The Effect of Short-Term Cognitive Behavioral Therapy and Mindfulness Based Cognitive Therapy in Patients with Binge Eating Disorder

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ABSTRACT

Objective: This research investigates and compares the effects of short-Term Cognitive Behavioral Therapy (CBT) and Mindfulness Based Cognitive Therapy (MBCT) over psychological problems of the patients with Binge Eating Disorder (BED).

Methods: Among patients of Sina hospital and other weight loss centers of Tehran, 44 people were selected and allocated randomly in CBT (14), MBCT (14) and control group (14). For each intervention, eight group sessions were held each lasted 90 minutes, with a separate psychologist. Measurement was performed in two phases: pre test and post test. Depended variables were measured with Beck Depression Inventory, Rosenberg Self-esteem Scale, Binge Eating Scale, and Perceived Stress Scale.

Results: There was no significant difference between CBT and MBCT in BED (F=36.03, P<0.315) depression (F=35.28, P<0.143), and self-esteem (F=6.9, P<1.00).

Conclusion: Based on the findings of this research, it seems that for patients who suffer from BED, CBT & MBCT are the same choose for improve depression, self-esteem and being eating.

1. Introduction

Binge eating disorder is a prevalent and clinically significant public health problem (Spitzer et al., 1993; Dalle Grave, 2010; National Task Force on the Prevention and Treatment of Obesity, 2000) with unanswered questions about treatment (Wilson & Fairburn, 2000). The prevalence of BED in the obese population has been estimated to be 30% in individuals seeking treatment and 8% in community samples (Spitzer et al., 1993). Higher binge frequency is associated with higher levels of adiposity (Pendleton et al, 2002). Patients with BED frequently suffer from multiple problems in addition to binge eating, including eating disorder psychopathology (various eating concerns, unhealthy restraints, overvalued ideas regarding weight and shape, and body image disturbance) (Grilo, Masheb, & Wilson, 2001), substance use (Dunn, Larimer, & Neighbors, 2002), negative mood (Stein et al., 2007), depression (Stice, Presnell, & Spangler, 2002), anxiety and obesity (Valentine et al., 2010). Ideally, all of these associated problems would be addressed by effective treatments (Goldfein, Devlin, & Spitzer, 2000).

Cognitive-behavioral therapy (CBT) has been shown to be a promising treatment for BED (Grilo, Masheb, & Wilson, 2005; Wilfley et al., 2003). These studies have documented substantial reductions in binge eating and in most associated problems, except for weight loss, significantly superior to wait list controls (Wilfley et al., 2003). Although CBT is the treatment of choice for BED, less than 50% of patients cease binge eating by the end of treatment (Smith, Shelley, Leahigh, & Vanleit, 2006; Wilfley et al., 2008; Amy, Gorin,

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Grange, & Stone, 2003). Because of the sizeable number of patients who remain symptomatic after treatment, there has been interest in developing and researching other theoretical conceptualizations and treatment models for BED (Safer, Robinson, & Jo, 2010).

It has been suggested that mindfulness-based practices may be a useful alternative for those who are less responsive to CBT (Wilson, 1996). Despite the efficacy of CBT, there is no focus on the role of unregulated emotions in the etiology and or maintenance of binge eating. Eating in response to stress and negative emotions are commonly recognized components of binge eating (Lundgren et al., 2010). Mindfulness approaches encourage individuals to focus on emotions and physical sensations with nonjudgmental awareness and an attitude of self-acceptance (Kabat-Zinn, 1990). By encouraging attention to physiological cues, mindfulness meditation may increase individuals' awareness of satiety and promote appropriate eating cessation. By encouraging acceptance of emotions, reducing reactive behavioral responses, and improving adaptive coping strategies, mindfulness practices may decrease the likelihood of binge eating as an emotional escape mechanism (Heatherton & Baumeister, 1991). Mindfulness-based interventions are a relatively novel treatment for binge eating; however, results suggest that such interventions reduce binge eating (Baer, Fischer, & Huss, 2005, 2006; Smith, Shelley, Leahigh, & Vanleit, 2006).

Mindfulness techniques encourage awareness and acceptance of emotional processes, tolerance of emotional experiences, and more adaptive coping strategies. (Leahey, Crowther, & Irwin, 2010). These approaches Standard CBT treatments for BED typically range from 12 to 20 sessions (Grilo, Masheb, & Wilson, 2005; Munsch et al., 2007; Nauta, Hospers, & Jansen, 2001; Wilfley et al., 2002). Short-term treatments for BED generally consist of guided self-help approaches lasting 10–12 weeks with six to eight brief individual meetings (Grilo & Masheb, 2007; Loeb, Wilson, Gilbert, & Labouvie, 2000), or lasting 8 weeks, but including twice weekly held sessions (Peterson et al., 2001). Shorter treatments are likely to be more cost-effective than longer interventions, assuming they produce comparable outcomes both in the short and long-term (Wilfley et al., 2003).

