Adapting Mindfulness-based Stress Reduction for the Treatment of Obsessive-compulsive Disorder: A Case Report

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Obsessive-compulsive disorder (OCD) is an illness characterized by intrusive and distressing thoughts, images, or impulses (i.e., obsessions) and by repetitive mental or behavioral acts (i.e., compulsions) performed to prevent or reduce distress. Efficacious treatments for OCD include psychotropic medications and exposure and response prevention (EX/RP). The following case report presents an individual diagnosed with OCD who refused treatment with medication or EX/RP and was treated using an adapted Mindfulness-Based Stress Reduction (MBSR) program. After an 8-week adapted MBSR program, the endpoint evaluation revealed clinically significant reductions in symptoms of OCD as well as an increased capacity to evoke a state of mindfulness. Discussion includes generalizability of these findings, potential mechanisms of action, and the role of an adapted MBSR in the treatment of OCD.

Obsessive-compulsive disorder (OCD) is an illness characterized by intrusive and disturbing thoughts, images, or impulses (i.e., obsessions) and by repetitive mental or behavioral acts (i.e., compulsions) that the person performs to prevent or reduce distress. The World Health Organization has identified OCD as one of the world’s leading causes of illness-related disability (Koran, 2000; Murray and Lopez, 1996; Robins et al., 1984; Skoog and Skoog, 1999). Proven OCD treatments include pharmacotherapy with serotonin reuptake inhibitors (SRIs) and cognitive-behavioral therapy (CBT) consisting of exposure and ritual prevention (EX/RP). EX/RP is at least as efficacious as SRIs and may be more durable (Foa et al., 2005; Simpson et al., 2004). However, EX/RP treatment has limitations: some refuse it, up to 25% of patients who enter drop out (Kozak, Liebowitz, & Boa, 2000), many who complete do not fully adhere to the procedures or achieve remission (Simpson, Franklin, Cheng, Foa, & Liebowitz, 2005), and not all maintain their gains in the long term (Foa and Kozak, 1996).

Given these limitations, alternative approaches to treatment or methods to enhance effectiveness of EX/RP merit further exploration. For instance, methods that emphasize the importance of noticing and accepting rather than attempting to change internal experiences such as thoughts, feelings, and bodily sensations may be useful in bolstering the effectiveness of EX/RP. Mindfulness is one such method that promotes awareness and attention to internal experience and is characterized by an acknowledging and witnessing stance towards this experience (Kabat-Zinn, 2003). From this witnessing perspective, participants learn to notice the thoughts, emotions, and sensations that arise without evaluating their truth, importance, or value and without trying to escape, avoid, or change them. In this way, mindfulness may help people to live satisfying lives while experiencing anxiety instead of being primarily preoccupied with attempting to control emotional experiences or actively changing the content of thoughts.

Recently, behaviorally oriented theorists have advocated renewed attention to the incorporation of mindfulness into psychotherapy to increase its effectiveness (Hayes, Strosahl, & Wilson, 1999; Linehan, 1993; Orsillo, Roemer, Lerner, & Tull, 2004) and several approaches utilizing mindfulness techniques have been developed as stand-alone treatments. These include Acceptance and Commitment Therapy (ACT), ACT for OC spectrum disorders (i.e., skin picking), Dialectical Behavior Therapy (DBT), and Mindfulness-Based Cognitive Therapy (MBCT), as well as variants of mindfulness techniques such as mindful awareness and the 4 R’s (Hayes et al., 1999; Linehan, 1993; Schwartz, Gulliford, Stier, & Thienemann, 2005; Segal, Williams, & Teasdale, 2002; Twohig, Hayes, & Masuda, 2006). These approaches and techniques, while incorporating a mindfulness component, do not focus on the formal practice of mindfulness meditation as an integral part of the treatment. They
have, however, shown promise in helping individuals to cope with the symptoms associated with a variety of psychological disorders, including anxiety and depression. To date, there has not been a mindfulness meditation intervention applied to obsessive-compulsive disorder (OCD).

