Interview-based assessments of overvaluation, such as the EDE, invite participants to consider self-evaluation attributes other than shape and weight (Fairburn et al., 2008), but do not provide estimates of the importance of other attributes. Self-report assessments are widely used to assess self-evaluation in the context of eating concerns, as they do not require an assessor for administration. Thus, in the present study, we use questionnaire-based measures to examine the utility of acquiring estimates of self-evaluation attribute importance, both normatively and idiosyncratically. Specifically, we examine BMI and BEC as correlates of influences on self-evaluation among a community sample of adult women. We expect that BEC will be associated with greater emphasis on shape and weight in self-evaluations (e.g., Hrabosky et al., 2007). We do not anticipate a main effect of BMI on self-evaluation influences as BMI is generally unrelated to shape- and weight-based self-esteem (Geller et al., 1997; Goldschmidt et al., 2011; Hrabosky et al., 2007; Woodward et al., 2014). However, we examine the interaction between BMI and BEC to investigate whether weight may be linked to self-evaluation in the context of BEC. An additional primary question of interest is the extent to which body-irrelevant intra- and interpersonal self-evaluation influences will be undervalued systematically as a result of the overvaluation of other self-evaluation influences, especially shape and weight.

METHOD

PARTICIPANTS

Participants were 115 women between the ages of 18 and 40 recruited for pay from the Iowa City community. Overweight and obese women were oversampled, resulting in a full range of BMI (18.7 to 51.9) within this sample. The final sample had a mean age of 25.20 ($SD = 6.11$) years and the majority identified as Caucasian (76.4%).

MEASURES

Measures of Self-Evaluation. Participants provided Likert scale ratings, rank orderings, and pairwise forced-choices of attributes relevant to self-evaluation. These methods are described in greater detail below. We assessed twelve potential influences on self-evaluations: Friendship, School Performance, Personality, Weight, Shape, Romantic Relationships, Family Relationships, Facial Attractiveness, Intelligence, Being a Good Person, Appearing Put Together, and Religion/Spirituality. All were included in our prior work employing these methods (Woodward et al., 2014) with the exception of Religion/Spirituality, which was added to the current measures in response to feedback from prior undergraduate participants.

Likert Scale Ratings. Participants explicitly rated the importance of each of the 12 self-evaluation attributes to how they feel about themselves in a random order, on a series of Likert rating scales (1 = not at all important, 4 = moderately important, 7 = extremely important). This ordinal-scale method placed no constraints upon participants' ratings of the self-evaluation attributes, permitting participants to indicate that all possible attributes were very influential.

Rank Ordering. Participants ranked from most important (1) to least important (12) the 12 self-evaluation influences which were presented in a random order. This ordinal-scale method constrained participants' self-evaluation specifications. For instance, choosing the most important attribute necessarily precludes the selection of another attribute as most important.

Forced-Choice. Participants were presented with all 66 pairs of the 12 attributes in a random order and were instructed to choose the item in each pair that more powerfully influenced how they felt

about themselves. The variable of interest was the number of times each attribute was chosen, resulting in a ratio-scale measure ranging from 0 to 11, as each attribute was presented once with each of the other 11 attributes.

Individual Differences Measures. Participants completed the Binge Eating Scale (BES), a widely used 17-item questionnaire assessing emotional, behavioral, and cognitive experiences associated with binge eating (Gormally, Black, Daston, & Rardin, 1982). The BES demonstrated excellent internal consistency within this sample ($\alpha = .92$). We measured participants' height and weight, from which we computed BMI.

PROCEDURE

Participants provided informed consent and completed the self-evaluation measures followed by the individual differences questionnaires. The forced-choice task always preceded the Likert scales which in turn preceded the rank-ordering task.

ANALYTIC APPROACH

We conducted separate repeated-measures multivariate models investigating prediction of the 12 self-evaluation attributes on the 3 tasks (i.e., Likert scale, rank ordering, and forced-choice). Predictors in each model included BMI, BEC, and their interaction. BMI was log-transformed and all predictors were centered. Significant omnibus multivariate effects were followed up with univariate analyses. All significant findings are reported below.

