

The Effects of Mindfulness Meditation on Cognitive Processes and Affect in Patients With Past Depression

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This study describes the effects of an 8-week course in Mindfulness-Based Stress Reduction (MBSR; J. Kabat-Zinn, 1982, 1990) on affective symptoms (depression and anxiety), dysfunctional attitudes, and rumination. Given the focus of mindfulness meditation (MM) in modifying cognitive processes, it was hypothesized that the primary change in MM practice involves reductions in ruminative tendencies. We studied a sample of individuals with lifetime mood disorders who were assessed prior to and upon completion of an MBSR course. We also compared a waitlist sample matched with a subset of the MBSR completers. Overall, the results suggest that MM practice primarily leads to decreases in ruminative thinking, even after controlling for reductions in affective symptoms and dysfunctional beliefs.

KEY WORDS: meditation; cognitive processes; rumination; affective disorders; treatment outcomes.

INTRODUCTION

Dysfunctional attitudes and rumination are cognitive attributes associated with a vulnerability to developing, maintaining, and relapsing into a depressive disorder (for reviews, see Beck, 1967; Beck, Rush, Shaw, & Emery, 1979; Ingram, Miranda, & Segal, 1998; Nolen-Hoeksema, 1991). Dysfunctional attitudes are characterized by negative, rigid, and extreme assumptions and beliefs about self-worth and typically involve conditional standards in areas of evaluation, perfectionism, and interpersonal approval (Weissman & Beck, 1978; Zuroff, Blatt, Sanislow, Bondi, & Pilkonis, 1999). Elevated dysfunctional attitudes are commonly reported in currently depressed individuals (for a review, see Haaga, Dyck, & Ernst, 1991), but recovered depressed individuals tend not to differ from healthy controls in the

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number and intensity of dysfunctional attitudes they endorse, unless challenged by sad mood or a stressor (for reviews, see Ingram, Miranda, & Segal, 1998; Segal & Ingram, 1994). This suggests that dysfunctional attitudes are mood state-dependent. Thus, while extreme and dysfunctional attitudes are likely to be available in the minds of vulnerable individuals, they are generally not accessible unless activated by a personally relevant environmental demand or by an increase in negative mood (for examples of research studies demonstrating this, see Miranda, 1992; Miranda, Gross, Persons, & Hahn, 1998; Miranda & Persons, 1988; Miranda, Persons, & Byers, 1990).

While dysfunctional attitudes reflect the content of the mind (i.e., what a person thinks about), rumination is associated with the processes of the mind, that is, how a person relates to the content of the mind. Rumination has been defined as passively focusing one's attention on a negative emotional state like depression, its symptoms, and thinking repetitively about the causes, meanings, and consequences of that state (Nolen-Hoeksema, 1991). Individuals who ruminate report they believe this will increase their understanding of themselves and solve their problems, but studies suggest ruminators are ineffective in active, interpersonal problem-solving and show an inflexible, perseverative cognitive style on a traditional neuropsychological test of novel problem solving (Davis & Nolen-Hoeksema, 2000; Lyubomirsky & Nolen-Hoeksema, 1995; Watkins & Baracaia, 2002). Both laboratory and field studies have demonstrated that ruminating in response to negative moods is associated with maintenance of depression and exacerbated sad affect (Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema & Morrow, 1991; Nolen-Hoeksema, Morrow, & Fredrickson 1993). Rumination has also been shown to increase the risk of developing depressive episodes in healthy participants who were followed prospectively (Just & Alloy, 1997; Robinson & Alloy, 2003; Spasojević & Alloy, 2001). Moreover, as reported by Spasojević and Alloy (2001), rumination mediated several other hypothesized risk factors that prospectively predicted number of depressive episodes, including dysfunctional attitudes, neediness, self-criticism, and history of past depression. Thus, a ruminative response style appears to be a factor in both the onset and maintenance of depression and a relevant target for treatments aimed at reducing current and future affective symptoms.

Self-regulatory strategies based on meditation practice, used alone or as adjuncts to other behavioral or medication regimens, may provide a set of techniques for modifying depressogenic cognitive variables such as rumination and dysfunctional beliefs. Mindfulness meditation (MM) is one such strategy that has been used in clinical practice, and existing research studies suggest that it may be a promising form of treatment for several physical and psychological conditions, including stress and mood symptoms in general, anxiety disorders, depression relapse prevention, chronic pain, fibromyalgia, binge eating, substance abuse, and skin related diseases (e.g., Astin, 1997; Goldenberg et al., 1994; Kabat-Zinn, 1990; Kabat-Zinn et al., 1992, 1998; Kabat-Zinn, Lipworth, & Burney, 1985; Kristeller & Hallett, 1999; Marlatt, 2002; Specia, Carlson, Goodey, & Angen, 2000; Teasdale et al., 2000). Results from a recent meta-analytic review corroborate the utility of mindfulness-based treatments for a variety of disorders while highlighting the need for research with sounder methodology (Baer, 2003). The latter point is echoed in a