

# Subjective or Objective Binge: Is the Distinction Valid?

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**Abstract: Objective:** The aim of this study was to examine the validity of the distinction between objective and subjective binge episodes. **Method:** Data were analyzed from 101 women who received 12 weeks of cognitive-behavioral therapy (CBT) for binge eating in a previous treatment study. Binges recorded by participants on daily food records were rated as either subjective or objective according to the Eating Disorder Examination rating guidelines. Unpaired *t* tests were performed to determine the relationship between type of binge, psychopathology, and other descriptive measures, including response to treatment. **Results:** These analyses revealed no significant differences between types of binge episodes. Of note is the observation that objective binge episodes appeared to decrease more rapidly than subjective episodes during treatment. **Discussion:** Future research should continue to investigate whether "large amount of food" is an appropriate criterion for the diagnosis of binge eating. © 1997 by John Wiley & Sons, Inc. *Int J Eat Disord* 22: 291–298, 1997.

**Key words:** cognitive-behavioral therapy; binge eating; Eating Disorder Examination guidelines

## INTRODUCTION

According to the 4th ed. of the *Diagnostic and statistical manual of mental disorders* (DSM-IV; American Psychiatric Association [APA], 1994), for an eating episode to be classified as a binge it must be characterized by both of the following: (1) consumption of a large amount of food and (2) a loss of control over eating. The term "large amount of food" is defined by the DSM-IV to be "definitely larger than most people would eat during a similar period of time in similar circumstances." However, researchers and practitioners in the field of eating disorders have acknowledged the existence of binge episodes that do not meet the "large amount of food" criteria but are experienced in every other way as binges (Rosen, Leitenberg, Fisher, & Khazam, 1986; Rossiter & Agras, 1990).

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Fairburn (1986) posited that it was the individual's perceived loss of control and perceived excessive consumption rather than actual amount of food consumed that should be considered when defining the eating episode. Hence, in the overeating section of Fairburn's Eating Disorder Examination, questions are asked about "objective" and "subjective" binge episodes, which both involve loss of control but differ solely on whether or not an objectively large amount of food was consumed (Cooper & Fairburn, 1987).

Researchers continue to question the diagnostic significance of the amount of food consumed in a binge. Rosen et al. (1986) found that 65% of bulimic subjects' binges consisted of amounts of food equivalent to amounts eaten in nonbinge eating episodes. Another of these researchers' findings was that 30% of the subjects reported binges that consisted of fewer than 600 kcal. Their data led them to conclude that binge eating episodes could be distinguished from nonbinge eating episodes by the types of foods and the feelings of loss of control over eating rather than by the amount of food consumed. Rossiter and Agras (1990) produced similar findings in a study of bulimic subjects. They found that 28% of all binges consisted of fewer than 500 kcal. Additionally, Rossiter and Agras noted much variability in the amount of kilocalories consumed in binges, both within and between subjects. Another study, conducted with nonpurging binge eaters, replicated these findings (Rossiter, Agras, Telch, & Bruce, 1992). Given the above findings, these researchers have suggested that the size of binges be de-emphasized as a diagnostic criterion. Furthermore, Garner, Shafer, and Rosen (1992) have recommended that the size distinction in binges be abandoned.

The studies mentioned above demonstrate the variability in the amount of food consumed in binges and suggest that large and small binges are not diagnostically different. Smith, Marcus, and Kaye (1992), in an investigation of cognitive-behavioral therapy (CBT) for obese binge eaters, noted that subjective binges were reduced but not eliminated by CBT, whereas objective binges were eliminated. This suggests that the experience of eating out of control may take longer to treat than eating large amounts of food. We felt that these intriguing findings merited further investigation. Additionally, no study of which we are aware has investigated how rates of subjective and objective binge eating episodes are related to measures of psychopathology. Thus, the aim of the present investigation was to address the issue of whether subjective and objective binges change differently over time in treatment, and second, to determine whether the two types of binges correlate differently with measures of psychopathology.

