

Mindfulness-Based Stress Reduction (MBSR): A Monograph

Jaime Kornswieg, L.Ac., MSTOM

Introduction/Overview

Mindfulness-Based Stress Reduction (MBSR) is a clinical program that introduces and facilitates a standardized meditative practice in mindfulness. The goal of MBSR is to help people cultivate “mindfulness” in order to better cope with stress, pain, and illness.

Mindfulness can be most briefly defined as “moment-to-moment awareness” (Kabat-Zinn, 1990, p.11). It is more descriptively defined as a state in which one is fully present in the moment, focused on the reality of the situation, while observing it, accepting it, and not judging it.

Scott R. Bishop, PhD., and his colleagues collaborated in 2004 to create a proposed operational definition of mindfulness. They proposed that mindfulness be defined in two parts. Firstly, as the self-regulation of attention, which involves sustained attention, attention switching, and inhibition of elaborative processing. Secondly, as an orientation to experiences, including a quality of non-elaborative awareness to current experiences, insight into the nature of one’s mind, and a de-centered perspective on the transience of thoughts and feelings (Bishop, et al., 2004).

Mindfulness meditation is based on the tenets and practices of Buddhism. However, although its roots are in Buddhist tradition, “its essence is universal” and mindfulness

“stands on its own as a powerful vehicle for self-understanding, independent of a belief system or ideology” (Kabat-Zinn, 1990, p.11). Although originating in the East, Jon Kabat-Zinn popularized mindfulness meditation in the West during the 1970’s. Kabat-Zinn created the first Mindfulness-Based Stress Reduction program at the University of Massachusetts, a group-based training in mindfulness meditation to be used to treat chronic pain. The original MBSR program acts as the template for all MBSR programs, and was a 8-week course, with home study, that included specific mindfulness techniques, including sitting meditation, body scan, and Hatha yoga stretches.

Experientially successful in the treatment of chronic pain, MBSR is now widely employed to reduce psychological morbidity associated with chronic illnesses such as cancer, as well as a treatment for psychological disorders such as anxiety, depression, and panic (Kabat-Zinn, 1998). Furthermore, MBSR is finding increasing uses in other areas such as cardiovascular disease (Ditto, et al., 2006).

In 2002, Bishop noted that there were approximately 240 MBSR programs in the West, and that number was continuously growing. Currently, the University of Massachusetts Medical School, Center for Mindfulness, reports that there are 549 practitioners of MBSR in their directory. Therefore, the popularity of MBSR has grown exponentially, and it has done so in the absence of rigorous evaluation (Bishop, 2002). However, Randomized Control Trials are emerging. Studies have already been conducted in patients with medical conditions including chronic pain, fibromyalgia, anxiety and panic disorders, psoriasis, depression, substance abuse, binge eating disorders, burnout, personality

disorders, cancer and heterogeneous patient populations. (Huynh, T. et al., 2007).

However, conclusive research has been somewhat limited by the methodological flaws of most existing studies. The methodological problems include “inappropriate or inadequate use of statistics, the use of invalidated measures, failure to control for concurrent treatments that might effect the outcome variables, and arbitrary determination of clinical responses” (Bishop, 2002, p.72). Despite the limitations of studies’ methodology, most researchers conclude there to be promising results that encourage future research.

Basic instructions for technique

Kabat-Zinn simplifies the process of developing mindfulness by explaining, “all it involves is cultivating our ability to pay attention in the present moment” (Kabat-Zinn, 1990, p.11). In greater detail, there are three dimensions of mindfulness meditation commonly emphasized; focusing one’s attention on a point of reference while disengaging from thoughts and feelings, observing the reality of the present moment, and remaining open to one’s experiences without judgment (Bishop, 2002).

As stated previously, MBSR programs are approximately 8 weeks in length and involve the instruction of mindfulness meditation techniques, including sitting meditation, body scan, and Hatha yoga stretches. Each session starts with the instruction of one of these techniques, followed by silent practice, and then reinforced through home study.

Regardless of the technique, the participants are instructed to focus their attention on a

point of reference, like an object or the breath, while remaining open to their experiences in the moment. When their attention wanders, they are advised to bring it back to the point of reference and observe any distractions, most commonly their thoughts, with openness and curiosity (Kabat-Zinn, 1990).

The instructions for sitting meditation are for a participant to sit in an upright position, either in a chair or cross-legged on the floor, and focus his or her attention on the breath or on the rising and falling of the abdomen. While the participant is using mindful attention, they are also noting perceptions and observing sensations. They are instructed to remain in a state of nonjudgmental awareness of cognitions and of the stream of thoughts and distractions that may arise. The body scan technique involves a gradual sweeping of attention through the entire body from bottom to top, feet to head, focusing on the sensations of each part of the body. The participant may or may not choose to incorporate breath awareness into the body scan. Again, the participant is focusing on a point of reference, in this case the body, without judgment or criticism of extraneous thoughts. The last technique, and the only technique of the three to involve specific physical movements, is Hatha yoga stretches. Hatha yoga includes a combination of breath exercises and simple stretches and postures to strengthen and relax the musculoskeletal system. The teaching instructions of this technique, like to two others, consists of advice on how to stay open, curious, and non-judgment of the thoughts and distractions that may flow through the mind (Chiesa & Serretti, 2009).

Kabat-Zinn adds that the success of MBSR is based on more than the ability to follow technical instructions. He explains that there are certain attitudes that factor into the effectiveness of the program: “non-judging,” “patience,” “beginner’s mind,” “trust,” “non-striving,” “acceptance,” and “letting go.” Moreover, “commitment,” “self-discipline,” and “intentionality” are also important characteristics to adopt during the MBSR program (Kabat-Zinn, 1990).

