



Differential caloric intake in overweight females with and without binge eating: Effects of a laboratory-based emotion-regulation training



J. Svaldi*, B. Tuschen-Caffier, M. Trentowska, D. Caffier, E. Naumann

University of Freiburg, Department of Clinical Psychology and Psychotherapy, Germany

ARTICLE INFO

Article history:

Received 16 October 2013

Received in revised form

20 February 2014

Accepted 26 February 2014

Available online 7 March 2014

Keywords:

Binge eating

Emotion regulation training

Suppression

Reappraisal

Food consumption

Bogus taste-test

ABSTRACT

Negative emotions are among the best predictors for the occurrence of binge eating attacks in binge eating disorder (BED). Evidence from self-report and experimental studies suggests that this link may be mediated by deficits in emotion regulation (ER). Therefore, the aim of the present study was to experimentally test the effects of a short laboratory-based ER training on caloric intake in BED. Thirty-nine women with BED and 42 overweight females without BED were randomly assigned to a laboratory-based ER training focusing on either expressive suppression or cognitive reappraisal. They were then given a negative mood induction with the instruction to adopt the learned ER strategy, which was followed by a bogus taste-test. Independent of group membership, caloric intake was significantly higher in the suppression compared to the reappraisal condition. Furthermore, the BED group displayed significantly higher habitual suppression and significantly lower habitual reappraisal scores than the overweight group. The data suggest that therapeutic interventions focusing on the mediation of more adaptive affect-regulation skills may be useful for the reduction of binge eating episodes.

© 2014 Elsevier Ltd. All rights reserved.

Since the research criteria for binge eating disorder (BED) were reported for the first time in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders ([DSM-IV] 1994), numerous studies yielded empirical evidence for the central role of negative emotions in the onset of binge eating in women with BED (Deaver, Miltenberger, Smyth, Meidinger, & Crosby, 2003; Henderson & Huon, 2002; Stice, Akutagawa, Gaggar, & Agras, 2000; de Zwaan, Nutzinger, & Schoenbeck, 1992). In fact, several theories focus on the functional aspects of binge eating episodes with respect to affect regulation. As such, the trade-off-theory of BED (Kenardy, Arnou, & Agras, 1996) postulates that binge episodes are maintained by a trade-off in which negative emotions are replaced by less aversive emotional states. The escape from self-awareness model (Heatherton & Baumeister, 1991) considers binge episodes the result of an individual's effort to remove the attention from emotional distress by narrowing the focus from an aversive self-perception toward the immediate environment, e.g. food. The

masking theory (Polivy & Herman, 1999) conceptualizes binge eating as an attempt to mask psychological distress resulting from other, less controllable areas of one's life. As a common core, all these theories share the assumption that binge attacks are used to cope with negative affect by providing short term comfort and/or distraction, thus bearing some form of regulatory function.

From a cognitive-behavioral perspective (Castonguay, Eldredge, & Agras, 1995), binge episodes are supposed to initially reduce negative affect by at least some extent and, consequently, to reinforce binge eating behavior. Such reinforcement will eventually contribute to the continuation and potential increase of such affect, thereby generating a vicious cycle responsible for the chronic nature of BED (Booth, Lewis, & Blair, 1990; Macht, 2008; Wild et al., 2007). The conditioned response to reduce undesirable affective states by engaging in binge episodes can override any conscious effort to refrain from binge eating, particularly under caloric deprivation (Agras & Telch, 1998), stress (Laessle & Schulz, 2009) or impulsivity (Engel et al., 2007).

Preliminary evidence for these theories comes from numerous retrospective self-report studies demonstrating that individuals suffering from BED report negative mood to be a significant antecedent of binge episodes (Arnou, Kenardy, & Agras, 1992; Binford, Mussell, Peterson, Crow, & Mitchell, 2004; Bruce & Agras, 1992;

* Corresponding author. University of Freiburg, Department of Clinical Psychology and Psychotherapy, Engelbergerstrasse 41, 79106 Freiburg, Germany. Tel.: +49 761 2039413; fax: +49 761 2033022.

E-mail address: jennifer.svaldi@psychologie.uni-freiburg.de (J. Svaldi).

Masheb & Grilo, 2006; Mitchell et al., 1999; Tachi, Murakami, Murotsu, & Washizuka, 2001). Further evidence comes from experimental studies indicating that the induction of negative mood or stress increases subsequent food intake and/or the likelihood of binge episodes in individuals with BED (Agras & Telch, 1998; Chua, Touyz, & Hill, 2004; Laessle & Schulz, 2009). As laboratory experiments are frequently criticized because of their limited external validity, several field studies were conducted to assess relevant precursors of binge episodes. For example, using ecological momentary assessment (EMA) Wild et al. (2007) found depression to be predictive for binge episodes in BED. Stein et al. (2007) found negative mood to be significantly higher on binge days compared to non-binge days. Further studies found strong evidence for the hypothesis that negative mood precedes subsequent binge episodes in BED and BN (Greeno, Wing, & Shiffman, 2000; Hilbert & Tuschen-Caffier, 2007; Le Grange, Gorin, Catley, & Stone, 2001).

