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Review Article

Adjunct Application of Mindfulness-Based Stress Reduction (MBSR) in Chronic Pain Syndrome (CPS)

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Abstract

In the management of chronic pain, there is a need to reduce dependency on drugs with adverse effects and addiction potential as well as lessen the psychological burden to the patient and family and fiscal burden to governments and healthcare systems. Introduced in the late 1970s, mindfulness-based stress reduction (MBSR) utilizes nonsectarian practices, including body awareness, seated or walking meditation, yoga, and prayer. The adjunct use of one or more of these methods has proved helpful for specific patients in noting and controlling stressors and triggers to their pain and in some cases, reducing their dependency on medicines with adverse effects.

Keywords: *Chronic Pain; Meditation; Mindfulness; Opioids; Prayer; Yoga*

Abbreviations

MBSR: Mindful-Based Stress Reduction; TCA: Tricyclic Antidepressants

Introduction

In the western world, mindfulness-based stress reduction (MBSR) was created and promulgated in the late 1970s by Jon Kabat-Zinn at the University of Massachusetts Medical Center [1]. The origins of MBSR include specific cultural practices and religious beliefs. However, MBSR interventions do not adherent to or demand specific cultural practices or religious beliefs from its users or healthcare practitioners who recommend or prescribe them.

Mindfulness practices have come in various forms throughout human history. MBSR-based practices have been presented as a pathway to self-awareness and a deeper awareness of oneself, seen as an ephemeral and interrelated entity within the universe. While in a state of mindfulness, the focus is diverted from physical desires and connections to the material world, and attention is given towards inner awareness [2-4].

The experience of deliberately focusing attention on the present moment and allowing thoughts and feelings to flow through the mind, body, and spirit are essential in MBSR. MBSR methods include body awareness, seated or walking meditation, yoga, and prayer [1-4].

Western medicine is slowly uncovering a scientific basis for the application of MBSR as adjunctive therapy for specific conditions. Applying MBSR as adjunctive therapy in chronic pain syndrome (CPS) may have the advantage of not only ameliorating or eliminating the pain experienced by patients but also in reducing or eliminating a dependency on pharmaceutical agents that can have numerous adverse effects, including opioid addiction.

Discussion

Etiology of chronic pain

Chronic pain is not a single-cause condition; often, it lacks a clear and well understood biochemical pathway. Many stimuli can elicit a nervous system response that perceives such stimuli as noxious, damaging, or dangerous [5]. Apart from the painful burden to chronic pain sufferers and their families, it is estimated that over 500 billion U.S. dollars are lost each year due to chronic pain treatment and productivity loss [5].

Experts have attempted to categorize pain as a three-part process, which includes physical or tactile sensation, feeling or emotion to the sensation, and the significance that is given to the sensation of pain [6]. Chronic pain treatment with pharmaceuticals may diminish a patient's vitality, memory, work capacity, and daily activities. Conventional medical treatments rely typically on a multidrug approach in addressing chronic pain, in constant need of balancing effective treatment with medicinal side effects [5].

Pros and cons of current treatment regimes for chronic pain syndrome (CPS)

Drugs typically used for chronic pain include tricyclic antidepressants (TCA), gabapentin, carbamazepine, duloxetine, and opioids [5]. While these agents reportedly provide some relief, they carry a risk of adverse effects. These adverse effects include, but are not limited to, the following:

- TCAs may cause an abnormal heart rhythm, termed QT prolongation.
- Abrupt cessation of gabapentin and carbamazepine have been reported to increase the risk for seizure.
- Duloxetine may have deleterious effects on liver function.
- Opioids carry a high risk of addiction.

Positive outcomes have been noted in MBSR interventions regarding pain, stress, negative emotions, and addiction [2]. Many patients with chronic pain suffer from comorbidities, which result in additional mental and physical duress. Several studies have shown that MBSR interventions are effective in chronic pain [7]. In using specific MBSR methods, CPS patients have identified—and in some cases have been able to control—stressors and triggers to their pain.

Application of MBSR methods in chronic pain syndrome (CPS)

MBSR interventions seem to disrupt specific mechanisms in patients with chronic pain [2]. Mindfulness practices are learned and practiced therapeutic methods, which require complex human processes and human input [7]. A personalized approach to MBSR therapies is essential. Standardization among these therapies is limited, given the individual variations in the amount of time a patient needs to dedicate to reflection and contemplation as well as the individual's commitment to learning and practicing the method or combination of methods.

In addressing CPS with MBSR interventions, the focus should be on a balance of efficacious treatment duration and degree of relief experienced, with the optimal goal of enhancing quality of life and reducing health-related concerns.

Conclusion

Mindfulness practices have been used in various forms throughout human history to gain self-awareness and a more profound sense of connection to the human "spirit" or a creator or creative force. Western medicine is beginning to seek a scientific rationale for the

application of MBSR as adjunctive therapy for specific conditions. MBSR methods may have an advantage in addressing CPS by lessening symptoms and avoiding or minimizing drugs that have adverse or addictive effects. Currently, there is no standard medical protocol or guidelines in employing MBSR for medical conditions, which makes its universal and prescription-based application challenging. However, for specific patients, it may be well worth a referral to a competent practitioner or center for body awareness, meditation, yoga, or prayer.

Conflict of Interest Statement

The authors declare that this paper was written in the absence of any commercial or financial relationship that could be construed as a potential conflict of interest.

Supplementary Note

Healthcare providers interested in integrating MBSR methods into their practices should consider the following resources:

- Mindfulness-Based Stress Reduction, Professional Training—Mindfulness-Based Stress Reduction, Curriculum Guide and Supporting Materials, Integrating Mindfulness Meditation into Health Care (https://www.umassmed.edu/globalassets/center-for-mindfulness/documents/mbsr-curriculum-guide-2017.pdf
- Palouse Mindfulness, Mindfulness-Based Stress Reduction (https://palousemindfulness.com).

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