RESULTS

SAMPLE CHARACTERISTICS

Individual Differences Descriptives. On average, participants' BMI was 28.69 ($SD = 7.62$, range: 18.7 to 51.9). Though 40% of the sample was of normal weight, the majority was overweight (21.7%) or obese (38.3%), and 10.4% met or exceeded a BMI of 40.0. Average BES score was 14.32 ($SD = 9.56$); 32.2% of the sample met or ex-

TABLE 1. Descriptive Statistics for the Three Self-Evaluation Measures

Attribute	Likert Scales	Rank Ordering	Forced Choice
	Average Likert Scale Rating (SD)	Average Inverse Rank Ordering ¹ (SD)	Average Number of Times Selected (SD)
Weight	4.59 (1.68)	4.76 (3.45)	3.53 (3.31)
Shape	4.97 (1.46)	5.42 (3.12)	4.05 (3.06)
Facial Attractiveness	4.32 (1.62)	4.36 (2.63)	2.87 (2.55)
Appearing Put Together	4.56 (1.27)	4.65 (2.48)	3.74 (2.33)
Friendships	5.06 (1.32)	7.06 (2.71)	5.67 (2.76)
Family Relationships	4.99 (1.51)	8.01 (3.02)	6.19 (3.31)
Romantic Relationships	4.99 (1.56)	7.13 (2.84)	5.38 (3.15)
Good Person	5.38 (1.39)	8.40 (3.26)	6.60 (3.26)
Personality	5.50 (1.37)	8.21 (2.79)	6.69 (3.02)
Intelligence	5.58 (1.17)	7.88 (2.91)	5.95 (3.07)
School or Work Performance	5.71 (1.26)	8.13 (3.05)	6.81 (3.26)
Religion/Spirituality	3.28 (2.20)	4.00 (4.01)	2.85 (3.63)

Note. *SD* = standard deviation. 1 Rank-orderings were recoded such that the most important attribute received the highest value (i.e., 12) to facilitate comparison across measurement methods.

ceeded the cutoff score of 17 for greater than mild BEC (Greeno, Marcus, & Wing, 1995). The bivariate correlation between BEC and BMI ($r = .27$) was not of sufficient magnitude to raise concerns about multicollinearity.

Self-Evaluation Task Descriptives. Table 1 provides means and standard deviations for the Likert scale ratings, rank-orderings, and forced-choice task. Participants' average Likert scale ratings exceeded the scale midpoint (i.e., 3.5) for every self-evaluation attribute, excepting perhaps Religion/Spirituality (see Table 1). However, not all attributes were normatively important on the rank ordering and forced-choice tasks. On average, participants emphasized those attributes pertaining to interpersonal characteristics (e.g., Friendships, Family Relationships, and Romantic Relationships) and intrapersonal characteristics (i.e., Good Person, Personality, Intelligence, School or Work Performance) and deemphasized those attributes related to weight, shape, and outward appearance when their choice of self-evaluation attributes was constrained. However, importantly, systematic differences in this pattern emerged as a function of BEC.

TABLE 2. Reliable Univariate Findings for BES across the Three Self-Evaluation Measures

Attribute	Likert Scale			Inverted Rank Order ¹			Forced Choice		
	<i>t</i>	<i>p</i>	η^2	<i>t</i>	<i>p</i>	η^2	<i>t</i>	<i>p</i>	η^2
Weight	6.031	<.001	.263	5.857	<.001	.252	6.223	<.001	.275
Shape	6.326	<.001	.282	6.491	<.001	.292	6.103	<.001	.268
Facial Attractiveness	2.720	.008	.068	2.791	.006	.071	5.383	<.001	.221
Put together	2.153	.034	.043				2.240	.027	.047
Friendships									
Family Relationships							-3.030	.003	.083
Romantic Relationships									
Good Person	-3.281	.001	.095	-4.043	<.001	.138	-4.155	<.001	.145
Personality				-2.870	.005	.075	-3.123	.002	.092
Intelligence				-2.681	.009	.066	-2.399	.018	.053
School or Work Performance									
Religion/Spirituality	-3.290	.001	.096	-2.670	.009	.065	-2.548	.012	.060

Note. BES = Binge Eating Scale; Blank cells indicate that no significant effect emerged.
¹Rank-orderings were recoded such that the most important attribute received the highest value (i.e., 12) to facilitate comparison across measurement methods.