Mindfulness-Based Stress Reduction (MBSR) is an intensive outpatient stress-reduction program based on the formal practice of mindfulness meditation. Its primary goal is the integration of mindfulness into everyday life as a support in dealing with the individual’s unique stressful life situations. Through a sustained process of daily home assignments, program participants learn and refine a range of self-regulatory skills aimed at awareness of internal experience (i.e., thoughts, emotions, sensations) and their effects on symptoms, feelings of health and well-being, stress reactivity, and overall sense of self and self-in-relationship. The practice of these mindfulness meditation techniques incorporates mental and behavioral components - for example, exposure, cognitive change, self-management, relaxation, and acceptance—that have been shown to be efficacious and necessary in the treatment of anxiety disorders (Baer, 2003). In the only study of MBSR for treatment of anxiety disorders, Kabat-Zinn and colleagues (1992) found that participation in the program led to significant reductions in symptoms of anxiety and depression in 22 medical patients with generalized anxiety disorder and panic disorder with and without agoraphobia. Additionally, there was a high rate of completion: 92% of participants completed the MBSR program and 84% of participants reported practicing MBSR techniques at least three or more times a week at 3-month follow-up (Kabat-Zinn et al., 1992). Although this was not a controlled trial, the results suggested that MBSR might be helpful in the treatment of anxiety disorders. The purpose of this report is to present the case of an individual with OCD who participated in an individual mindfulness-based treatment that was adapted from the MBSR program.

**Case Report**

**Client Characteristics and Treatment History**

Mr. X is a 25-year-old single Caucasian male, currently unemployed living with a roommate. He recently graduated from college with a bachelor’s degree and was in the process of looking for work, but reported difficulty because his “intrusive thoughts took up too much time.” His OCD began in college with intrusive and repetitive fears about saying something inappropriate and of harming himself or others. At that time, he began reading articles about circumcision and then developed an obsession consisting of intrusive thoughts and images about circumcision; these obsessions triggered feelings of both anxiety and anger. Mr. X expressed strong views against the practice of circumcision and, having undergone this process as an infant, now as an adult reported “feeling violated and incorrect as a male.” When either thoughts or images about circumcision came to his mind, he would perform mental compulsions of reviewing the pros and cons surrounding circumcision. Mr. X also had other obsessions, such as fear of harm to others; fear of doing something embarrassing; need for symmetry; and compulsions such as checking (e.g., locks, stove), ordering, and arranging, and the urge to ask, tell, or confess. However, at presentation, his obsessions about circumcision caused him the most distress and functional impairment.

Mr. X underwent a comprehensive psychiatric evaluation for all Axis I disorders. The resulting diagnosis was OCD; no psychiatric comorbidity was found. His prior treatment history consisted of a series of adequate SRI trials (e.g., >12 weeks of different SRIs at maximum dose), which were minimally helpful with his intrusive thoughts. Given his experience, he did not want another medication trial and he refused EX/RP because the idea of calling up his obsessive thoughts on purpose was too distressing to him. At the time of presentation, he coped with his OCD by rationalizing thoughts (i.e., reviewing the pros and cons of circumcision debate) or suppressing thoughts, strategies that were minimally helpful in the short term. After he refused further medication trials and EX/RP, he was referred to the first author (SRP) for treatment of OCD using mindfulness based stress reduction.

**Assessment Procedures: Treatment and Follow-up**

To monitor clinical progress throughout treatment, the patient underwent independent assessments at the beginning, midpoint (Week 4), and end of treatment (Week 8). A research psychiatrist who specializes in the research and treatment of OCD conducted the independent assessments. These assessments consisted of clinician-administered and self-report measures. The primary outcome measure was the Yale-Brown Obsessive Compulsive Scale (YBOCS; Goodman et al., 1989) and the secondary process measure was the Toronto Mindfulness Scale (TMS; Bishop et al., 2006). The YBOCS is a 10-item clinician-administered instrument used to assess severity of obsessions and compulsions (range: 0 to 40); it is a standard measure of severity for OCD. A score of 16 or greater indicates at least moderate OCD. The TMS is a 10-item self-report instrument that assesses a practitioner’s proficiency in the attention skills and attitudinal set that are involved in formal mindfulness meditation practice. The questions are completed in relation to the subject’s experience of the immediately preceding
meditation exercise (range: 0 to 40). The TMS is presently under review as a state-type mindfulness scale.

