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MINDFULNESS-BASED APPROACHES TO EATING DISORDERS

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INTRODUCTION: CHARACTERISTICS AND PREVALENCE OF EATING DISORDERS

The *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (DSM-IV-TR) (American Psychiatric Association, 2000), recognizes two primary eating disorders: anorexia nervosa (AN) and bulimia nervosa (BN). It also includes a category for eating disorders not otherwise specified (EDNOS), which includes binge eating disorder (BED), subthreshold versions of AN and BN, and other disordered eating patterns. The primary features of AN include refusal to maintain a minimally normal body weight, intense fear of weight gain, disturbances in how body shape and weight are experienced and evaluated, and amenorrhea. Primary features of BN include frequent binge-eating episodes and the use of compensatory behaviors to

prevent weight gain, such as self-induced vomiting, misuse of laxatives, fasting, or excessive exercise. In both AN and BN, self-evaluation is unduly influenced by body shape and weight. BED includes frequent binge eating but without the compensatory behaviors typical of BN. Whereas individuals with AN are severely underweight, those with bulimia or BED tend to be normal weight to obese.

In females, the lifetime prevalence of AN is approximately 0.5%. For BN, lifetime prevalence rates of 1% to 3% are commonly reported. Both are much more common in women than in men. EDNOS may be more common than either AN or BN (Ricca *et al.*, 2001). Millar (1998) reported that 47% of referrals to an eating disorder service met criteria for EDNOS, whereas 40% had BN and 13% had AN. Herzog, Keller, Lavori, & Sacks (1991) reported prevalence rates for all eating disorders combined of 5% to 15% when subthreshold cases were included. King (1989; 1991) also combined subthreshold with clear cases and found prevalence rates for eating disturbances of 3.9% for women and 0.5% for men.

Among obese persons, Spitzer *et al.* (1993) found prevalence rates of BED of about 30% for those in weight control programs, and 5% for those in community samples. BED is 1.5 times more common in women attending weight loss programs than in men, and is at least as common in whites and African Americans (Spitzer *et al.*, 1993; Spitzer *et al.*, 1992; Striegel-Moore, Wilfley, Pike, Dohn, & Fairburn, 2000). While the evidence is mixed, some studies have found that the prevalence and severity of binge eating increases with increasing adiposity (Bruce & Agras, 1992; Lowe & Capputo, 1991; Marcus & Lamparski, 1985; Spitzer *et al.*, 1993; Telch & Rossiter, 1988). For both obese and BED patients, caloric intake tends to increase as the individual's obesity increases. Additionally, BED patients tend to experience larger and more frequent weight fluctuations (Walsh & Devlin, 1998). These issues suggest that binge eating places obese individuals among those at highest risk for the medical complications of obesity. Some studies suggest that obese binge eaters are less successful in weight management programs, being more likely to drop out of treatment and to regain weight more rapidly (Gormally, Rardin, & Black, 1980; Keefe, Wyshogrod, Weinberger, & Agras, 1984; Marcus, Wing, & Hopkins, 1988; Sherwood, Jeffrey, & Wing, 1999). Those who achieve abstinence from binge eating may be more successful in weight loss and maintenance (Eldredge *et al.*, 1997), suggesting a need for treatment of the eating disorder prior to weight loss therapies.

All of the eating disorders are associated with significant distress and/or dysfunction, including mood disturbance, anxiety symptoms, substance abuse, and physical complications. Subthreshold cases also appear to have significant levels of distress or impairment. For example, Striegel-Moore, Dohm, *et al.* (2000) found that a community sample of women with subthreshold BED did not differ from those meeting full criteria on measures of shape and weight concern, dietary restraint, or psychiatric

distress. Overall, the evidence suggests that a wide range of eating disturbances cause significant distress and dysfunction in the general population. These problems are more common in women than in men.

