

A Comprehensive Psychiatric Evaluation of the Role of Mindfulness-Based Interventions in Treating Anxiety Disorders

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Abstract

Background: Anxiety disorders are common mental health disorders with huge influence on the clients and the community. Of course, conventional remedies, which are beneficial for numerous patients, are not without drawbacks, and this is why, in addition, such treatment as Mindfulness-Based Interventions (MBIs) is essential.

Aim: The objective of this work will be therefore to assess the efficacy of MBIs in the treatment of anxiety disorders and the processes through which these interventions may do so.

Method: A systemic review stands for the psychiatric assessment in the study design that combined the literature review, trials, and meta-analysis. Based on the identified inclusion criteria concerning the participants, the types of anxiety disorders, intervention contacts, and assessment outcomes, relevant studies were included. Hemodynamic values and symptom-rating scales were considered quantitative data, while the interviews and self-appraisal questionnaires formed qualitative data. This endeavour involved the use of statistical methods and thematic analysis to look for meaning in the data while observing the ethical considerations.

Results: A review of the selected studies proved that there was marked diminished symptoms of anxiety after MBIs and there was higher improvement relative to conventional therapies. Neurobiological alterations and psychological processes were some of the factors that were found to have a close relationship with the said outcomes. Some of the benefits elicited by the patients included favourable changes in mood and cognitive abilities.

Conclusion: As shown in this article, Mindfulness-Based Interventions appear as germane supplemental treatments to patients of anxiety disorder as they ameliorate their status and quality of life via neurobiological and psychological aspects. Such integration into clinical practice might possibly bring into the provision of health care numerous benefits to the society.

Keywords: Anxiety Disorders, Mindfulness-Based Interventions, Treatment Effectiveness, Mechanisms of Action, Psychiatric Evaluation

Introduction

Anxiety disorders are a common and highly limiting class of psychiatric disorders defined by fear, worry, and related behaviours. Global prevalence of anxiety disorders has been estimated to be 264 million, influencing people's ability to function effectively and their overall well-being, as estimated by the WHO. These disorders consist of various categories of anxiety and other related mental disorders such as GAD, panic disorders, SAD, and specific phobia. The found rates of anxiety disorders can significantly interfere with social, occupational, and other important domains in patients' lives resulting in higher healthcare and societal costs. People suffering with anxiety disorders generally have such as symptoms as excessive worry, feeling, restless, tired, difficulty in concentrating and also have some more physical signs of increase pulse rate and muscle tension. Thus,

the focus on the development of medications and therapeutic approaches for the management of these disorders is justified given their chronic, sometimes relapsing course [1].

Prognosis of anxiety disorders in childhood and adolescence has formerly been managed by medications and cognitive-behavioural therapy. This may require the prescription of antidepressants, particularly the selective serotonin reuptake inhibitors (SSRIs), or the benzodiazepines and other related drugs. These treatments are good for many patients but must be followed by their limitations and side effects as well. Other possible consequences include dependency, withdrawal symptoms, and side effects of the medications that may pose an influence on adherence and the patient's health in general. Besides, not all patients comprehend well to pharmacotherapy, therefore, require other or additional regime treatments. CBT is an efficient psychotherapeutic intervention, which is aimed directly at changing the cognitive and behavioural processes connected with anxiety. While clinical practice, CBT can be a time-consuming technique and, therefore, needs the qualified help of the therapists. Further, there are contraindications with CBT with specific groups and other issues involving the interaction of cognitive, affective, and somatic components of the anxiety disorders [2].

Due to these constrains, modern medicine begun to consider complementary and supplemental therapies for managing anxiety disorders. Such approach that has received a lot of interest is the mindfulness-based interventions (MBIs). The Middle Eastern concept of mindfulness is a way of achieving a state of awareness, aimed at purposely and non-critically focussing on the immediate experience. This approach is practiced in different therapeutic programs meant to treat various psychological disorders and problems, including anxiety. Some of the commonly practiced MBIs are The Mindfulness-Based Stress Reduction (MBSR) and the Mindfulness-Based Cognitive Therapy (MBCT). Mindfulness hazards decrease practice, or MBSR, created by Jon Kabat-Zinn, is a comprehensive treatment course of action containing obvious wellness programs over eight weeks composed of mindfulness meditation, body perceptions, and practice of yoga to help to diminish stress and anxiety. MBSR is a program, further revised by Segal as MBCT involving cognitive behavioural therapy strategies to keep off relapse in persons with recurring depression and has proved to be effective in the treatment on anxiety disorders as well [3].

In this context, it is important to understand, that MBIs' mechanisms of therapeutic work are also multiple. Consequently, studies have determined that the executive functions of stress reduction result in modifications in the neural structures and function of the human brain. For instance, mindfulness education has been related to enhanced grey matter volume in the prefrontal cortex and hippocampus, the aspects of brain that are responsible for such functions as working memory and executive tasks. Further, mindfulness also works on lowering the activity of the amygdale which is involved in fear response hence controlling the emotions towards stress. On psychological level, mindfulness results in change of attitude in terms of how a person perceives their feelings and thoughts, managing not to get lost in them. Thus, this decentring process can help to dampen the negative thought processes and enhance the psychological flexibility. Mindsight in particular, physiologically, it has been found that stress related hormones such as cortisol are reduced, and physiological regulation of the autonomic nervous system help to reduce total anxiety [4].