Therefore, in this study the effects of short-term CBT was compared with mindfulness based cognitive therapy. Our expectation of the efficacy of a short-term treatment is based on studies which reports a rapid response to the treatment in patients with BED (Grilo, Masheb, & Wilson, 2006; Masheb & Grilo, 2007). However, this approach may not be effective for almost 40-50% of BED patients (Lundgren et al., 2010). Therefore, there is certainly scope for the development of alternative strategies, given a holistic approach could potentially influence the complex nature of binge eating's physical and psychological. As mentioned earlier, it has been suggested that mindfulness-based practice may be a useful alternative for those who are less responsive to CBT. Therefore, we want to evaluate effects of mindfulness based cognitive therapy for this disorder and then compare the effectiveness of both treatments together.

2. Methods

Participants

The type of study was controlled trial with pre and post test design. The study was conducted at the Sina hospital, Iran. Participants were recruited through newspaper ads and flyers for a treatment study on binge eating. Study inclusion criteria required that participant's age to be between 18 and 60 years old and meet full diagnostic criteria for BED according to DSM-IV-TR (American Psychiatric Association, 2000) and obtain the required points of the intended tools. Participants were excluded if they met DSM-IV-TR criteria for severe mental disorders warranting immediate treatment, such as major depression with acute suicidal risk, psychosis, bipolar disorder, or current substance use disorder.

Further exclusion criteria were pregnancy, participation in another psychotherapy, treatment with weight loss medication (current or during the past 3 months), or previous surgical treatment of obesity. 45 participants were available for randomization. All participants were offered free treatment for their participation in the study. Prior to initial assessment, all participants provided written informed consent. Then they were randomly assigned to treatment or the wait-list condition using a permuted block design. Participants in the wait-list condition entered the treatment condition after completion of the 8-week waiting period. A wait-list control group was chosen because both between-and within-subject comparisons allow testing for treatment effects (Lambert, Shapiro, & Bergin, 1986).

Treatment protocol

The CBT manual was a shortened version of the 16-session group CBT that has demonstrated efficacy for BED (Munsch et al., 2007).The shortened protocol consisted of 8 weekly 90-min sessions (Table 1).

CBT contents mainly focused on the identification of binge eating cues and the development of individual strategies to cope with binge eating and engaging in self-reinforcement; cognitive restructuring and problem solving; learn identify and challenge thinking patterns that maintain problematic eating behavior and learn about high-risk situations that may

Table 1. Summary of sessions for CBT shortened therapy.

Session 1	Program overview, the definition is binge eating disorder.
Session 2	Cues and consequences
Session 3	Thoughts, feeling and Behaviors
Session 4	Restructuring your thoughts
Session 5	Impulsivity, self-control and mood enhancement
Session 6	Assertiveness and problem solving
Session 7	Stress management
Session 8	Relapse prevention, review of program and long term planning

trigger the binge eating and develop coping strategies to minimize the like hood of relapse. The MBCT manual was consisted of eight weekly 90-min sessions (Table 2).

Diagnostic interviews were conducted at baseline to ensure the accurate diagnosis of BED according to DSM-IV-TR. Self-report measures and weight were administered at two measurement points: baseline, end of active treatment. The number of self-reported weekly binges was additionally measured upon each treatment session.

Body mass index

Weight and height were measured on an electronic balance scale by a stadiometer. Body mass index (BMI) was calculated as weight in kilograms divided by the square of height in meters: (kg/m^2).

Depression:

Participants completed the Iranian version of the Beck Depression Inventory (BDI), which is widely used and psychometrically validated self-report measure for depression. Via performing BDI over a 94 Iranian sample, Fata (1999) reported α of 0.91, 0.89 as correlation coefficient of two halves and one week lag retest coefficient of 0.94.

Self-esteem and Perceived Stress

Participants completed the Iranian version of the Rosenberg self-esteem. Goldsmith et al. (1986) showed a validity coefficient of 0.84 that is the same as Bernadette, Valerie and Timothy research results. On the other side, Iranian version of Cohenberg perceived stress scale was performed over 60 cardiovascular patients and Zarani reported Coefficient of Internal consistency 0.83.