MINDFULNESS-BASED TREATMENTS FOR EATING DISORDERS

The most widely researched treatments for eating disorders are based on cognitive-behavioral procedures and have focused largely on BN and BED. Treatment of AN has received less research attention (Roth & Fonagy, 2005). For BN, the literature suggests that cognitive-behavioral therapy (CBT) eliminates binge eating and purging in about 50% of participants, and reduces it in many others, and that maladaptive dieting and distorted body image also are substantially improved (Wilson, 2004). CBT for BED also has strong empirical support (Apple & Agras, 1997; Fairburn, Marcus, & Wilson, 1993), as does interpersonal therapy (IPT) (Klerman, Weissman, Rounsaville, & Chevron, 1984) for both BN and BED. However, as many participants show incomplete response to treatment, additional work seems necessary to find more broadly effective interventions. Wilson (1996) has suggested that acceptance-based methods for treating eating disorders deserve increased attention, and several interventions that incorporate mindfulness training and acceptance-related procedures recently have been introduced. Some of these are adaptations of previously developed interventions. For example, dialectical behavior therapy (DBT) (Linehan, 1993) has been adapted for BED and BN; mindfulness-based cognitive therapy (MBCT) (Segal, Williams, & Teasdale, 2002) has been adapted for BED; and acceptance and commitment therapy (ACT) (Hayes, Strosahl, & Wilson, 1999) has been applied to AN. In addition, mindfulness-based eating awareness training (MB-EAT) (Kristeller & Hallett, 1999) was developed specifically for BED. These interventions are summarized in the following sections. As DBT, MBCT, and ACT are described in more detail in several other chapters in this volume, the current chapter summarizes these briefly and devotes more comprehensive attention to MB-EAT.

DIALECTICAL BEHAVIOR THERAPY

The recent adaptation of DBT for eating disorders consists of 20 weekly sessions and has been applied in both group and individual formats (Safer, Telch, & Agras, 2000; 2001; Telch, Agras, & Linehan, 2000; 2001). The rationale for this approach is based on an affect regulation model of binge eating, which states that eating binges function to reduce unpleasant emotional states in individuals who lack more adaptive emotion regulation skills (Wiser & Telch, 1999). Negative emotions may be triggered in a variety of

ways, such as through comparison of one's body with images found in fashion magazines, by unpleasant interactions with others, or by other undesirable circumstances. Once negative emotion has been triggered, the individual fears that it will escalate and searches for a means of reducing it. By distracting attention from the negative affect, binge eating temporarily relieves this distress and thus is negatively reinforced.

This version of DBT is designed to improve participants' ability to manage negative affect adaptively and includes training in three of the four skills modules included in standard DBT: mindfulness, emotion regulation, and distress tolerance. It also includes training in behavioral chain analysis, which is applied to binge eating episodes. The mindfulness skills are taught to counteract the tendency to use binge eating to avoid emotional awareness. These skills emphasize nonjudgmental and sustained awareness of emotional states as they are occurring in the present moment, without reacting to them behaviorally. Thus, participants learn to watch their emotions as if they were clouds moving across the sky, without efforts to change them and without self-criticism for having these experiences. Participants also practice mindful eating by engaging in the raisin exercise (see Chapter 1 in this volume for a more detailed description). Mindfulness skills are a critical foundation for the emotion regulation and distress tolerance skills that also are taught, as they enable participants to recognize and acknowledge their emotional states without engaging in automatic, impulsive behaviors. While in a state of mindful awareness, the individual is better able to make adaptive choices about emotion regulation and distress tolerance skills that could be used in place of binge eating.

MINDFULNESS-BASED COGNITIVE THERAPY

An adaptation of MBCT for BED has been explored by Baer, Fischer, and Huss (2005; in press). Although MBCT was developed to prevent depressive relapse, most MBCT strategies are not specific to depression, and the adaptation for BED adheres very closely to the MBCT manual (Segal *et al.*, 2002; see Chapter 1 in this volume for a detailed description), with only a few changes. For example, the number of sessions was expanded from 8 to 10, and material specific to binge eating was substituted for material related to depression. Baer *et al.* (2005; in press) note that several recent theoretical formulations of binge eating imply that mindfulness skills might be useful in treating this problem. For example, Heatherton and Baumeister (1991) argue that binge eating is motivated by a desire to escape from self-awareness. Setting high personal standards leads to negative thoughts and unpleasant emotions when these standards are not met. This aversive internal state leads to a narrowing of attention and reduces inhibitions against eating. A model of emotional schemas proposed by Leahy (2002) suggests that individuals who label their emotions as pathological may