In addition to these formal assessments, the therapist recorded the patient’s anecdotal experience during treatment. After 3 months, Mr. X was seen by the therapist for a mindfulness refresher session and assessed at that time using a questionnaire consisting of closed- and open-ended questions to obtain qualitative information on his status posttreatment. Some of the questions were: Are you still practicing any of the techniques you learned during the 8-week treatment? Have you continued to use skills to cope with your OCD since the program ended? Did you gain anything from the treatment? If so, what? Did the techniques or skills learned help you to cope with your OCD? If yes, how? Has the mindfulness practice affected any other area of your life? If so, how? What are some areas you would like to improve with continued practice?”

**Treatment**

**MBSR**

MBSR was developed by Jon Kabat-Zinn and colleagues at the University of Massachusetts Medical Center (Kabat-Zinn, 1990) and is an 8-week group intervention that is largely skill-based and psychoeducational. Weekly sessions last 2 to 2.5 hours with one all-day retreat during the 6th week, and are comprised of considerable in-session practice of the formal mindfulness training techniques (body scan, sitting meditation, mindful yoga, and walking meditation) and discussion of the challenges participants are facing in integrating mindfulness into the stressful situations in their lives. In addition, participants are provided with CDs to use at home that guide them through the formal mindfulness practices. In the body scan, a person brings attention to each part of his/her body, from head to toe, recognizing the thoughts or sensations associated with each body part and then moving attention on to the adjacent region of the body. In sitting meditation, participants are asked to adopt an alert and relaxed body posture, bring their attention to the sensations of breathing and to return their attention to the breath when they notice that it has wandered. Mindful stretching and hatha yoga consists of gentle stretching and strengthening exercises, with moment-to-moment awareness of the sensations that arise as one puts his/her body into the described postures. Lastly, similar to yoga, walking meditation is conducted with awareness of the sensations of body movement and the thoughts, feelings, images that arise as one walks at a slow pace.

In summary, the first half of the program focuses on using the mindfulness exercises to foster self-regulation of attention to increase awareness of present-moment experience without evaluation. The second half of the program is directed toward generalizing mindfulness practice to everyday life situations, particularly stressful encounters, and developing strategies for coping with these.

**Adaptations to MBSR**

The treatment was delivered by the first author, who had undergone professional training in MBSR and was in the process of teacher certification. The following adaptations were made to the regular MBSR program:

*Format.* To pilot this intervention for the treatment of OCD, the 8-week intervention was delivered as an individual instead of a group treatment. The all-day retreat was omitted from the curriculum and the length of each session was abbreviated to 1 hour and 10 minutes. A 1-hour mindfulness refresher session was added to the intervention at 3-month follow up.

*Content.* In the original MBSR curriculum, Sessions 4, 5, and 6 include a didactic component about stress reactivity and coping with stress. These three sessions were adapted to include specific psychoeducation about OCD, discussion of symptoms and their meaning, and awareness of methods for coping with OCD. Additionally, Sessions 7 and 8 of the original MBSR program were adapted to focus on developing the patient’s capacity to bring mindfulness to a wide variety of obsessions in addition to everyday life situations.

**Techniques used to facilitate a decentered perspective.** As emphasized in MBCT (Segal et al., 2002), the patient was encouraged to view his thoughts (i.e., obsessions) as mental events in order to adopt a decentered (i.e., a shift in perspective and relationship to thoughts) perspective of his intrusive thoughts, by reminding himself that “thoughts are just facts” and “I am not my thoughts.” When an intrusive thought arose, Mr. X was asked to observe the thought as a transient mental event, and to return his attention to the present moment by noticing the sensations of the breath at that moment.

In addition to observing thoughts as transient mental events, we introduced a deliteralization exercise borrowed from ACT in order to transition from observation to nonjudgmental observation. In ACT, the goal of deliteralization is to decrease the role of evaluation and strengthen a client’s ability to take a nonjudgmental, observer perspective in relation to his or her disturbing private events with less struggle and more willingness (Hayes et al., 1999). The deliteralization exercise used in this intervention is termed “physicalizing” in ACT, which involves labeling the physical dimensions of thoughts. During in-session practice, Mr. X would use descriptors (i.e., blue lightning bolt, big green blob) to lend physical attributes to his thoughts, thus enabling him to observe them as an impartial spectator.