LIKERT SCALE RATINGS RESULTS

Attribute accounted for fifty-five percent of the variability in Likert scale ratings of the 12 self-evaluation influences, $F(11,92) = 10.29, p < .001, \eta_p^2 = .55$, indicating marked systematic variability in the importance of the 12 influences to participants. BEC emerged as a significant multivariate predictor of Likert ratings of the twelve self-evaluation attributes, $F(11,92) = 7.439, p < .001, \eta_p^2 = .47$. Follow-up univariate analyses (see Table 2) established that BEC strongly positively predicted Weight, $t(102) = 6.03, p < .001, \eta_p^2 = .26$, and Shape, $t(102) = 6.33, p < .001, \eta_p^2 = .28$; as expected, participants' reliance on both weight and shape when making self-evaluations increased with greater BEC. Univariate analyses also demonstrated that BEC weakly to moderately positively predicted Facial Attractiveness, $t(102) = 2.72, p = .008, \eta_p^2 = .07$, and Appearing Put Together, $t(102) = 2.15, p = .034, \eta_p^2 = .04$. Thus, the importance of facial attractiveness and appearing put together to participants' self-evaluations also increased with enhanced endorsement of BEC. Univariate analyses further showed that BEC moderately to strongly negatively pre-

dicted Being a Good Person, $t(102) = -3.281, p = .001, \eta_p^2 = .10$, and Religion/Spirituality, $t(102) = -3.290, p = .001, \eta_p^2 = .10$; moral character and religious faith influenced participants' self-evaluations to a lesser degree in the presence of greater BEC. This pattern of findings contrasts with the normative pattern for Likert scale ratings, in which nearly all self-evaluation influences were rated as at least moderately important. The multivariate effects of BMI and the BMI by BEC interaction were not reliable ($p = .967$ and $.563$, respectively).

RANK ORDERING RESULTS

Attribute accounted for sixty-seven percent of the variability in rank orderings of the 12 self-evaluation influences $F(11,92) = 17.05, p < .001, \eta_p^2 = .67$. Rank-orderings were recoded, so that the highest value (i.e., 12) corresponded with the most important attribute to facilitate comparison across measurement methods. BEC emerged as a significant multivariate predictor of rankings of the twelve self-evaluation attributes, $F(11,92) = 5.630, p < .001, \eta_p^2 = .40$. Follow-up univariate analyses (see Table 2) established that BEC strongly predicted higher rankings for Weight, $t(102) = 5.86, p < .001, \eta_p^2 = .25$, and Shape, $t(102) = 6.49, p < .001, \eta_p^2 = .29$, and weakly to moderately positively predicted higher rankings for Facial Attractiveness, $t(102) = 2.79, p = .006, \eta_p^2 = .07$. Univariate analyses also demonstrated that BEC moderately predicted lower rankings for Being a Good Person, $t(102) = -4.04, p < .001, \eta_p^2 = .14$, and weakly to moderately predicted lower rankings for Intelligence, $t(102) = -2.68, p = .009, \eta_p^2 = .07$, Personality, $t(102) = -2.87, p = .005, \eta_p^2 = .08$, and Religion/Spirituality, $t(102) = -2.67, p = .009, \eta_p^2 = .07$. Thus, the self-evaluations of participants with greater BEC relied more on weight, shape, and facial attractiveness and less on intellect, character, personality, and religion. This pattern of results contrasts with the normative pattern, in which interpersonal and intrapersonal characteristics are prioritized over attributes related to weight, shape, and outward appearance. The multivariate effects of BMI and the BMI by BEC interaction were not reliable ($p = .845$ and $.410$, respectively).

FORCED-CHOICE TASK RESULTS

Attribute predicted almost three-quarters of the variability in pairwise forced choices among the 12 self-evaluation influences,

$F(11,92) = 24.30, p < .001, \eta_p^2 = .74$. BEC emerged as a significant multivariate predictor of pairwise forced-choices among the twelve self-evaluation attributes, $F(11,92) = 6.225, p < .001, \eta_p^2 = .43$. Follow-up univariate analyses (see Table 2) established that BEC strongly positively predicted Weight, $t(102) = 6.22, p < .001, \eta_p^2 = .28$, Shape, $t(102) = 6.10, p < .001, \eta_p^2 = .27$, and Facial Attractiveness, $t(102) = 5.38, p < .001, \eta_p^2 = .22$, and weakly to moderately positively predicted Appearing Put Together, $t(102) = 2.24, p = .027, \eta_p^2 = .05$. Univariate analyses also demonstrated that BEC moderately to strongly negatively predicted Being a Good Person, $t(102) = -4.16, p < .001, \eta_p^2 = .15$, moderately negatively predicted Family, $t(102) = -3.03, p = .003, \eta_p^2 = .08$, and Personality, $t(102) = -3.12, p = .002, \eta_p^2 = .09$, and weakly to moderately negatively predicted Intelligence, $t(102) = -2.40, p = .018, \eta_p^2 = .05$, and Religion/Spirituality, $t(102) = -2.55, p = .012, \eta_p^2 = .06$. As BEC increased, participants' self-evaluations relied on weight, shape, facial attractiveness, and appearing put together to a greater degree. However, increasing BEC were associated with lesser reliance on being a good person, family relationships, personality, intellect, and religion when making self-evaluations. The multivariate effects of BMI and the BMI by BEC interaction were not reliable ($p = .132$ and $.251$, respectively).