attempt to reduce awareness of their emotional states through substance use, dissociation, or binge eating. In addition, Lowe (1993) and Craighead and Allen (1995) note that individuals who binge eat often have extensive histories of unsuccessful dieting and weight cycling, which may lead to impaired sensitivity to hunger and satiety cues. MBCT includes a variety of mindfulness practices designed to cultivate nonjudgmental and nonreactive observation and acceptance of bodily sensations, perceptions, cognitions, and emotions. Thus, participation in MBCT should encourage increased ability to observe hunger and satiety cues, increased willingness to experience negative affect that previously has triggered binge eating, decreased believability of negative thoughts common in binge eating individuals, and increased ability to choose adaptive behaviors in stressful circumstances.

ACCEPTANCE AND COMMITMENT THERAPY

ACT is based on an experiential avoidance model that suggests that many forms of disordered behavior are related to attempts to avoid or escape aversive internal experiences, including sensations, cognitions, emotions, and urges (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). ACT emphasizes nonjudgmental acceptance of thoughts and feelings while changing overt behavior to work toward valued goals and life directions (Hayes *et al.*, 1999). The application of ACT to anorexia nervosa has been described in a recent clinical case study (Heffner, Sperry, Eifert, & Detweiler, 2002) and a recently published self-help manual (Heffner & Eifert, 2004). The intervention includes several mindfulness and acceptance-based strategies directed toward fat-related thoughts, images, and fears. For example, the *thought parade* is a mindfulness exercise in which the participant imagines that her thoughts are written on cards carried by marchers in the parade. Her task is to observe the parade of thoughts, such as "I'm a whale" and "My stomach is gross" (Heffner *et al.*, 2002, p. 234) as they come and go, without becoming absorbed in them or necessarily believing or acting on them. This exercise promotes the ability to observe cognitions nonjudgmentally and with acceptance, rather than engaging in anorexic behaviors in reaction to such thoughts. Similarly, the *bus driver* exercise asks the participant to imagine that she is the driver of a bus, which represents her movement toward valued life goals. Fat-related thoughts are conceptualized as passengers on the bus, who demand that she change direction and drive the bus "down the anorexia road" (Heffner *et al.*, 2002, p. 235). This exercise encourages the ability to allow negative thoughts to be present without acting in accordance with them and while maintaining movement in valued directions. Good nutrition generally is required to maintain the energy to move in valued directions (i.e., to be a good friend, family member, or citizen, or to do good work). Thus, an important feature

of the intervention is the clarification of the patient's most valued goals and directions.

MINDFULNESS-BASED EATING AWARENESS TRAINING

MB-EAT (Kristeller & Hallett, 1999) was developed by integrating elements from MBSR and CBT with guided eating meditations. The program draws on traditional mindfulness meditation techniques, as well as guided meditation, to address specific issues pertaining to shape, weight, and eating-related self-regulatory processes such as appetite and both gastric and taste-specific satiety. The meditative process is integrated into daily activity related to food craving and eating. It is informed by our current knowledge of processes in food intake regulation, including the role of hunger and satiety cues, and places primary attention on underlying eating patterns, relative to the other models outlined previously. Patterns of overeating, particularly binge eating, can be viewed as symptomatic of a prototypical dysregulation syndrome involving disturbances of affect regulation, cognitive and behavioral dysregulation, and physiological dysregulation. Mindfulness meditation is conceptualized as a way of training attention to help individuals first to increase awareness of automatic patterns and then to disengage undesirable reactivity. It is also viewed as a way to heighten awareness of potentially more healthy aspects of functioning, in this case physiologically based hunger and satiety cues, and to use such awareness to more "wisely" inform behavior and experience (Kristeller, 2003).

