A comparison of eating disorder psychopathology, appearance satisfaction, and self-esteem in overweight and obese women with and without binge eating

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ARTICLE INFO

ABSTRACT

This study investigated the differences in eating disorder psychopathology, appearance satisfaction, and self-esteem between 194 overweight/obese college women with and without binge eating. Participants were categorized as binge eating (BE; $n = 56$) or non-binge eating (NBE; $n = 138$) based on reports of binge eating at least once per week on average for the past 28 days and no episodes of vomiting or laxative use in the past 28 days. The BE group had significantly greater levels of eating, weight, and shape concerns and lower levels of appearance satisfaction and self-esteem than the NBE group. For the BE group, binge eating frequency was negatively correlated with dietary restraint. Results are generally consistent with studies utilizing clinical and community samples. The findings extend such research by examining binge eating in a sample of overweight and obese college women and indicating that overall appearance satisfaction is lower among women with binge eating. Study findings also highlight potential issues to address in obesity and binge eating intervention efforts for college populations. Future research is needed to replicate these findings in additional samples of college women and men.

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1. Introduction

Binge eating disorder (BED) has a lifetime prevalence estimate of 3.5% in adult women (Hudson, Hiripi, Pope, & Kessler, 2007) and may occur at higher rates among college students. In college women, the prevalence of severe binge eating symptoms and BED has been estimated at 44% and 8.4%, respectively (Napolitano & Himes, 2011). College students may have an elevated risk for binge eating onset given the average age of binge eating and BED onset occurs between 18 and 25 (Stice, Killen, Hayward, & Taylor, 1998; Stice, Marti, & Rohde, 2013). Longitudinal research has shown that college students are also at an increased risk for weight gain, especially during early college years (Lloyd-Richardson, Bailey, Fava, & Wing, 2009; Racette, Deusinger, Strube, Highstein, & Deusinger, 2005), which may lead to overweight and obesity.

Binge eating is strongly associated with overweight and obesity (Wilfley, Wilson, & Agras, 2003). In clinical samples, 23%–46% of obese individuals report binge eating (Bulik, Sullivan, & Kendler, 2002). There is also evidence indicating that higher body mass index (BMI) is linked to greater binge eating severity in college women with overweight and obese women at an increased risk for BED (Napolitano & Himes, 2011). Further, binge eating is associated with elevated eating disorder psychopathology (Wonderlich, Gordon, Mitchell, Crosby, & Engel, 2009), increased body dissatisfaction (Ahrberg, Trojca, Nasrawi, & Vocks, 2011) and decreased self-esteem (Pasold, McCracken, & Ward-Begnoche, 2013). Although obesity is itself associated with negative outcomes (Haslam & James, 2005), clinical studies indicate that among obese individuals, those with BED experience greater eating disorder psychopathology, psychiatric and medical comorbidity, impairment in social and occupational functioning, and reduced quality of life than those without BED (Bulik et al., 2002; Wilfley et al., 2003). Thus, binge eating seems to compound physical and psychosocial problems among obese individuals.

While several studies have examined binge eating (Bulik et al., 2002; Wonderlich et al., 2009), relatively few studies have been conducted with college students. This is particularly true for overweight and obese college students, a subgroup of the college population in which binge eating is likely to occur at higher rates. Extant studies utilizing college samples have investigated binge eating in first-year college students (e.g., Barker & Galambos, 2007) and gender and ethnic groups (e.g., Mitchell & Mazzeo, 2004; Napolitano & Himes, 2011), with little attention to weight groups. Research examining binge eating and its correlates among overweight and obese college students is warranted given that these individuals may be at greater risk for BED. Such research can inform both obesity and binge eating intervention efforts by highlighting areas to address during a critical period when college students are susceptible to weight gain.

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The current study investigated eating disorder psychopathology, appearance satisfaction, and self-esteem in overweight/obese college women with and without binge eating. Based on prior research, we hypothesized that women with binge eating would report greater eating disorder psychopathology and less appearance satisfaction and self-esteem than women without binge eating. Further, consistent with studies examining correlates of binge eating, it was expected that greater binge eating as indexed by binge eating frequency would be associated with greater eating disorder psychopathology and lower appearance satisfaction and self-esteem in women with binge eating.

2. Materials and methods

2.1. Participants

Participants were 194 overweight ($n = 114$) or obese ($n = 80$) undergraduate women from a sample of 1151 undergraduate women who participated in a study examining appearance attitudes. The following inclusion criteria were used for the current study: a) ages 18 to 30, b) BMI of 25 or higher, c) either at least one episode of binge eating per week on average in the past 28 days or no such episodes, and d) no episodes of vomiting or laxative use in the past 28 days. Participants' mean age was 20.39 (SD = 2.51). Fifty percent of the sample was non-Hispanic White, 20.6% African American, 13.9% Hispanic, 2.1% Asian American, and 11.3% other. BMI ranged from 25.06 to 46.60 ($M = 29.92$, SD = 4.37).