DISCUSSION

The present study sought to investigate eating- and weight-related correlates of systematic under- and overvaluation of self-evaluation influences among mostly overweight community women, as well as the extent to which measurement strategy affects conclusions drawn about self-evaluation influences. To this end, we examined BMI, BEC, and their interaction as correlates of influences on self-evaluation, which were assessed using three self-report measures, two of which constrained participants' choices. We will describe and interpret first nomothetic, then idiographic findings, followed by a comparison of these findings across samples; throughout, we will remark upon measurement strategy and suggested future directions.

NORMATIVE FINDINGS

The normative profiles reflecting which self-evaluation influences are over- and underemphasized differed across the measures. On average, participants' Likert scale ratings indicated that every self-evaluation influence was at least somewhat important (excepting perhaps Religion/Spirituality), while normative responses to the rank-ordering and forced-choice tasks emphasized intrapersonal and interpersonal characteristics. Furthermore, although religion was not endorsed nomothetically as very important, it was clearly central to the self-evaluations of a subset of participants, which highlights the utility of its inclusion in the current measures. Notably, appearance-related attributes such as weight, shape, and facial attractiveness were deemphasized when participants' choices of self-evaluation influences were constrained. Thus, what we conclude about normative influences on women's self-evaluations depends upon the constraint of the measures we use. Presumably, constraining measures improve the ecological validity of our assessment of self-evaluation, relative to Likert scale ratings, as their constraints parallel real-world limitations on time management in pursuit of positive self-evaluation (Crocker, 2002). Moreover, attribute accounted for more systematic variability in responses to the two constraining measures ($\eta^2 = .74$ and $.67$ for forced-choice and rank-orderings, respectively) than to the Likert-scale ratings ($\eta^2 = .55$), suggesting that constraining participants' choices of self-evaluation also may enhance the precision of our estimates of self-evaluation influences. The differing nomothetic patterns across methods support the continued use of constraining measures to enhance our understanding of the importance of women's self-evaluation attributes.

IDIOGRAPHIC FINDINGS

Binge Eating Concerns (BEC). BEC positively predicted the influence of body shape, body weight, and facial attractiveness on self-evaluations, regardless of measurement strategy. Overvaluation of shape and weight measured primarily by clinical interviews is considered to be central in the conceptualization of BED (e.g., Hrabosky et al., 2007); the self-reported importance of weight and shape to self-evaluation among women with BEC is entirely consistent with

this literature. However, the elevated importance of facial attractiveness and appearing put together (which emerged on the Likert scale ratings and forced-choice task) among women with BEC extends theoretical conceptualizations of overvaluation of shape and weight in DE. On the forced-choice task, the magnitude of the facial attractiveness effect was similar to those for body weight and shape, whereas the magnitude of the effect of appearing put together was smaller relative to the other appearance-related indicators. Women with BEC may overemphasize outward appearance and not body shape and weight per se, in their self-evaluations. Though much of the literature highlights the importance of overvaluation of shape and weight, specifically, the present findings are consistent with other work identifying broader appearance concerns in DE and binge eating (Jackson, Grilo, & Masheb, 2000; Lloyd-Richardson, King, Forsyth, & Clark, 2000). This study extends existing interview-based literature in the domain of BEC which has asked participants to consider the importance of shape and weight relative to other self-evaluation influences without acquiring estimates of these other influences' importance. The present study further examines self-evaluation influences by contrasting constrained measures with Likert scale ratings within community women. Additionally, much of the prior literature has examined overvaluation of shape and weight among those who meet diagnostic criteria for BED; the present findings suggest that BEC, even if not clinically significant, are nonnegligibly associated with the bases for women's self-evaluations. Future work should replicate and extend the current findings by continuing to examine multiple potential influences on self-reported self-evaluation using constraining methods. Continued use of constraining measures and multiple potential influences on self-evaluation will bear on the specificity of the influence of body shape and weight (versus outward appearance, more generally) on the self-evaluations of women with BEC.

