

The Implementation of Mindfulness-Based Interventions in Nursing Care: A

Review

By:

Ahmed Abdrabalameer Alrashid
Rahmah Sameer Bu Khader
Fatimah Ali Alshakhs
Zahra Hussain Aljumi
Anwar Abdullah Aljaber
Khloud Mohammed Alkhamis
Noora Fahad Alfudhiekh
Zainab Ahmad Alzaqaan
Fatima Mohammed Alkhamis
Huda Taher Almoaibed

Abstract

Mindfulness-based interventions have gained recognition in healthcare settings for their potential to improve patient outcomes and enhance healthcare professionals' well-being. This review explores the implementation of mindfulness-based interventions in nursing care, focusing on the evolution of mindfulness practices in Western healthcare systems. The concept of mindfulness, rooted in a deep awareness of present experiences without judgment, has been integrated into various healthcare interventions, such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT).

The review discusses the historical development of mindfulness interventions, starting with Jon Kabat-Zinn's pioneering work in integrating mindfulness into the treatment of chronic pain patients. The effectiveness of MBSR and MBCT in managing pain, depression, and anxiety is highlighted, along with their potential to enhance patient outcomes and prevent relapse in conditions like depression.

Drawing on recent research, the review emphasizes the need for standardized mindfulness practices in Western healthcare. By examining the core components of mindfulness interventions and their impact on patient care, this review aims to provide insights into the potential benefits of incorporating mindfulness into nursing practice.

Keywords: Mindfulness-based interventions, nursing care, Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT), patient outcomes, healthcare professionals' well-being, standardized mindfulness practices.

Research Background

Mindfulness is the practice of being fully present and aware of one's thoughts, emotions, physical sensations, and the environment in each passing instant. Mindfulness is associated with qualities such as openness, nonjudgmentalness, friendliness, curiosity, acceptance, compassion, and kindness (Baer et al., 2019). Mindfulness practices seek to foster a state of mindfulness. These practices can be categorized as either formal, such as breathing exercises, sitting meditation, walking meditation, and body scans, or informal, such as incorporating mindfulness into everyday activities. Numerous mindfulness-based intervention (MBI) programs have been established. Mindfulness-based stress reduction (MBSR), developed by Jon Kabat-Zinn in 1979 (Kabat-Zinn, 2003), and mindfulness-based cognitive therapy (MBCT), which is based on MBSR and was created by Segal, Teasdale, and Williams, are the two most often used mindfulness-based interventions (MBIs). These two programs consist of eight weekly mindfulness workshops along with a one-day retreat (Segal et al., 2004; Teasdale et al., 2000).

Mindfulness-based interventions have gained attention in healthcare for their potential to improve patient outcomes and enhance healthcare professionals' well-being. Rooted in ancient practices, mindfulness involves non-judgmental awareness of present experiences. The integration of mindfulness into healthcare interventions like Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) has shown promising results in managing various health conditions.

Research Problem

Mindfulness is conventionally defined as "a state of being fully aware and present in the moment, encompassing a clear understanding of one's internal and external experiences, such as thoughts, sensations, emotions, actions, and surroundings" (Gunaratana, 2010; Kapleau, 1989). Regrettably, traditional explanations of mindfulness are not readily amenable to scientific examination. The core components are typically defined as the complete focus on both internal and external events as they happen in the present moment, along with an attitude characterized by not making judgments and being open to the current experience (Bishop et al., 2004; Brown & Ryan, 2003).

In a recent publication, Goyal et al. conducted a review of mindfulness interventions in comparison to active control. The study revealed notable enhancements in depression and anxiety levels (Goyal et al., 2014). Nevertheless, they incorporated quite a heterogeneous group of meditation techniques. While the practice of mindfulness has a history spanning 2500 years (Gunaratana, 2010), it is only in recent times that a standardized form of mindfulness interventions for Western healthcare has been established.

In 1979, Jon Kabat-Zinn incorporated mindfulness into his approach to treating patients with chronic pain, demonstrating that altering the patients' perception of their suffering can impact their pain experience (Brown & Ryan, 2003). The approach he developed, called Mindfulness-Based Stress Reduction (MBSR), rapidly disseminated to other medical facilities and expanded to address various health conditions.