**Introduction and order of techniques.** Introduction of techniques in this case report was tailored to patient...
preference and expression of anxiety. This patient reported a significant level of body anxiety, as circumcision was the focus of his obsessions and compulsions. Kabat-Zinn, Chapman, and Salmon (1997) reported that patients preferred meditation techniques that focused on objects of attention that differed most from their dominant mode of anxiety expression. Mr. X’s dominant mode of anxiety expression was characterized, using the Cognitive Somatic Anxiety Questionnaire (Schwartz, Davidson, & Goleman, 1978) as high somatic and low cognitive. Therefore, introduction of techniques was tailored opposite to the dominant mode of anxiety expression: high cognitive and low somatic. The techniques were introduced in the following order: sitting meditation, mindful yoga, walking meditation, and the body scan.

Results

Assessment

At pretreatment assessment, Mr. X’s YBOCS score was a 22, indicating moderate OCD severity. At midpoint (Week 4) his YBOCS score decreased to a 17. At posttreatment (Week 8) his YBOCS score was a 13, indicating mild OCD severity and a 9-point change from pretreatment by end of the 8-week program. On the TMS, he indicated a 9-point increase, from 18 to 27, in the capacity to evoke a state of mindfulness.

Throughout treatment, Mr. X reported consistent practice of 20- to 25-minute daily meditation exercises, similar to the average number of minutes (mean=31 minutes) of practice that has been reported among participants in a group MBSR program (Carmody, Reed, Kristeller, & Merriam, in press).

Self-report

Self-report data gathered from Mr. X through the course of treatment reflected both perceived benefits and areas where he could further his mindfulness practice. His account included the description of a shift in his experience of the intrusive thoughts: “I feel more grounded after the practice and when in practice my thoughts are just thoughts — I can pull the plug on them easier or when they enter I escort my attention like you said and eventually the thought, or image (e.g., blue lightning bolt) doesn’t seem as interesting and fades away like a sinking ship.”

Follow-up

At the 3-month follow-up interview, Mr. X reported continued practice of mindfulness exercises for 20 minutes a day at least two to three times a week. His obsessions and compulsions about circumcision were no longer causing distress or impairment. He experienced an overall improvement in his OCD symptoms and reported an increase in awareness of symptom patterns and fluctuations in their intensity. During periods of symptom exacerbation, Mr. X used a brief sitting meditation to tolerate and shorten the duration of the obsession and gradually confront the cues that trigger his OCD with more ease. In addition to an improvement in his OCD symptoms, Mr. X reported benefit to his quality of life and overall functioning. At 3 months, he returned to work full time and volunteering on two film projects. Although he needed to move home with his parents due to financial difficulties, he reported less worry and an increased sense of security to pursue activities and tasks that were important to him. During a discussion of further practice, Mr. X reported a need for continued mindfulness practice in order to refine his ability to bring “mindfulness to everyday OCD.”

Limitations

There were several limitations in the present case report. First, we are limited in this report with a sample size of 1. Second, although MBSR is an 8-week program that follows a general outline of weekly themes, experiential practice in session and discussion of practice, assessment of treatment fidelity is lacking and in need of development. Third, the independent evaluator who assessed outcome for this case was not blind to treatment condition.