## METHOD

### Subjects

Food diaries from 101 women who received 12 weeks of CBT for binge eating disorder (BED) in a previous multiphasic study were used (Telch, Agras, Rossiter, Wilfley, & Kenardy, 1990; Wilfley et al., 1993; Agras et al., 1995; Eldredge et al., in press). For the treatment study, all subjects had met the DSM-IV diagnostic criteria for BED. All subjects were female and their mean body mass index (BMI) was 37.9 ( $SD = 7.1$ ). Ages ranged from 21 to 65 years ( $M = 45.7$ ,  $SD = 11.0$ ). Ninety four percent (94%) of subjects were white (non-Hispanic), 3% were Hispanic, 2% were African American, and 1% were Native American. Mean duration of binge eating at the baseline of the study was 26.2 ( $SD = 12.7$ ) years, with an average age of onset of binge eating of 19.5 ( $SD = 11.4$ ) years.

Seven-day food diaries from Weeks 1, 2, 4 and 12 in the treatment study were reviewed in the present study. Each eating episode labeled as a binge by the subject on the food



diary was coded as either subjective or objective according to the Eating Disorder Examination (EDE; Cooper & Fairburn, 1987) rating scheme. Binges were coded by two independent raters trained on the EDE interview and interrater reliability was calculated to be 95.7%.

One obstacle we encountered was that the food diaries given to participants prior to treatment were not mandatory for entrance into the study. Rather, a 14-day binge record was the main piece of data required of subjects at pretreatment. Therefore, more than half of the subjects' food diaries from this data point were not collected. These records, which provided detailed accounts of food eaten during each eating episode, would have been instrumental in assessing rates of subjective and objective binges prior to treatment. Instead, food diaries from the week following Session 1, which most subjects had turned in, were coded. Rates of the two types of binges may have been affected by one session of CBT. Yet, because the therapy was provided in group format the first session is devoted to introductions, building rapport, and providing participants with an overview of the study. CBT techniques were not introduced until Session 2. Therefore, the degree to which the participants' rates of binge eating were affected was most likely minimal.

### Measures

All subjects completed assessments at multiple intervals during the treatment intervention study. For the purposes of the study reported here, only baseline measures were used. To assess subjects' psychological distress and eating disorder symptomatology, subjects completed the following assessments at baseline.

#### BES

This is a 16-item self-report questionnaire (Gormally, Black, Daston, & Rardin, 1982) designed to assess the severity of binge eating problems in the obese. The BES has become a fairly standard measure of binge eating symptomatology. The mean BES score for this sample was 29.54 with a median score of 30. Gormally et al. (1982) reported a mean BES score of 28.9 for severe binge eaters in his normative sample.

#### BDI

The Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) was included as a standard measure for assessing the severity of depressive symptomatology.

#### Symptom Checklist-90

The SCL-90 (Derogatis, Lipman, & Covi, 1973) is a standard instrument used to assess psychiatric symptomatology in outpatients. The SCL-90 consists of 90 items reflecting psychiatric symptomatology which subjects rate on a 5-point scale of distress (0 to 4) ranging from not at all to extremely. The SCL-90 provides scores on nine subscales as well as an overall index of distress (General Symptomatic Index [GSI]), and has high internal consistency and high test-retest reliability. The GSI was the measure used in this study.

#### Inventory of Interpersonal Problems

The IIP (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988) is a self-report inventory that describes interpersonal problems that people experience and the level of distress arising from interpersonal sources. The IIP contains 127 items and asks the subject to consider each interpersonal problem described and to rate how distressing that problem has been on a scale ranging from 0 (not at all) to 4 (extremely). The IIP contains six

subscales, and an overall mean rating of interpersonal distress is derived from the mean self-rating across all items. We used the total score on the IIP as the measure of interpersonal distress in this study.

### TFEQ

The Three Factor Eating Questionnaire (Stunkard & Messick, 1985) measures cognitive restraint, tendency toward disinhibition of eating, and perceived hunger.

## RESULTS

Tables 1, 2, and 3 and Figure 1 summarize the results reported below.

*T* tests (unpaired) revealed that subjects who scored above versus below the median score on baseline measures of psychopathology did not significantly differ on rates of subjective or objective binge eating at Week 1 (see Table 1).

The median scores for each measure can be found in Table 2. Of interest is the finding that high and low baseline Gormally scores were not associated with different rates of subjective or objective binges at Week 1. Unpaired *t* tests were also employed to determine whether responders to treatment, defined as those who had no subjective or objective binges at Week 12 in the treatment study, differed from nonresponders on rates of subjective binge episodes at Week 1 (see Table 3). No significant mean difference was found between responders and nonresponders with regard to rates of the two types of binge episodes at Week 1.