Teasdale, Williams, and Segal adapted MBSR into Mindfulness-Based Cognitive Therapy (MBCT) specifically for treating depression. Following their first encouraging outcomes (achieving a relapse prevention rate of 50% in individuals with a history of 3 or more episodes of depression), further investigations consistently validated the efficacy of Mindfulness-Based Cognitive Therapy (MBCT) in treating depression (Teasdale et al., 2000).

Following that, both MBSR (Mindfulness-Based Stress Reduction) and MBCT (Mindfulness-Based Cognitive Therapy) were clearly defined and implemented in the treatment of different chronic conditions. MBSR, which primarily targets the physical manifestations of stress, has been incorporated into supportive care for cancer, chronic pain, heart disease, and fibromyalgia. On the other hand, MBCT places greater emphasis on cognitive factors and is utilized in the management of depression, anxiety, burn-out, and eating disorders. Given that mindfulness as a lifestyle intervention is not expected to have any harmful side effects and has the potential to decrease stress, which is a risk factor for both mental and physical problems, it is also being implemented in many preventive settings such as education, parenting, the workplace, pregnancy, and prisons (Samuelson et al., 2007; Napoli et al., 2005).

The use and appropriateness of MBSR and MBCT are subjects of discussion, despite their increasing application and the available data. The objective of this study is to offer a methodical summary of the efficacy of Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) in various groups of patients, to determine the specific patient populations for which these interventions are suitable.

Despite the growing interest in mindfulness-based interventions, there is a need to explore their implementation specifically in nursing care settings. Understanding how mindfulness practices can be effectively integrated into nursing practice is essential for optimizing patient care and supporting the well-being of healthcare professionals.

Research Questions:

1. What are the core components of mindfulness-based interventions, such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT), and how do they impact patient outcomes in nursing care?
2. What is the effectiveness of mindfulness-based interventions in managing conditions like chronic pain, depression, and anxiety within the context of nursing care?
3. What challenges and opportunities exist in integrating mindfulness practices into nursing care, and what recommendations can be proposed for successful implementation?

Aim and Objectives

The aim of this research is to investigate the implementation of mindfulness-based interventions in nursing care. The objectives include:

- To explore the core components of mindfulness-based interventions, such as MBSR and MBCT, and their impact on patient outcomes.
- To assess the effectiveness of mindfulness-based interventions in managing conditions like chronic pain, depression, and anxiety in nursing care settings.
- To identify challenges and opportunities in integrating mindfulness practices into nursing care and propose recommendations for successful implementation.

Research Significance

This research holds significant implications for nursing practice and healthcare delivery. By delving into the implementation of mindfulness-based interventions in nursing care, the study can provide valuable insights into how mindfulness practices can enhance patient care and support healthcare professionals' well-being. Understanding the historical context, core components, and effectiveness of mindfulness interventions in nursing care can inform strategies for optimizing healthcare practices. The findings of this research can contribute to the development of standardized mindfulness practices in nursing care, ultimately improving patient outcomes and fostering a supportive work environment for healthcare professionals.

Effects on mental health

Research has demonstrated that MBIs are effective in enhancing several prevalent mental health issues (Aghaie et al., 2018).

Depression and anxiety

Meta-analyses have provided sufficient evidence to establish that MBIs are effective in reducing depression and anxiety. These analyses have shown moderate to strong impact sizes for the decrease of both illnesses (Khoury, et al., 2015; Khoury, et al., 2013; Hofmann, et al., 2010). During pregnancy, a comprehensive review demonstrated that MBIs were effective in lowering perinatal anxiety to a significant extent. However, the evidence regarding the effectiveness of MBIs in reducing perinatal depression was less consistent (Shi & MacBeth, 2017). Web-based therapies focused on mindfulness have demonstrated efficacy in lowering despair and anxiety in individuals diagnosed with anxiety disorders (Sevilla-Llewellyn-Jones et al., 2018).

The presence of social interaction and psychoeducation in many MBIs, such as group mindfulness-based cognitive therapy (MBCT), makes it challenging to determine if the benefits of mindfulness practices alone still remain. A recent study examined the disparity and found that various mindfulness practices, such as breathing exercises, body scans, seated meditation, and sound scans, had modest to moderate impacts on anxiety (Blanck et al., 2018).