To sum up, there is strong evidence that negative affective states cue binge eating, however, at this point little is known about the mechanisms underlying these findings. One potential explanation is that binge eating individuals display deficits in emotion-regulation (ER) and lack the skills required to adaptively and effectively cope with highly aversive negative affective states (Wiser & Telch, 1999). ER has been defined as “the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994, pp. 27–28). Evidence for the assumed lack of effective ER skills in BED comes from several self-report studies (Corstorphine, Mountford, Tomlinson, Waller, & Meyer, 2007; Svaldi, Griepenstroh, Tuschen-Caffier, & Ehring, 2012). Moreover, studies reveal that ER deficits explain a significant portion of variance of binge eating behaviors both in non-clinical samples of adults and children (Czaja, Rief, & Hilbert, 2009; Whiteside et al., 2007) and treatment-seeking BED samples (Gianini, White, & Masheb, 2013). In a meta-analysis on the dispositional use of ER (Aldao, Nolen-Hoeksema, & Schweizer, 2010) rumination and suppression (both processes have been conceptualized as dysfunctional attempts to regulate negative affect; Gross, 1998b; Philippot & Brutoux, 2008; Ray et al., 2005) were associated with more severe eating disorder symptoms.

At this point, only a few studies used an experimental design to test the causal relationship between ER and overeating in women with BED (Dingemans, Martijn, Jansen, & Furth, 2009; Svaldi, Caffier, & Tuschen-Caffier, 2010). Thereby, one study found that contrary to cognitive reappraisal, expressive suppression leads to an increase of the desire to binge in BED (Svaldi et al., 2010). However, in this study all BED participants received first a control ER instruction, then a suppression instruction followed by a reappraisal instruction. Therefore, not the ER strategy itself, but the order of presentation could be responsible for the results found. Second, and even more important, this study only assessed desire to binge and not food intake. One study, which tested the effects of suppression on food intake as a more direct measure of bingeing did not find this relationship (Dingemans et al., 2009). In this study, participants received the instruction to either suppress emotions (suppress condition, SC) or to react naturally (natural condition, NC) to a sadness inducing film clip. Results revealed that conditions did not significantly differ with regard to subsequent food intake. At first sight, the results of the study stand in contrast to the theory of an ER deficit in BED. However, if women with BED habitually suppress negative emotions, an explicit instruction to do so would not change their habitual pattern. Explicit instruction to adopt an ER strategy which opposes this habitual pattern, by contrast should reveal pathological ER-styles more clearly.

In line with the research just mentioned, we decided to experimentally test the influence of expressive suppression and cognitive

reappraisal on food intake after sadness induction in women with BED and overweight and obese controls without BED. To ensure strategy compliance, all participants underwent a laboratory-based ER training prior to the enrollment in the experimental task. Applying Gross’ (1998a) process model of ER, we hypothesized that in BED compared to overweight controls food intake would be significantly larger in the suppression compared to the reappraisal condition. This differential hypothesis was based on prior research which found a differential food intake between the two groups following stress (Laessle & Schulz, 2009) and depressed mood (Wild et al., 2007).

Method

Participants

Participants were recruited by advertisements in local newspapers and via Internet websites. Our clinical group consisted of 39 women meeting DSM-IV-TR criteria (APA, 2000) for BED. Inclusion criteria for the overweight control group (CG; $n = 42$) were a Body Mass Index ($BMI = \text{weight}/\text{height}^2$) ≥ 27 . Exclusion criteria were the presence of substance abuse or addiction, bipolar disorder, current or past psychosis, schizophrenia, current suicidal ideation, pregnancy or lactation. Diagnoses for eating disorders were determined by administration of the Eating Disorder Examination interview (EDE; Cooper & Fairburn, 1987; German version: Hilbert, Tuschen-Caffier, & Ohms, 2004). Diagnoses of all other disorders were made by means of the Structured Clinical Interview for DSM-IV Axis I (Spitzer, Williams, Gibbon, & First, 1992; (SCID); German version: Wittchen, Zaudig, & Fydrich, 1997). Height and weight measures were obtained during the course of the diagnostic session. Both groups were recruited as part of a larger project at the Department of Clinical Psychology and Psychotherapy of the University of Freiburg. The study was approved by the local ethical committee. All participants provided informed consent.

Groups (BED vs. CG group) did not differ on sociodemographic variables. There were significant group differences in all other scales measuring eating pathology and severity of depression (see Table 1 for means and statistics).

Women with BED had a mean of 3.83 ($SD = 3.23$; range: 1–21) binges per week over the six months prior to testing. Comorbidity in the BED sample was quite high with 56% ($n = 22$) with a lifetime affective disorder, 35.9% ($n = 14$) with a lifetime anxiety disorder, 2.6% ($n = 1$) and 3.3% ($n = 3$) with a lifetime anorexia or bulimia nervosa. In the control group comorbidity was lower with 23.8% ($n = 10$) of participants having a lifetime diagnosis of an affective disorder and 7.1% with a lifetime anxiety disorder.

Materials

Laboratory-based ER training in expressive suppression and cognitive reappraisal

Randomization

Within the groups (BED vs. CG) participants were randomly assigned to either the suppression or the reappraisal condition after the diagnostic session. No other experiments were conducted on the day of the present experiment. The sample consisted of 19 BED participants in the suppression, and 20 BED participants in the reappraisal condition. In the CG, there were 21 participants in each condition.

Training

The training was administered in a standardized manner over the computer. However, to ensure participants would understand

Download English Version:

<https://daneshyari.com/en/article/7262709>

Download Persian Version:

<https://daneshyari.com/article/7262709>

[Daneshyari.com](https://daneshyari.com)