Our findings further extend the literature pertaining to overvaluation of shape and weight in the context of BEC by demonstrating that self-evaluation influences can be systematically undervalued as well as overvalued. By any measure, BEC are linked to undervaluation of character and religion or spirituality. Constraining measures additionally reveal that BEC are associated specifically with undervaluation of personality and intelligence. Prioritizing outward appearance in one's self-evaluation appears to come at a cost for these women, who are less likely to consider intellectual

traits and intrapersonal factors when determining their own worth. Moreover, responses on the forced choice task indicate that BEC are associated with undervaluation of relationships with family members. Taken together, BEC are linked to overemphasis of outward appearance and underemphasis of character, intelligence, personality, or relationships. These findings may also suggest the utility of providing a list of potential self-evaluation domains and of retaining estimates of value placed on self-evaluation domains other than shape, weight, and control over eating in the EDE interview.

This work may prove to be clinically significant. For example, women who over- or undervalue important areas of their lives as a result of their BEC might particularly benefit from psychotherapy that emphasizes relationships (e.g., interpersonal psychotherapy; IPT). Indeed, perhaps the established effectiveness of IPT for the treatment of BED is operating in part through this mechanism (Wilson, Wilfley, Agras, & Bryson, 2010). Moreover, overvaluation of shape and weight is associated with greater benefit from cognitive behavioral treatment for BED (Grilo, Masheb et al., 2012), suggesting that more nuanced characterization of influences on self-evaluation may have implications for treatment planning and prognosis. Constraining measurement strategies force respondents to articulate what is more versus less important to them. From a motivational interviewing perspective (Miller & Rollnick, 2013), these approaches may make the costs associated with shape and weight preoccupation more salient and may increase ambivalence about BEC. Of course, the extent to which constraining assessments might pave the way for clinical interventions remains an empirical question. Future research may benefit from exploring self-evaluation moderators of treatment efficacy and the clinical utility of constraining assessments in the context of BEC treatment.

Body Size. As expected, no main effect of BMI on the importance of shape or weight to self-evaluation emerged, suggesting that the degree to which women's self-evaluation relies on shape and weight is not affected by body size. This is consistent with prior literature indicating that BMI is not reliably associated with overvaluation of shape and weight among individuals who struggle with various forms of overeating (e.g., Geller et al., 1997; Grilo, White et al., 2012; Hrabosky et al., 2007; Woodward et al., 2014). Binge eating and not body size, per se, is associated with overvaluation of shape and weight, given the nonsignificant BMI and BMI by BEC findings,

and the oversampling of overweight and obese individuals in the current sample.

COMPARISON ACROSS SAMPLES

The current methods of evaluating influences on self-evaluation (i.e., Likert, rank-ordering, and forced-choice tasks) have now been used in both an undergraduate and a community sample of women. The community sample was on average older and heavier than the undergraduate sample; we examined individual differences in self-evaluation influences as a function of DE (measured by the Eating Disorder Examination Questionnaire) among the undergraduates and as a function of BEC among the community women. However, the general pattern of findings is consistent across samples: overvaluation of shape and weight tends to occur alongside systematic undervaluation of significant inter- and intrapersonal characteristics in the context of problematic eating. Among community women with BEC, outward appearance seems to be overvalued, whereas body shape and weight specifically tended to be overvalued among undergraduate women with DE. In addition, we find consistently larger effect sizes for the community women. Replication of these results within women prospectively would suggest that, among those with DE and/or BEC, overvaluation (and its attendant costs in terms of systematic undervaluation) may be present in college age women but come to be more influential to self-evaluations with time. Perhaps self-evaluations become more contingent over the lifespan, or perhaps appearance-related concerns become more general and less closely tied to body shape and weight with advancing age. Although the nature of body dissatisfaction has been examined across the life span (Tiggemann & McCourt, 2013), to our knowledge, no work has examined longitudinal changes in the relative contributions of different self-evaluation influences in the context of DE or BEC; work examining how influences shape self-evaluation over time would address this outstanding empirical question. Finally, though the utility of the constraining measures has now been demonstrated among undergraduate and community women between the ages of 18 and 40, additional work with younger and older samples could examine their utility among women of all ages.

CONCLUSIONS

Overall, the current findings suggest that overvaluation of outward appearance, including body shape and weight, among women with BEC comes at a cost; these women are less likely to evaluate themselves on the basis of intelligence or intrapersonal traits. In general, the difficult choices participants must make when completing constraining measures may reflect the choices they must make in the real-world about how to prioritize values and allot time in pursuit of more positive self-evaluation (Crocker, 2002). Therefore, constraining measures may provide more ecologically valid assessments of self-evaluation influences than Likert scale ratings. Future work should continue to examine both over- and underemphasis of body-relevant and body-irrelevant influences on self-evaluation using more ecologically valid constraining measures, such as rank-ordering or pairwise forced-choices, as these measures have the potential to augment case conceptualization and treatment planning.

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