Binge Eating Scale

Participants completed the Iranian version of the Binge eating scale. This scale was performed over 60 participants. Dezhkam et al. (2009) reported a sensitivity of 0.85 and a validity test-retest of 0.72.

Table 2. Summary of sessions for mindfulness-based therapy.

Session 1	Binge eating disorder consequents, automatic pilot, eating a raisin with awareness
Session 2	Body scan practice, connection with the direct experience of physical sensation, relating skillfully to the mind wandering
Session 3	Allowing things to be as they are, learning how we can bring attention to and be present with bodily experience
Session 4	Discovering new ways to work with intensity, developing a new relationship with experience
Session 5	Mindfulness, the three minute breathing space
Session 6	Mindfulness practice in everyday life
Session 7	Mindfulness practice in everyday life
Session 8	Relapse prevention

Table 3. Average score and SD of dependent variables.

Variables	MBCT	CBT	Control
Depression	24.92 (9.26)	26.43 (8.81)	28.14 (10.9)
Self-esteem	14.64 (6.47)	15.62 (5.32)	14.42 (2.87)
Perceived stress	21.42 (3.32)	23.87 (3.36)	23.85 (4.43)
Binge eating	25.28 (6.21)	25 (8.62)	24.85 (7.96)

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3. Results

In terms of age variable there was not significant statistical difference amongst the three groups of MBCT, CBT and control group. The averages of the age in MBCT group were 40.35 in CBT group, 35.75 and 34.5 in control group respectively. Based on ANOVA results, this differences were not significant (F=1.57 and P=0.219). The mean and SD of the attendees in terms of Perceptional Stress, Depression, Self Esteem and BED variables are represented in the Table 3.

Question 1 of the study: (Is there any difference in BED reduction between the two groups of CBT and MBCT?). ANCOVA was used for this purpose. Results showed that the average of BED in MBCT group was smaller than CBT group however statistically insignificant (F=36.03, P<0.315 (As a result it can be said that both interventions do have the same effects on reduction of BED.

Question 2 of the study: (Is there any difference in Perceptional Stress between the two groups of CBT and MBCT?). In order to answer to the second question, ANCOVA was used. Results showed that the average of Perceptional Stress in MBCT group was smaller however statistically insignificant (F=0.85, P<1.00). Therefore, it can be concluded that both interventions have the same effects on BED reduction which do not make a significant difference with control group.

Third and forth questions of the study: (Was there any difference in reduction of depression and increasing the self-esteem between the two groups of CBT and MBCT?). To answer to these questions MANCOVA was used. Results showed that the average score of depression in MBCT group was smaller than CBT but not significantly (F=35.28, P<0.143). The same thing happened in Self Esteem Scale (F=6.9, P<1.00).

Therefore, it can be said that both interventions have the same effectiveness on reduction of depression and enhancing the self-esteem with a significant difference with control group (Table 4).

4. Discussion

This study compared the effectiveness of MBCT and CBT over BED and psychological symptoms. Based on the obtained data, CBT and MBCT have almost the same effect on BED index, perceptional stress, on depression and self-esteem indices. As mentioned earlier CBT led to rectification of psychological problems and BED reduction via flexibility in eating regimes, creation of healthier regimes, as well as cutting the relationship self-esteem and body imaging, improvement in awareness leading to thoughts connection, emotions and being eating behaviors (Munsch et al., 2007). Mindfulness based cognitive therapy approaches encourage individuals to focus on emotions and physical sensations with nonjudgmental awareness and an attitude of self-acceptance hence, may decrease the likelihood of binge eating (Kabat-Zinn, 1990).

The results of this study indicate the efficacy of cognitive and behavioral techniques is the same as MBCT by focusing on present time and increase in self-awareness. This similarity in efficacy of MBCT and short term

Table 4: The comparison of efficacy of treatments.

Depended variable	MS	df	F	P
Binge eating	1195.0	2	36.06	0.315
Perceived stress	16.35	2	0.85	1.00
Self-esteem	137.5	2	6.9	1.00
Depression	1051.0	2	35.2	0.143

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CBT- which is now the most practical and effective treatment for binge eating disorder is a good confirmation for appropriateness of MBCT as a complementary and substitute treatment for CBT specially for those who are not able to learn or perform cognitive techniques, those who don't response to CBT. More investigation on the efficacy of this treatment on disorder and other psychological problems is necessary. Like many other studies, in this study there were some limitations. The qualified volunteers were all female; hence, generalization of the study for males should be done carefully. Meanwhile, in order to facilitate the generalization of the study, it is recommended to take a bigger male sample.

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