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# Mindfulness Meditation: An Interesting Opportunity for the Rheumatologist



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**Abstract**

Mindfulness meditation is a mental technique which cultivates attentional focus and stability by directing the mind to remain connected to the present experience, moment by moment. Scientific literature in healthy subjects have correlated mindfulness training to improvements in stress, anxiety and depressed mood. Moreover, basing on evidence we can state that mindfulness may have an important role in treating somatic conditions such as psoriasis, cancer, HIV, infection, irritable bowel syndrome, heart disease, hypertension, lung disease, diabetes mellitus, and chronic pain.

Although, researches specifically conducted on rheumatologic conditions are limited, some studies of the highest quality about mindfulness interventions in chronic pain have been in patients with osteoarthritis, fibromyalgia and rheumatoid arthritis. In rheumatic diseases, mindfulness meditation may have favourable effects on mental health, in particular on mood states and depression, and on different aspects of physical condition, through a variety of pathways including reduced inflammation, decreased sympathetic activation and improved neuroendocrine function.

Thus, Mindfulness meditation is a good opportunity for patients thanks to its safety and it may be a powerful tool that can help the clinicians to manage the patient and improve the relationship between the patient and his illness and his body.

**Keywords:** Mindfulness; Mindfulness based stress reduction; Fibromyalgia; Rheumatoid arthritis; Osteoarthritis; Rheumatic diseases

**Abbreviations:** Hrql: Health Related Quality of Life; MBSR: Mindfulness Based Stress Reduction

**Introduction**

The Mindfulness Based Stress Reduction (MBSR); founded by Jon Kabat-Zinn, is a practice of awareness that has proven effective in helping patients change their relationship with their disease symptoms by increasing the quality of life and reducing the symptoms themselves [1-3]. In fact, the constant practice of Mindfulness has shown to be effective in reducing stress, in relieving physical symptoms associated with organic diseases and, in general, in promoting profound and positive changes of the attitude, of the behavior and the perception of themselves, others and the world [4].

**Method**

Mindfulness meditation is a mental technique which is used to strengthen the capacity to establish and sustain mindful awareness [5]. The practice of mindful meditation cultivates attentional focus and stability by directing the mind to remain connected on the experience of the present moment. Attention is

usually sustained by concentrating on the breath [6]. Depending upon the exercise, the focus of attention can vary and may include sensations in the body during rest or movement, a sound, or a visual focus. Although, the object of focus varies, in all instances the goal of the practice is to train attention to remain fully engaged with the experience, moment by moment.

The most popular program, designed to train participants in mindfulness, is the Mindfulness-Based Stress Reduction (MBSR) program, developed in the 1970's by Jon Kabat-Zinn at the University of Massachusetts [2]. MBSR is a standardized protocol conducted as an 8-weeks class with weekly sessions typically lasting 2.5 to 3 hours.

During the training participants practice:

- A. Sitting meditation using the breath as an anchor
- B. Contemplative walking

C. Mindful movement through the use of gentle Hatha type yoga postures

D. The body scans in which participants practice attention control by systematically focusing on the sensations in various parts of the body.

Mindfulness activities are practiced both in class and as homework. Thus, participants are expected to complete, as homework, approximately 45 minutes of formal mindfulness practice at least 6 days per week during the eight weeks period. Near the end of the 8-weeks training program, the method encourages the application of mindful awareness to daily activities. The impact of teacher's experience, frequency of weekly session attendance, duration and frequency of home practice seem to be the most important elements that affects the degree of symptomatic improvement reported by participants [1,7-11].

### Effectiveness of the Method

Lots of studies in healthy subjects have linked mindfulness training to improvements in distress, anxiety, and depressed mood [12-15]. Moreover, evidence is also accumulating that mindfulness may have a role in treating somatic conditions such as psoriasis, cancer, HIV, infection, irritable bowel syndrome, heart disease, hypertension, lung disease, diabetes mellitus and chronic pain. [2,16-29]. Mindfulness meditation seems to have a positive effect in different aspects of physical and mental health [30-35], to improve immune function [36,37] and to reduce inflammation [38,39].

### Mindfulness in Rheumatic Conditions

Despite the growing body of evidence supporting the use of mindfulness training as an adjunct to conventional therapy for a variety of medical and psychological conditions, studies specifically examining this intervention in patients with rheumatologic conditions are limited. Some of the highest quality evaluations of mindfulness interventions in chronic pain have been performed in patients with osteoarthritis (OA) [40,41], fibromyalgia (FM) [42-45] and rheumatoid arthritis (RA) [46].

In these studies, it is unclear whether mindfulness reduces the frequency and intensity of pain or simply improves patient's ability to cope with pain [42]. It is hypothesized that mindfulness meditation may have favourable effects through a variety of pathways including reduced inflammation, decreased sympathetic activation and improved neuroendocrine function [47]. Anyway further largest studies are necessary to confirm those hypotheses.