The results of a calculation of the relative rates of change of subjective and objective binge episodes during treatment are shown in Figure 1. These data showed that by Week 4 in treatment, the number of objective binges had decreased by 56% whereas the number

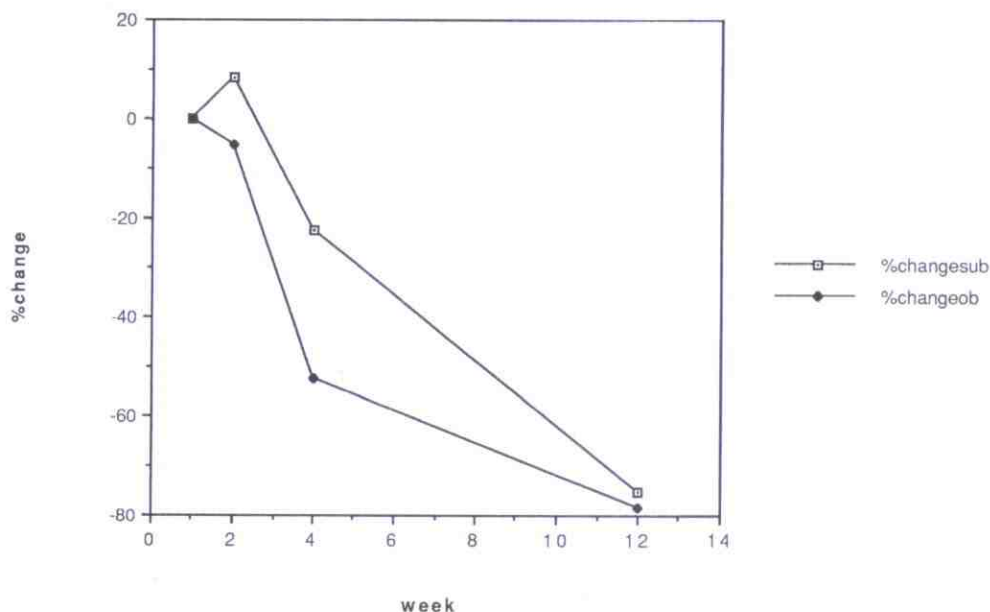


Figure 1. Rates of subjective and objective binges over time.

Table 1. *T* tests of baseline measures and subjective and objective binge episodes at week 1

	BDI		Cormally		GSI (SCL-90)		BMI		Age Onset	
	Low	High	Low	High	Low	High	Low	High	Low	High
Subjective binge episodes	$M = 3.51 \pm 3.78$	$M = 5.26 \pm 2.94$	$M = 4.04 \pm 3.76$	$M = 4.73 \pm 4.14$	$M = 3.34 \pm 3.55$	$M = 5.35 \pm 4.08$	$M = 4.38 \pm 4.20$	$M = 4.34 \pm 3.70$	$M = 5.34 \pm 4.20$	$M = 3.40 \pm 3.44$
Objective binge episodes	$M = .960 \pm 2.48$	$M = 1.22 \pm 1.56$	$M = .860 \pm 1.60$	$M = 1.34 \pm 2.52$	$M = 1.19 \pm 2.59$	$M = .980 \pm 1.42$	$M = .520 \pm .920$	$M = 1.66 \pm 2.70$	$M = 1.30 \pm 2.45$	$M = .88 \pm 1.63$
	IIP		Restraint		Hunger		Disinhibition		Duration	
	Low	High	Low	High	Low	High	Low	High	Low	High
Subjective binge episodes	$M = 3.96 \pm 3.83$	$M = 4.77 \pm 4.04$	$M = 4.38 \pm 4.03$	$M = 4.32 \pm 3.83$	$M = 4.25 \pm 3.74$	$M = 4.47 \pm 4.16$	$M = 4.76 \pm 4.11$	$M = 3.94 \pm 3.74$	$M = 4.44 \pm 4.15$	$M = 4.29 \pm 4.15$
Objective binge episodes	$M = 1.00 \pm 2.33$	$M = 1.17 \pm 1.81$	$M = 1.20 \pm 1.85$	$M = .890 \pm 2.40$	$M = .670 \pm 1.14$	$M = 1.51 \pm 2.67$	$M = .940 \pm 2.30$	$M = 1.24 \pm 1.83$	$M = 1.54 \pm 2.55$	$M = .653 \pm 1.39$
									$M = 1.57 \pm 2.48$	$M = .670 \pm 1.56$

Note: BDI = Beck Depression Inventory; GSI = General Symptomatic Index; BMI = body mass index; SCL-90 = Symptom Checklist-90.