Discussion

In this patient, the adapted MBSR program was effective in producing a clinically significant reduction in his OCD symptoms, an important finding given that he reported minimal relief with prior SRI trials and refused EX/RP. A 9-point reduction in the YBOCS represents a clinically meaningful and reliable change, as defined by a 6-point or greater reduction in the YBOCS, in the context of randomized controlled treatment trials for OCD (Whittal, Thordarson, & McLean, 2005). The 9-point reduction in the YBOCS in this adapted MBSR treatment is less than what has been reported on average for randomized controlled trials of intensive EX/RP (Foa et al., 2005) yet comparable to less intensive weekly EX/RP (Whittal et al., 2005; Greist et al., 2002) and comparable or superior to change in YBOCS scores in large placebo-controlled SRI trials (Hollander et al., 2003; Montgomery, Kasper, Stein, Bang Hedegaard, & Lemming, 2001; Tollefson et al., 1994). He also demonstrated a clinically significant increase in his ability to attain a mindful state. The pre- to posttreatment scores and change in TMS scores are comparable to pre- to post-group MBSR program average scores (Carmody et al., in press). By patient report, mindfulness practice served as a self-management strategy to learn about and tolerate the
components of his internal experiences and thereby improved his ability to effectively manage his OCD. At posttreatment, Mr. X reported that he was on his own actively undergoing exposure to feared stimuli that he previously avoided; presumably, these exposures led to the observed reduction in his OCD symptoms. However, Mr. X attributed his new ability to do these exposures to the mindfulness skills he had acquired, stating that he now perceived and experienced the exposure experience as more tolerable. This shift in perception of traditional exposure after mindfulness training speaks to recent conceptualization and treatment development efforts to integrate mindfulness- and acceptance-based strategies into traditional therapies such as CBT (Hannan and Tolin, 2005).

Several adaptations were made to the original group-based MBSR program for this patient with OCD. First, the length and structure of sessions were adapted for delivery in an individual format. An individual format was chosen for both practical and ethical reasons, since MBSR had not previously been used in OCD patients. Second, the last half of the program incorporated disorder-specific psychoeducation, for example, awareness and patterns of obsessions and compulsions, relationship to OC symptoms, and discussion of reacting (i.e., ritualizing or avoiding) versus responding (i.e., attending to quality and sensation of breath while self-exposing and tolerating intrusive thought until it passes, using 3-minute breathing space to recognize and interrupt mental compulsions). Third, the meditation techniques were introduced, in gradations from most preferred/least intrusive in terms of exposure to internal experience (i.e., sitting meditation), to least preferred/most intrusive in terms of exposure (i.e., body scan). Part of mindfulness practice is incorporating a lifestyle change; order of techniques in terms of preference may help the patient achieve a sense of mastery and may ease them into making the commitment to practice each day between sessions. Lastly, borrowing strategies from MBCT and ACT (Segal et al., 2002; Hayes et al., 1999), we incorporated decentering strategies to facilitate observing obsessive thoughts as a mental event and diliteralization exercises to reduce evaluation and increase an open and nonjudgmental perspective. Comparable to Roemer and Orsillo’s (2002) development and integration of acceptance-based and mindfulness strategies for the treatment of GAD, this case report provides support for the pursuit of treatment development and empirical investigation of mindfulness in the treatment of OCD.

With any novel treatment it is important to consider potential mechanisms of action. Researchers in the areas of acceptance and mindfulness hypothesize several mechanisms of action that may explain the effectiveness of mindfulness practice. First, there is compelling evidence that experiential avoidance, attempts to change the form or frequency of internal events such as thoughts, feeling, bodily sensations, or memories, contributes to the development and maintenance of many forms of psychopathology (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Second, in mindful observation, tolerating the emotions as opposed to controlling them may help people experience the impermanence of emotions without having to avoid, suppress, or perform compulsions (Hayes and Feldman, 2004). This may provide a basis by which regulation of emotion can be developed. Kabat-Zinn (1990) suggests that a mindful response is different from a stress reaction in that when arousal is experienced he or she is aware of the full context and is therefore able to return to a state of equilibrium more rapidly. For a patient with OCD, the act of regulating one’s responses to intrusive thoughts may be key in considering alternatives to avoiding or ritualizing.

The results of this case report should be addressed with caution and seen as a platform for further inquiry into the value of this treatment. As discussed above, this is not a controlled study using gold standards for treatment outcome research. Nevertheless, this case report represents an OCD patient who refused standard treatment for his OCD and was motivated to explore a mindfulness-based treatment program. Findings suggest that a mindfulness-based treatment for OCD may have potential as a stand-alone treatment for certain OCD patients or as a strategy for enhancing established treatments such as SRIs and CBT. Future directions that warrant attention include further development and manualization of the adapted MBSR treatment, piloting the treatment in different types of OCD (e.g., physical compulsions, hoarding), and conducting a randomized controlled trial to evaluate the treatment to test efficacy and assess potential mechanisms of action.

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