As is outlined in Table 4.1, each session incorporates meditation practice. General sitting meditation is similar to practices used in MBSR and MBCT. "Mini-meditations" also are taught, in which participants learn to stop for a few moments at key times during daily activities, particularly meal and snack times, to practice nonjudgmental awareness of thoughts and feelings. Several eating-related guided meditations are included, in which participants focus nonjudgmental attention on sensations, thoughts, and emotions related to hunger, satiety, and binge triggers. A number of the eating-related meditations use food, beginning with the raisin meditation and moving toward more complex and challenging foods, culminating with making food choices mindfully, first between just two foods and then at a buffet. Several sessions also incorporate mindful body work, moving from a body scan to self-soothing touch to mindful walking. The intervention then transitions to a forgiveness meditation related to one's own body and self, and a wisdom meditation, to emphasize that the wisdom to make better choices lies within.

Interventions that incorporate mindfulness meditation, with a goal of increasing general psychological and physiological self-regulation, are particularly well suited to the complexity of behavioral, emotional, and

TABLE 4.1 Outline of Sessions for MB-EAT Group

<i>Session 1:</i>	Introduction to self-regulation model; Raisin exercise; Introduction to mindfulness meditation with practice in group. <u>Assignment:</u> Meditate with tape (continues all sessions).
<i>Session 2:</i>	Brief meditation (continues all sessions); Mindful eating exercise (cheese and crackers); Concept of mindful eating; body scan. <u>Assignment:</u> Eat 1 snack or meal per day mindfully (continues all sessions with increasing number of meals/snacks).
<i>Session 3:</i>	THEME: Binge triggers. Binge trigger meditation; Mindful eating exercise (sweet, high-fat food). <u>Assignment:</u> Mini-meditation before meals.
<i>Session 4:</i>	THEME: Hunger cues—physiological vs. emotional. Hunger meditation; Eating exercise: Food choices—cookies vs. chips; healing self-touch. <u>Assignment:</u> Eat when physically hungry.
<i>Session 5:</i>	THEME: Taste satiety cues—type and level of cues; Taste satiety meditation; Seated yoga. <u>Assignment:</u> Attend to taste and satisfaction/enjoyment.
<i>Session 6:</i>	THEME: Stomach satiety cues—type and level of cues. Satiety meditation; Pot luck meal. <u>Assignment:</u> Stop eating when moderately full; Eat at a buffet.
<i>Session 7:</i>	THEME: Forgiveness. Forgiveness meditation. <u>Assignment:</u> Eat all meals and snacks mindfully.
<i>Session 8:</i>	THEME: Inner wisdom. Wisdom meditation; Walking meditation. <u>Assignment:</u> Eat all meals and snacks mindfully.
<i>Session 9:</i>	THEME: Have others noticed? Where do you go from here? Relapse prevention; Celebratory pot luck meal.
<i>Follow-up Sessions:</i>	Meditation practice; Review of progress; other weight management approaches.

cognitive dysregulation observed in eating disorders. This model is consistent with other perspectives on dysfunctional eating patterns: the chronic dieting model (e.g., Herman & Polivy, 1980), affect regulation models (e.g., Wilson, 1984), and the escape model (Heatherton & Baumeister, 1991).

The dysregulation model, which forms the theoretical basis of MB-EAT, synthesizes key aspects of the aforementioned models into a comprehensive explanation of a binge cycle. This model posits that the chronic dieting that many binge eaters engage in makes them susceptible to binge triggers that include physical stimuli, distorted cognitions, and negative affect. While it is informed by the affect regulation model, it gives more attention to introducing skills and awareness-related processes to food intake per se. Chronic dieting, patterns of binge eating, and use of food for nonnutritive reasons (i.e., emotional eating) are not only symptoms of underlying dysfunction but actively contribute to it. Emotionally, dieting may lead to frustration and deprivation, as well as dysphoria due to negative self-awareness. Once a dietary rule is violated (such as by eating a "forbidden"

food or eating at an inappropriate time), the individual may give up control altogether, judging that she has “blown it,” and binge, in a pattern consistent with the abstinence violation effect (AVE) (Marlatt & Gordon, 1985). This is further compounded by a lack of physiological awareness of satiety (Hetherington & Rolls, 1988) that also leaves one vulnerable to binge eating in that normal cues to stop eating are ignored or not experienced. The binge may bring some immediate physical and emotional gratification but is likely to be followed by physical discomfort and guilt. This then leads to continued negative self-evaluation and a reinstatement of dietary restraint. The binge cycle may vary by person, and some may not experience all of these components.