One of the factors that influence the prognosis of the disease and the quality of life (HRQoL) is the illness perceptions of patients [48]. In rheumatic diseases, the patient's beliefs and their emotional responses have been associated with the meaning that patients ascribe to their disease rather than with the disease severity [49]. These illness perceptions were

associated with physical HRQoL because patients are concerned about the consequences of their illness and they worry for the lack of control on the disease course. For these reasons, psychological therapy such as mindfulness may be a useful approach to the disease.

Another characteristic of rheumatic diseases, favorable to the treatment with Mindfulness methods, is the high prevalence of mood disorders, anxiety and depression that leads to negative outcomes and reduces the patients HRQoL by enhancing symptoms, decreasing adherence and increasing disability [50].

The presence of a chronic painful disease is a suffering condition not only for the patient but also for family members and represent a psychosocial problem (because of disability, absences from work, outpatient visits, diagnostic examinations and time off from work). Therefore, Mindfulness meditation represents a good opportunity also for the society [51].

### Rheumatoid Arthritis

In literature, two RCTs investigated the effect of MBSR on RA. Pradhan in 63 AR patients demonstrated no differences between two groups (MBSR group and waitlist control group) on measures of depressive symptoms, psychological distress, well-being, mindfulness after two months. However, at 6 months there were significant improvements across self-reported outcomes in the MBSR group [52].

Zautra [45] compared 144 participants randomly assigned to cognitive behavioral therapy (CBT), Mindfulness meditation and emotion regulation therapy, and education-only, which served as an attention placebo control. Major improvements in pain control and reduction in inflammatory activity (measured by cytokines) were observed in participants in the CBT pain group, but both the CBT and mindfulness groups improved more in coping efficacy than the education control group. Interestingly, patients with a positive history of depression benefited more from mindfulness on outcomes of both negative and positive affect and physicians ratings of joint tenderness, suggesting that MBSR might be preferable to CBT for treating individuals with chronic depressive features [46].

Hawtin [52] conducted a qualitative study in which patients reported a changing relationship to pain, stating that it no longer dominated their life or restricted their daily activities. Moreover, more responsive approaches to pain were described and this resulted in improved psychological well-being, particularly less depression [53]. Recently (2015), Nyklíček [53] examined the prospective moderating effect of Mindfulness regarding psychological distress across a 12 months follow-up period in 201 patients with RA, differing in levels of disease activity and disability. The study demonstrated that a mindful attitude shows a prospective association with relatively low psychological distress across a one-year period. Distress levels were fairly consistent across time for most patients but only those high in mindfulness showed a decrease in distress levels from baseline

to follow-up when compared with high disability [54]. Future studies are needed to investigate in which conditions and for which outcome variables mindfulness-based interventions may be beneficial and effective in patients with RA.

## Fibromyalgia

Lots of scientific studies support the effectiveness of Mindfulness meditation in FM. Kaplan et al. early in 1993 showed improvements on scales of wellbeing, pain, fatigue, sleep, coping and FM symptoms, as well as general psychiatric symptomatology [55]. Goldenberg [42] confirmed improvements in the MBSR group on measures of pain, sleep, FM impact and global severity of psychological symptoms [43]. Later (2007), Grossman [43] showed greater improvement on measures of pain, coping, quality of life, anxiety, depression and somatic complaints and, interestingly, they reported that these results were maintained 3 years later [44]. Also some RCTs have been conducted, Weissbecker [4,56] reported an increased sense of coherence which was related to lower levels of perceived stress and less depression. Sephton et al. showed an important improvement on depression symptoms in patients [57]. Schmidt [42] demonstrated that MBSR improved in quality of life because it seems to be an effective intervention for alleviating a lot of FM symptoms such as pain, depression and a range of psychological outcomes; although, it has not proven superior to other active control conditions, and not yet been tested against proven efficacious treatments such as cognitive behaviour therapy, that would provide a tougher test of overall efficacy [58].

## Conclusion

In the last decades, literature is providing many demonstrations regarding the connection mind-body and in particular regarding the power that the mind-body therapies have in mediating the symptoms of chronic pain. Despite this, the western clinicians are still un-qualified for this aspect, so that these interventions are not yet recommended as a part of the treatment. The result is that only 20% of the patients referred the use of such additional therapies [59,60].

Decreased quality of life is common among people with chronic rheumatic and it is an important predictor of morbidity. Anyway, it is difficult for the clinicians to encourage patients to optimally enjoy life despite chronic medical conditions. Mindfulness meditation is a safe and powerful tool that can help the clinicians to manage the patient and that improve the relationship between the patient, his illness and his body.

In conclusion mindfulness training could be suggested as an adjunctive approach to a multidisciplinary care plan in patients with Rheumatic diseases.

## Conflict of Interest

No financial supports or any other benefit, which could create a potential conflict of interest with regard to the work, are declared.

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