Stress

Existing research generally indicates a moderate impact of MBIs in lowering stress. However, further rigorous studies are necessary to draw definitive conclusions regarding the effectiveness of MBIs in diverse populations. A study examined the impact of MBIs on cortisol levels, which is a hormone associated with stress. The analysis revealed that MBIs may have a positive influence on cortisol levels in healthy adults. The overall effect size was moderately low (Sanada, et al., 2016). However, a different study found that meditation therapies had a notable and statistically significant impact on cortisol levels. This effect, however, was only observed in individuals who were considered at-risk, such as those living in highly stressful circumstances (Koncz et al., 2021). There is no conclusive evidence to suggest that MBIs can effectively lessen the perception of stress in older adults (Li & Bressington, 2019).

Insomnia

The existing research regarding the impact of MBIs on insomnia and sleep disturbance is encouraging. A meta-analysis has found that MBIs are effective in improving symptoms of insomnia and sleep quality when compared to attention/education and waitlist control. The effects of MBIs have medium to large effects and appear to last for at least 3 months after the intervention (Rash, et al., 2019). Several further studies have also reported comparable findings, all demonstrating a statistically significant enhancement in insomnia or sleep quality as assessed by the Pittsburgh Sleep Quality Index (Chen et al., 2020; Wang et al., 2018; Gong et al., 2016).

Eating Disorders

Recent research has yielded initial indications on the potential impact of MBIs on eating disorders (EDs). A study shown that MBIs had a significant impact on symptoms of EDs, emotional eating, negative emotions, body dissatisfaction, and body mass index (BMI) in individuals with anorexia and bulimia, compared to their initial assessment (Turgon, et al., 2019).

Another comprehensive analysis and synthesis of multiple studies also discovered that MBIs have the potential to decrease body image distress and negative emotions, while simultaneously fostering a positive attitude towards one's own body (Beccia, et al., 2018). Both authors reached the conclusion that more rigorous research are necessary in order to demonstrate the effectiveness of MBIs on EDs (Turgon, et al., 2019; Beccia, et al., 2018).

Addiction

Research confirms that MBIs have been proven effective in treating both chemical addictions and behavioral addictions. A comprehensive analysis of 54 randomized controlled studies revealed that MBIs effectively reduced dependency, desire, and other addiction-related symptoms, while also enhancing emotional state and mitigating emotion dysregulation (Sancho, et al., 2018).

Two additional meta-analytic findings demonstrated significant and substantial effects of MBIs in reducing perceived craving, stress severity, substance misuse frequency and severity, anxiety and depressive symptoms, negative affectivity, and post-traumatic symptoms for the treatment of substance

misuse. Further investigation is required, particularly with regards to extended follow-up evaluations and the inclusion of various demographics, in order to fully ascertain the efficacy (Cavicchioli, et al., 2018; Li, et al., 2017).

Psychosis

MBIs show promise in providing advantages for those with psychosis, but, additional research is necessary (Louise et al., 2018). A comprehensive analysis of 434 patients revealed compelling evidence of the impact of MBIs on various aspects of psychosis. In the short term, MBIs demonstrated moderate evidence of reducing total psychotic symptoms, positive symptoms, hospitalization rates, duration of hospitalization, and enhancing mindfulness. In the long term, MBIs were found to be effective in reducing total psychotic symptoms and duration of hospitalization in patients with psychosis (Cramer, et al., 2016). Another systematic review has also verified the feasibility of MBIs for persons with psychosis. Additionally, it has been found that MBIs offer several notable advantages compared to standard care, including the improvement of negative symptoms and measures of functioning (Aust & Bradshaw, 2017). It is recommended that future major trials use randomization to provide a better understanding of the mechanisms and long-term effectiveness of MBIs in individuals with psychosis.

Post-traumatic stress disorder (PTSD)

The findings regarding MBIs among subjects diagnosed with post-traumatic stress disorder (PTSD) were inconclusive. An extensive analysis and synthesis of 10 trials investigating meditation therapies has revealed that while the outcomes for PTSD were favorable, they did not reach statistical significance. The analyses were limited due to the range of meditation intervention modalities, short follow-up intervals, and the quality of research (Hilton et al., 2017).