Table 2. Median scores of baseline measures

Baseline Measures	Median Score
BDI	14
Gormally	30
GSI (SCL-90)	.73
BMI	36.912
Age onset	16
IIP	1.485
Restraint	7
Hunger	10
Disinhibition	14
Duration	25.98
Age	46.64

Note: BDI = Beck Depression Inventory; GSI (SCL-90) = General Symptomatic Index (Symptom Checklist-90); BMI = body mass index; IIP = Inventory of Interpersonal Problems.

of subjective binges had decreased by 22%. This observation is consistent with a past study that distinguished between subjective and objective binges (Smith, et al., 1992).

## DISCUSSION

This study was not able to distinguish subjective and objective binge episodes using measures of psychopathology and subject demographics. The fact that no significant differences were found in subjects with high versus low BES scores for mean rates of subjective and objective binges suggests that severity of binge eating is not directly related to the size of the binge. Further, our data analysis revealed that response to treatment was not associated with different rates of subjective or objective binges at Week 1.

A possible explanation for the finding that objective binge episodes decrease more rapidly during treatment is that early CBT sessions may have focused on stopping restriction and on not skipping meals. Only later when cognitive restructuring, aimed at reducing distorted thinking, was discussed might subjective binges have decreased. Because subjective binges consist of small amounts of food that subjects perceive to be excessive, these episodes may be evidence of greater cognitive distortion. Smith et al. (1992) postulated that the reason objective binge eating decreased more rapidly during CBT was that the experience of loss of control over eating takes longer to treat than eating large amounts of food in a binge. Future researchers may investigate the mechanism behind the finding that CBT appears to treat objective binges more immediately than subjective binges.

The use of food diaries presents a possible point of criticism as the accuracy of self-monitoring records has been questioned. In an investigation of this issue, Loeb, Walsh,

Table 3. *T*-test of response to treatment and subjective and objective binge episodes at session 1

Measures	Responders Week 12 Binge Episodes = 0	Nonresponders Week 12 Binge Episodes $\geq$ 1
No. of objective binge episodes session 1	$M = 1.07 \pm 1.76$	$M = 1.09 \pm 2.63$
No. of subjective binge episodes session 1	$M = 4.36 \pm 4.22$	$M = 4.56 \pm 3.75$



and Pike (1992) compared subjects' 7-day food diary entries to their recall of the corresponding week in the EDE assessment and found a correlation of .96 between the two measures. Therefore, it appears food diaries contain accurate information regarding frequency of binge eating. Yet, because the EDE accesses detailed information about binge eating and subcategorizes binges into subjective and objective types, this interview might have proven more appropriate for our purposes. Given that the EDE was not employed in the treatment study, we used the EDE rating scheme for each individual binge on each food record to ascertain whether binges were subjective or objective. We recommend that future studies attempt to replicate our findings using the EDE at baseline to obtain rates of subjective and objective binge episodes.

Given that subjective and objective binges differ primarily on the amount of food consumed, these findings may indicate that the amount of food should not be a primary focus in diagnosis of binge eating disorders. An alternate approach to these diagnoses would entail an emphasis on the experience of loss of control during a binge episode. Telch and Agras (in press) recently completed a laboratory study of binge eating in which they found that negative mood and the subjective experience of loss of control, rather than the amount of food eaten, determined whether subjects labeled eating episodes as binges. Garner et al. (1992) believe that it is "the quality of a binge rather than the quantity that makes [binge eating] distinctive." This poses the question to researchers and practitioners of whether the distinction between subjective and objective binges is clinically useful.

The findings of this study have implications for the diagnosis of binge eating disorders. In the realm of research, initial diagnosis determines the population that will be the source of our collective knowledge. Currently, many individuals fail to meet the full criteria for diagnosis of binge eating because they do not have unusually large binges frequently enough. Also, some practitioners and eating-disordered individuals may be unaware that binges do not have to be objectively large to be given diagnostic significance.

Our results, in conjunction with previous research findings, point to the importance of the subjective experience of binge eating and question the validity of the actual amount of food consumed in a binge. It is clear that this is a fertile area for investigation. Depending on the results of future research, the diagnostic criteria may need to be revised to de-emphasize the "large amount of food" criteria currently used in diagnosis of binge episodes.

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