While CBT approaches address some aspects of this model, such as the distorted thinking of the AVE and the use of behavioral substitutions for emotional eating, the MB-EAT program may attenuate or interrupt more aspects of this cycle, and do so in a way that is more effective in internalizing and maintaining change. In comparison with the DBT approach, it is also more focused on the regulation of experiences of eating *per se*, but could be combined with DBT or CBT in an extended and more comprehensive program.

EMPIRICAL SUPPORT FOR MINDFULNESS-BASED APPROACHES TO EATING DISORDERS

Several clinical trials have provided strong support for the efficacy of DBT as adapted for the treatment of BN and BED. Telch *et al.* (2000) describe an uncontrolled trial with 11 women diagnosed with BED who participated in the group form of this treatment, with 20 weekly 2-hour sessions. Results showed that 9 of the 11 women had completely stopped binge eating by the end of treatment and no longer met criteria for BED. Substantial reductions in the urge to eat when feeling negative affect were observed, as were increases in self-reported ability to regulate negative moods. These findings suggest that the treatment was successful in teaching affect regulation skills, and that participants' ability to use these skills when experiencing negative affect improved. At 6-month follow-up, seven of the women remained abstinent from binge eating, and those who had binged did not meet the frequency criterion for BED diagnosis.

These authors followed this paper with a randomized trial in which DBT for BED was compared with a wait-list control condition (Telch *et al.*, 2001). At the end of treatment, 89% of participants in DBT had stopped binge eating, whereas only 12.5% of the control group had stopped. DBT participants also showed reduced urges to eat when feeling angry and reduced concerns about weight, shape, and eating patterns. At the 6-month follow-up, 56% of the DBT participants were abstinent from binge eating.

Findings did not support the hypothesis that increased ability to regulate affect was responsible for the observed improvements, as no differences between groups in negative affect or in mood regulation were noted. However, it is possible that the treatment reduces urges to eat in the presence of negative affect, rather than reducing the affect itself or increasing confidence in ability to regulate it.

Safer *et al.* (2001) report an additional randomized controlled trial (RCT) in which DBT was applied to bulimia nervosa. Treatment involved 20 weekly individual sessions. At posttreatment, binge eating and purging had stopped for 29% of treatment participants and had been greatly reduced for an additional 36% of participants. The others remained symptomatic. There were no dropouts from the treatment group. Substantial decreases in the tendency to eat when feeling negative affect also were observed.

Empirical support for MBCT applied to BED is preliminary but encouraging. In a recent case study, Baer *et al.* (2005) reported a complete cessation of eating binges and large reductions in eating, shape, and weight concerns, as well as increases in mindfulness. In a subsequent uncontrolled pilot study with six participants, Baer *et al.* (in press) reported large reductions in binge eating, eating concern, and the expectancy that eating leads to feeling out of control. Increases in mindfulness also were noted. To date, the use of ACT for treating anorexia has been reported only in a single case study (Heffner *et al.*, 2002). However, given that anorexia can be life-threatening and is widely regarded as difficult to treat, these findings are encouraging and suggest that additional studies could yield valuable information.

The evidence for MB-EAT to date is based on a nonrandomized, extended baseline/follow-up study (Kristeller & Hallett, 1999) and a recently completed randomized clinical trial (Kristeller, Quillian-Wolever, & Sheets, in preparation). Eighteen women completed the original study, out of 20 initial participants; their average age was 46.5 and mean weight was 238 lbs (body mass index: 40). None had previous experience with meditation, and all met DSM-IV criteria for BED with obesity. They participated in a manualized seven-session group treatment program lasting over 6 weeks, with 3 weeks of weekly assessment prior to, and following, treatment. Binges per week dropped from slightly over 4 to about 1.5, with only 4 participants still meeting criteria for BED at follow-up; the binges that remained decreased substantially in magnitude, another useful measure. Scores on the Binge Eating Scale (Gormally, Black, Daston, & Rardin, 1982) fell from the “severe” range to a level just higher than having “little or no problem” with binge eating (scores lower than 14). Measures of depression and anxiety also decreased from clinical to subclinical levels. There were no significant weight changes related to treatment.