2.2. Measures

2.2.1. Demographics

Participants reported age, height, weight, and ethnicity. Based on research indicating good reliability between self-reported and measured height and weight in college samples (Quick et al., 2014), self-reported height and weight were used to calculate BMI.

2.2.2. EDE-Q

The Eating Disorder Examination — Questionnaire (EDE-Q; Fairburn & Beglin, 1994) is the self-report version of the Eating Disorder Examination (EDE; Fairburn & Cooper, 1993) that focuses on the main features of eating disorders occurring in the past 28 days and contains four subscales: Dietary Restraint, Eating Concern, Weight Concern, and Shape Concern. This questionnaire was used to assess frequency of objective binge episodes (i.e., consuming a large amount of food accompanied by loss of control) and eating disorder psychopathology. The EDE-Q has received empirical support for the assessment of binge eating (Mond, Hay, Rogers, Owen, & Beumont, 2004) and has demonstrated adequate internal consistency and test–retest reliability (Luce &

Crowther, 1999). In the current study, the EDE-Q subscales had good internal consistencies (Cronbach's alphas = .82–.91).

2.2.3. MBSRQ-AE

The 7-item Multidimensional Body–Self Relations Questionnaire — Appearance Evaluation subscale (MBSRQ-AE; Brown, Cash, & Mikulka, 1990) assesses the respondent's satisfaction with overall physical appearance using a 5-point Likert scale ranging from definitely disagree to definitely agree. All subscale items were used in scoring. The MBSRQ-AE has shown adequate internal consistency (Brown et al., 1990). High internal consistency (Cronbach's alpha = .92) was found for the MBSRQ-AE in the current study.

2.2.4. RSES

The 10-item Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a measure of global self-esteem. It uses a 4-point Likert-type scale ranging from strongly agree to strongly disagree. All items were used in scoring. The RSES has shown adequate internal consistency and high test–retest reliability (Robins, Hendin, & Trzesniewski, 2001). In the current study, the RSES demonstrated high internal consistency (Cronbach's alpha = .91).

2.3. Procedure

Participants were recruited online from the undergraduate psychology research pool at a large southeastern university. Students interested in completing the study provided electronic informed consent and responded to questionnaires online. This method of data collection is widely-used and has been validated with numerous psychological measures (Vallejo, Jordan, Diza, Comeche, & Ortega, 2007). Participants received extra course credit as compensation. This study was approved by the university's institutional review board.

2.4. Data analysis

Two groups were created based on responses to the EDE-Q item assessing frequency of binge eating. Consistent with the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5; APA, 2013) frequency criteria for BED, participants who reported at least one objective binge episode per week on average and no episodes of vomiting or laxative use for the past 28 days were categorized into the binge eating (BE) group ($n = 56$). Participants who indicated no episodes of binge eating, vomiting, or laxative use in the past 28 days were categorized into the non-binge eating (NBE) group ($n = 138$). This method of identifying clinical versus control groups has been utilized in prior research on binge eating (Masheb, Grilo, & White, 2011).

Group differences in BMI, eating disorder psychopathology, appearance satisfaction, and self-esteem were examined using independent samples t-tests with Bonferroni adjustments. Each comparison was

Table 1
Comparisons of BE and NBE groups on body mass indices, eating disorder features, appearance satisfaction, and self-esteem.

	BE (n = 56)		NBE (n = 138)		t-Test		Effect size	
	M	SD	M	SD	df	t	p	Cohen's d
Body mass index	30.79	5.02	29.56	4.04	192	1.79	.075	0.270
Overweight (%)	46.4		63.8					
Obese (%)	53.6		36.2					
EDE-Q binge episodes/month[*]	9.07	5.93	0.00	0.00	192	19.28	<.001	2.163
EDE-Q Restraint	3.44	1.69	2.83	1.62	190	2.34	.020	0.368
EDE-Q Eating Concern[*]	3.31	1.53	1.71	.95	220	8.79	<.001	1.256
EDE-Q Shape Concern[*]	5.23	1.33	3.92	1.72	217	5.09	<.001	0.852
EDE-Q Weight Concern[*]	4.91	1.33	3.80	1.59	217	4.56	<.001	0.757
MBSRQ-AE[*]	2.52	.92	2.94	.95	218	2.77	.006	0.449
RSES[*]	2.72	.51	3.10	.59	218	4.12	<.001	0.689

Note. BE = binge eating group; NBE = non-binge eating group; EDE-Q = Eating Disorder Examination — Questionnaire. MBSRQ-AE = Multidimensional Body–Self Relations Questionnaire — Appearance Evaluation subscale; RSES = Rosenberg Self-Esteem Scale.
[*] Significant difference between BE and NBE based on Bonferroni correction alpha level of 0.007.