Functions

The functions of MBSR are to create a quiet, peaceful state of mind, to improve quality of life, and to develop better coping skills in patients suffering from chronic illness, both mental and physical. Kabat-Zinn (1990) explains that mindfulness meditation helps people to “calm down enough to enter and dwell in states of deep relaxation” and to gain clarity on their lifestyle choices in order to make changes to enhance their health and well-being (p.12). It also helps participants to channel their energy more effectively when faced with stressful, threatening, fearful, or helpless situations (Kabat-Zinn, 1990, p.12). Therefore, it is understandable that in these negative situations, practitioners of mindfulness present with an increase in positive behaviors such as patience, acceptance, enhanced relaxation, tolerance, as well as a decrease in negative reactions (Hyunh T., et al., 2007).

In Chinese medical terms, MBSR can be considered a technique to “Quiet the Spirit,” *An1 Shen2*. To “Quiet the Spirit” is to “calm the heart spirit, thereby alleviating

insomnia, profuse dreaming, palpitations, etc” (Wiseman & Ellis, 1996, p.488). MBSR can be considered to Tonify or Replenish Qi. Kabat-Zinn states that mindfulness “nourishes and restores body and mind,” and further explains that the energy being nourished and restored “comes from inside us and is therefore always within our reach and potential control” (Kabat-Zinn, 1990, p.12). Some specific Chinese medical disease states treated with mindful meditation would therefore include Susceptibility to Fright, *Yi4 Jing1*, Fright Palpitation, *Jing1 Ji4*, Fearful Throbbing, *Zheng2 Chong1*, Disquieted Heart Spirit, *Xin1 Shen2 Bu4 An1*, and Vexation, *Fan4*.

Although Mindfulness-Based Stress Reduction is not directly associated with Chinese medicine, *Qigong* and *T'ai chi* can be viewed as two forms of mindfulness meditation. *Qigong* is an ancient traditional Chinese medicine practice that, like MBSR, blends the coordination of different breathing patterns with various physical postures, bodily movements, and meditation techniques. *T'ai chi* is a Chinese martial art characterized by soft, slow, flowing exercises that promote posture, flexibility, relaxation, well-being, and mental concentration. *T'ai chi* also involves training the mind, and therefore can be considered a moving form of mindful meditation (Ospina, et al., 2008).

Current research (on both mechanism of action and effectiveness)

Recent controlled trials have shown that mindfulness meditation is correlated with decreases in psychological morbidity associated with medical illness (Bishop et al., 2004). For instance, MBSR may improve cancer patients' psychosocial adjustment to

their disease (Ledesma & Kumano, 2009). Grossman, et al. conducted a meta-analysis, and found that compared to a control group, interventions of mindfulness meditation significantly improved both mental and physical health indicators for patients across a variety of diagnoses, regardless if the study design was randomized or non-randomized (2004). In addition to diseased states, MBSR has been shown to reduce stress levels in healthy people (Chiesa & Serretti, 2009).

In terms of mechanism of action, the findings of Davidson and colleagues (2003) suggest that mindfulness meditation can increase relative-left-sided anterior activation, which is associated with reductions in anxiety and negative affect and which increases positive affect. Additionally, a study focusing on the short-term physiological effects of one of the techniques employed in mindfulness meditation training, a basic body scan meditation, found that participants engaging in the body scan displayed significantly greater increases in cardiac respiratory sinus arrhythmia than while engaging in other relaxing activities. Moreover, a significant decrease in cardiac pre-ejection period was observed during the body scan meditation. However, overall, the results of the study indicated more similarities than differences in the physiological responses to body scan meditation as other relaxing activities (Ditto, et al. 2006).

A study examining EEG changes during nondirective meditation, a type of meditation similar in method to mindfulness in that they are open to the experience of the moment, produced findings that suggest that nondirective meditation techniques alter theta and alpha EEG patterns significantly more than regular relaxation. In other words,

nondirective meditation may reflect increased cognitive processing and awareness, associated with increased theta activity, as well as increased relaxation, associated with increased alpha activity. (Lagopoulos, et al., 2009).

Adverse Effects, Contraindications, and Red Flags

Meditation, including mindfulness meditation, while relatively lacking in serious adverse side effects, can cause some negative reactions and should be used cautiously with certain individuals. In the book *Mindfulness and Psychotherapy*, Gerner, et al. (2005) point out that an important variable to consider before entering into formal meditation is the participant's "ego strength," or "emotional resilience" (p. 128). They continue to explain, "patients who decompensate when cognitive controls are loosened should generally not do formal sitting meditation. For example, destabilizing traumatic memories, including body memories, may rise to the surface, and mild states of depersonalization could trigger panic attacks" (Gerner, et al., 2005, p.128). However, a competent teacher or facilitator can help a participant decipher whether they are experiencing a temporary discomfort or, more seriously, a fragmentation of the self. If a participant is experiencing fragmentation of the self, manifesting as dissociation, grandiosity, terror, or delusion, the teacher or facilitator should advise the participant to discontinue formal meditation and suggest they switch to externally focused activities (129).

In a study by Shapiro (1992), 62.9% of long-term mindfulness meditators reported adverse side effects, either before or after a meditation retreat. The unwanted reactions

reported were mostly mild, such as irritability, hypersensitivity to city life, or awareness of negative personal qualities. There were two of the 27 participants that did report more serious adverse reactions. These included depression, confusion, and severe shaking.

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