The strongest predictor of improvement in eating control was the amount of time participants reported engaging in eating-related meditation, rather

than general meditation. Improvement in awareness of satiety cues was significantly correlated with a reduction in the number of binges reported, but change in awareness of hunger cues was not.

While the results could not be attributed unequivocally to the meditation effects, the pattern suggested that engagement in the meditation practice contributed to the changes in mood and behavior. The magnitude of change was also consistent with those from treatments drawing on more traditional methods including CBT (Agras *et al.*, 1995), suggesting that they did not simply reflect nonspecific effects. Furthermore, results suggest that mindfulness and increased awareness of satiety cues may be particularly important as mediating variables. While awareness of hunger cues also improved, BED is inherently more a dysfunction of failure to terminate eating than one of initiating eating too frequently (though both may occur). Therefore, becoming more sensitive to satiety signals may be particularly useful for increasing control of binge eating.

The recently completed RCT (Kristeller *et al.*, in preparation) included a larger sample (total $N=85$ completed), with similar characteristics to the first study but also including 15% men, who were randomized to the MB-EAT condition, a psychoeducational (PE) treatment or a wait-list control condition, with follow-up at 1 and 4 months. The MB-EAT treatment components were somewhat revised and expanded (see Table 4.1) to nine sessions. In particular, mindfulness of satiety experience was separated into two sessions: taste awareness (sensory-specific satiety) and fullness awareness. A session was added that included a wisdom meditation. Again, the focus was on decreasing binge eating, rather than weight loss. The PE treatment drew on education materials used in the nationally known obesity treatment program at the Duke Diet and Fitness Center. As has been reported in other studies comparing specific interventions with psychoeducation, the MB-EAT and the PE groups showed somewhat comparable improvements in behavior and on the Binge Eating Scale. However, the MB-EAT group improved significantly more on the Disinhibition Scale of the Stunkard and Messick (1985) Eating Inventory, indicative of greater internalization of change. Again, while there was no overall average weight loss, improvement on this scale was highly correlated with weight loss. Measures of practice suggested that it was the use of eating-related meditations and mini-meditations that predicted greater improvement on other indicators of improved self-regulation.

CASE STUDY

The individual described here was a participant in our RCT on MB-EAT. She completed the protocol described previously and outlined in Table 4.1, as part of a group intervention.

CLIENT BACKGROUND

Paige was a 56-year-old, remarried African American female with well-treated high blood pressure, high cholesterol, impaired glucose tolerance, and binge eating disorder. She entered the MB-EAT program to obtain control of her eating and to gain “more control over life.”

At 5' 7", Paige weighed 267 pounds. She reported that she had fluctuated around this weight for about a year, after having gained significant weight over the previous 6–7 years, despite multiple diets; in the past year alone she had dieted six times. Paige often skipped meals, restricted calories and fats, and attempted fad diets. The result: her binge eating continued at about four times per week, “often interfered” with her work and daily activities, and “always interfered” with her thoughts and feelings about herself and her personal relationships. In addition, she noted that even if not binge eating, she overate at least twice per day.

Paige lived with her husband of 10 years and her disabled teenage son. In addition to caring for her son, she had used her college education to develop a children's ministry in her neighborhood, where she sheltered a number of at-risk children. Paige noted that her eating disorder had affected her relationships with the children. She found herself hiding eating from them due to feelings of embarrassment. At intake, she was moderately distressed with her overall life and mildly depressed. Specifically, she was concerned about her marriage (a “mistake”) and her tendency to please others, even at her own expense.