Other studies have also found comparable results, indicating that MBIs such as mindfulness, yoga, and relaxation studies may be effective in treating PTSD. However, many of the trials included in these reviews had methodological limitations or were of moderate to low scientific rigor (Niles et al., 2018; Banks et al., 2015). Additional rigorous research is required to examine the impact of MBIs on individuals diagnosed with Post-Traumatic Stress Disorder in order to enhance certainty on its efficacy.

Attention-deficit hyperactivity disorder (ADHD)

Additional study is required to ascertain the efficacy of MBIs for attention-deficit hyperactivity disorder (ADHD), despite existing studies indicating its potential as a promising therapeutic. A comprehensive analysis of multiple studies has shown that MBIs have a significant impact on reducing the severity of core symptoms associated with Attention-Deficit/Hyperactivity Disorder (ADHD), such as inattention, hyperactivity, and impulsivity. This effect was observed in both children and adolescents (Hedge's $g = -0.44$, 95% CI -0.69 to -0.19, I² 0%) as well as adults (Hedge's $g = -0.66$, 95% CI -1.21 to -0.11, I² 81.81%). Nevertheless, the authors' conclusion is that there is not enough methodologically rigorous data to substantiate the effectiveness of the intervention. This is owing to a small number of research, variations

in the methodologies used among studies, and a significant risk of bias (Zhang et al., 2018). Several additional systematic reviews have seen comparable results and reached the same conclusions (Poissant et al., 2019; Mak et al., 2018; Lee et al., 2017).

Autism spectrum diseases

There is a scarcity of current literature on Mind-Body Interventions (MBIs) for individuals with Autism Spectrum Disorder (ASD) or their caregivers. In a systematic review conducted in 2017, 16 relevant papers were analyzed. However, conclusive recommendations about the impact of MBIs on individuals with ASD or their caregivers could not be made. The inclusion of a wide range of age groups and outcome measures, such as behavioral, social, and psychological symptoms, as well as the subjective well-being of individuals with ASD and their parents, contributed to the diversity of those research (Hourston & Atchley, 2017).

In general, there are several potential advantages of MBIs for individuals with ASD. These include the reduction of anxiety, thought difficulties, rumination, aggression, parental stress, and the enhancement of subjective well-being and parental psychological well-being (Hartley et al., 2019; Cachia et al., 2016a; Cachia et al., 2016b).

Cognition

The existing evidence to support MBIs on cognition is lacking in strength. A comprehensive analysis conducted in older individuals with mild cognitive impairment revealed that MBIs had a positive impact on participants' cognitive performance and everyday activities functioning. Nevertheless, the existing studies suffered from limited sample sizes, absence of control groups for comparison, and a lack of follow-up to comprehensively assess the impact on halting the advancement of dementia. Additional rigorous trials conducted on diverse groups are necessary to validate the efficacy of MBIs in enhancing cognitive function (Farhang et al., 2019).

Conclusion

The evolution of mindfulness practices in healthcare systems has shown a gradual acceptance and integration into patient care, with interventions like MBSR and MBCT gaining recognition for their effectiveness in managing various health conditions. The core components of mindfulness interventions, including non-judgmental awareness and acceptance of present experiences, have been instrumental in improving patient outcomes and supporting healthcare professionals' well-being.

The effectiveness of mindfulness-based interventions in managing chronic pain, depression, and anxiety in nursing care settings has been highlighted, showcasing the potential for these interventions to enhance patient care and prevent relapse. By addressing the holistic needs of patients and promoting self-management strategies, mindfulness practices have the capacity to improve overall well-being and quality of life.

Challenges in integrating mindfulness practices into nursing care have also been identified, such as the need for standardized training programs and ongoing support for healthcare professionals. However,

opportunities exist to leverage mindfulness interventions to create a more patient-centered and supportive care environment.

In conclusion, the implementation of mindfulness-based interventions in nursing care holds significant promise for optimizing patient outcomes and enhancing healthcare professionals' well-being. By understanding the historical development, core components, and effectiveness of mindfulness practices, healthcare systems can leverage these interventions to improve patient care and support staff resilience. Moving forward, it is essential to continue exploring the integration of mindfulness practices in nursing care, addressing challenges, and capitalizing on opportunities to foster a culture of mindfulness in healthcare settings. By incorporating standardized mindfulness practices and providing ongoing education and support, healthcare systems can harness the benefits of mindfulness interventions to create a more compassionate and effective care environment for both patients and healthcare professionals.

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