RESPONSE TO TREATMENT

From the first experiential exercise, Paige immediately understood the concept of mindful eating. She reported during the second week that when she sat down to a chicken meal, she noticed she was feeling excited. She looked at the food carefully and then said to herself, “Why are you so excited? That is nothing but a dead bird.” Her delightful sense of humor brought laughter to the group and also demonstrated her ability to use awareness to recognize emotional reactivity and thoughts. Furthermore, she was able to apply these concepts without judgment in order to undermine her previous attachment to food.

Paige was fascinated by the process of meditation and immediately found it soothing. Though she had several children with her most of the time, she established a routine in which all of them took 30 minutes of “quiet time” so that she could practice her meditation. She instituted the practice to improve her health and was excited about passing on a skill to help the children self-soothe as well.

Paige's binge eating and her overall intake dropped steadily over the course of treatment and follow-up. Number of binges decreased from about 16 per month to 9 per month by the fifth week of treatment, and then declined to 2 binges per month by the end of 9 weeks. Binge eating completely subsided during the month following treatment, and remained this way at last measurement, 6 months posttreatment. Interestingly, Paige's weight remained stable at 260 lbs. throughout treatment but began to drop in the 6 months following treatment. Significant overeating episodes, as measured by the Eating Disorders Examination (EDE) (Fairburn & Cooper, 1993), dropped from twice daily at baseline to twice per month one month posttreatment, to once per month at the 6 month follow-up. Paige had lost 10 pounds (to 249.6) and 4.5 cm from her waist by continuing to practice the principles learned in the MB-EAT program; she pointed out that she eats only what she wants and stops eating when she is full. Over the course of treatment, while she continued to enjoy eating, food regained an ordinary rather than powerful place in her world.

Paige's level of depression steadily improved as well. Her scores on the Beck Depression Inventory (BDI-II) (Beck, Steer, & Brown, 1996) dropped from 15 at baseline, to 10 at week 5, to 9 at week 9, and to a score of 3 at 6 months posttreatment. Improvements in mood were paralleled by improvements in self-care. Paige increased her walking regimen from 25 minutes three times per week to daily walks. She became more concerned about cleaning up her surroundings and improving her living environment. Most importantly, she began to set boundaries with family members and friends who were used to taking advantage of her. Her enhanced confidence and self-care was so noticeable that her husband asked her if she was having an affair. She laughed and then explained, "What has happened is that I used to be a little tiny tree that would blow whichever way his wind blew me. Now I am a strong tree with a thick trunk. I don't just bend to his or anyone else's wind."

PRACTICAL AND CONCEPTUAL ISSUES IN USING MINDFULNESS-BASED INTERVENTIONS IN EATING DISORDERED POPULATIONS

Engaging individuals in a mindfulness approach to eating issues presents several challenges. Patients typically have a history of trying multiple diets and have a difficult time conceiving of an approach that does not promise yet another "quick fix." Yet this same experience can be used as a framework for presenting the need for a more permanent, enduring approach that involves an alternative to dieting. Initially, most individuals who have difficulty with binge eating are so distrustful of their own

judgment in regard to food that they may not be convinced that such a goal is possible. Two issues are most salient: presenting the value of a mindfulness rather than a dieting approach, and the challenge of how to introduce meditation components to the client.

As in many applications of mindfulness and related meditation techniques, there is some value in framing it within a relaxation or stress management context. This is salient in relation to eating problems, because stress and negative emotions are common triggers for compulsive overeating. However, eating problems particularly lend themselves to the concept of cultivating a "wise" mind, to the idea of going off automatic pilot, and to the value of cultivating awareness of internal cues. In that dieting itself entails a disengagement from the use of internal cues of hunger and satiety (substituting rules about foods and calories), a framework of becoming more attuned or mindful of such experiences is often appealing. Furthermore, the idea of becoming more mindful of the enjoyment and satisfaction that can be obtained from the quality of food—rather than the quantity—is appealing and is built into mindful eating exercises, whether simple ones like eating a raisin mindfully, or the more challenging ones we use in the MB-EAT program, in which "challenging" (i.e., potential binge) foods and entire meals are eaten mindfully.

Another issue is how to present meditation practice in a way that is nonthreatening, without raising concerns about religious identity. In the MB-EAT program, we found that it was valuable to address this issue in an individual orientation meeting, both in our Midwest community and in the south, when we run the program at Durham, North Carolina. Doing so virtually eliminated dropouts in the first or second session. We ask people what they know about meditation and if they have any concerns about sharing their participation in the program with family, friends, or church members. We raise the issue that some Christian religious teachings view meditation as inappropriate because it is associated with Buddhism or Hinduism, an attitude we have found to be common in our areas. We then point out that virtually all known religions, including Christianity, have meditative traditions, because it is a way to quiet the mind and access inner wisdom. This seems to help many participants be more comfortable with their involvement. These issues could also be raised in the first meeting of a group, but it is somewhat harder to predict the time needed to allow for this, or for individuals to raise questions of concern during a first meeting with strangers.

Motivating people to practice meditation is often a challenge. Although virtually everyone will acknowledge that engaging in meditation feels relaxing, practicing daily can feel like an effort or chore. Practice can be presented in several supportive ways: as a way to give yourself a "break," as a time to practice mindfulness so that it is easier to do under more stressful circumstances, as inherently challenging. Acknowledging "racing thoughts"

as normal and to be expected is particularly helpful, as is the challenge of being disciplined enough to do nothing! It is invaluable to put materials onto audiotapes or CDs to provide more support and structure, but it is also important to try to “wean” people off a dependency on the tapes as active treatment moves toward completion. While using a tape may feel more supportive, it is important for individuals to experience being able to do sitting meditation without one. Instead of a tape, using a digital timer can be helpful. Although somewhat controversial, it mimics the timekeeping that a group leader would provide in more formal retreat settings and decreases preoccupation with time during an individual sitting.

While some of our data support the clinical value of the eating-focused meditations—both longer ones and the “mini-meditations”—over the general mindfulness practice in regulating eating behavior and experience, practice in general mindfulness meditation lays the groundwork. Unfortunately, virtually no empirical evidence exists about the comparative effects of different approaches to meditative practice. Problem-focused meditations can be particularly powerful, as these help support and integrate general sitting meditation with application of mindfulness practice to issues of most concern. Of note, a number of our participants in the MB-EAT program had had previous experience with the MBSR program. Despite the exposure to the concept of mindful eating by using the raisin meditation, this had not been sufficient to allow them to change the ingrained and serious eating problems with which they were struggling.

Appropriate or recommended training and qualifications for therapists is an issue in providing mindfulness-based interventions, as with many focused therapeutic approaches. Traditionally, meditation has been taught as part of a complex heritage of practice; therapeutic training is also embedded in certain expectations of comprehensive coursework and experience. Despite the apparent simplicity of meditation practice in some respects, it is generally strongly advised that therapists using these approaches with individuals with eating disorders have the appropriate background, which entails not only the appreciation for the underlying behavioral and psychological processes, but also a personal practice in mindfulness meditation. Such personal practice and training in the MBSR or DBT certification programs is also desirable. At the same time, to the extent that the structure of the interventions and materials are available in manuals and the guided or focused meditations are available on audiotapes, relatively less training may be required. For example, we require a personal practice of the co-leaders of the MB-EAT program of at least 3 months. Given that, and use of the structured manual materials, clinical outcome appears to be comparable between graduate student clinicians and those with more meditation and therapy background.

CONCLUDING COMMENTS

Mindfulness-based interventions appear particularly well suited to address disordered eating behaviors. We have reviewed several approaches that vary in the degree to which meditation practice is a core element and to which focus on underlying eating issues is central to treatment. Regardless, each of the approaches provides individuals with a heightened ability to simply observe feelings, behaviors, and experiences, to disengage automatic and often dysfunctional reactivity, and then to allow themselves to work with and develop wiser and more balanced relationships with their selves, their eating, and their bodies. Because making choices around food is such an ever-present part of daily life, yet is tangible (in contrast to a private experience of pain and emotion), understanding the role of these approaches in relation to eating regulation may not only serve to improve treatment for eating disorders and obesity, but it may also serve to inform the fuller potential of mindfulness-based interventions in other areas of treatment.

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