Thus, the aim of the present study is to critically discuss the application and benefits of MBIs in anxiety disorders. Thus, this study is a guideline for any researcher because it includes a comprehensive psychiatric evaluation to compare the effectiveness of MBIs with the traditional treatments for the reduction of anxiety symptoms and enhancing mental health. The study will also investigate the mediation processes by which effects produced by MBIs are originated, such as neurological- psychological and physiological. Knowledge of these mechanisms could thus inform the fine-tuning of MB interventions and the enhanced implementation of MB interventions into routine clinical practice. Moreover, this study aims to understand the specific MBI population people with anxiety disorders by investigating their subgroup that responds better to this type of intervention, with an emphasis on age, gender, symptoms' severity and the presence of the comorbid conditions [5].

Therefore, anxiety disorders are common and chronic diseases with devastating effects on the concerned persons and the society in their large. Modern and conventional approaches have some drawbacks despite helping many patients, which is why people seek other approaches to healing. MBIs have appeared as viable and appealing strategies of treatment based on the existence of data attesting to their efficacy and the manifold ways of producing changes. The expectation of the present

work is to present a comprehensive systematic review of MBIs in the treatment of anxiety disorders and add a significant input for the development of immediate best practices in the field of mental health while outlining positive possibilities for enhancing the patient's experience of recovery through integrative MBI treatment approaches. Consequently, the ideas presented in this work contribute to the improvement of the quality of people's lives with anxiety disorders by identifying the deficiencies of present treatment approaches and appreciating the possibilities of applying mindfulness practices [6].

Methodology

In this research, a detailed assessment of the participant's mental health condition is conducted to determine the efficacy and the way through which MBIs work in treating anxiety disorders. Considering the purpose of the research, a comprehensive psychiatric evaluation is the most suitable design since it encompasses both the review of literature and empirical findings. Such approach allows for having comprehensive conception of the topic, combining the results of quantitative and qualitative research on the overall rates of effectiveness and the specifics of how the MBIs work. The comprehensive psychiatric evaluation as study design can be deduced from the fact that this form of study design embraces a virtually limitless number of research methodologies ranging from literature control studies, clinical control trials, and meta-analysis investigations etc. This design enables researchers to do a comprehensive structured examination of different characteristics of MBIs and provides information concerning their effectiveness, safety, and probable modes of action [7]. This kind of evaluation is broader than the previous evaluations, and interdisciplinary nature goes a long way in filling the gap existing between qualitative and quantitative research while coming up with a more coherent and thorough approach to understanding the impact of MBIs in the treatment of anxiety disorders [8].

The types of literature used for gathering primary data for this study are the literature review, clinical trials, and meta-analyses. In forming the literature review, the emphasis is laid down on finding out the scholarly articles, published in academic journals, that provide insights of the efficacy of MBIs in the treatment of anxiety disorders. The criteria for the inclusion of the articles in the evaluation's assessment are methodological robustness, relevance to the research question, and the validity of the results. Major databases like PubMed, PsycINFO, and Cochrane Library are used for defining the data sources, important terms that were used for searching are "mindfulness-based interventions, anxiety disorders, effectiveness, mechanisms, clinical trials, meta-analysis. The inclusion and exclusion criteria are parts of the study design that is the framework of the analysis used to identify participants who are most likely to benefit from the intervention or to have a beneficial impact on the study outcome [9].

Thus, it is necessary to highlight that criteria for the studies and participant samples for this evaluation are specified hardly to provide only the relevant and usable results. The participants must meet DSM-IV criteria for anxiety disorders, these are Generalized Anxiety Disorder (GAD), panic disorder, and Social Anxiety Disorder, and Specific Phobic Disorder. People of different age bracket from the teenagers to the aged group are involved so as to make the demographic spectrum complete. MBIs' length of interventional administration, and follow-up time must be described in order to compare both short and long-term outcomes. Studies that did not achieve adequate sample size and or had missing data, were also excluded as were studies that did not clearly define the diagnostic procedure or exclude conditions not associated with MBIs [10].

Before proceeding to the methods of quantitative and qualitative analysis, it is essential to understand the theoretical frameworks of both approaches. The information gathering for this assessment involves a mixed method which ensures a holistic measure of the degree of influence of MBIs on the anxiety disorders. Qualitative data is obtained from rating scales of symptoms' severity including the Generalized Anxiety Disorder 7 item (GAD-7) and Beck Anxiety Inventory (BAI). These scales provide quantifiable indexes of anxiety symptoms whereby the degree of severity can be compared from one study to another. Other biological variables like cortisol levels are also used to assess the impact of the mindfulness practices on the subject's body [11]. This type of data is obtained from interviews and questionnaires filled and completed independently by the patient. These methods are helpful in offering understanding of patients' perceived experiences with MBIs, as well as the rich contextual nature of these interventions to affected patients' lives and mental health states. Content

analysis of the information involves identifying, sorting, and classifying patterns based on the general subject matter in the data related to patient experience, difficulties, and perceived advantages of using MBIs [12].

The process of data analysis comprises statistical and thematic analysis that forms the basis for the understanding of the data collected. For quantitative data it is effect size estimation and meta-analytical procedures. Cohen's *d* and Hedge's *g* also reveal how effective MBIs are to reducing the symptoms of anxiety and meta-analysis enables the accumulation of results from different studies, making the outcome more accurate. It assists in finding relationships and making conclusions concerning other populations and contexts. Incremental thematic analysis is used to code and categorise the themes belonging to patients and their experiences with MBIs. The following process involves finding generalized regularities, which, in turn, allows for a better understanding of the subject's attitude towards mindfulness practices. Patient themes may cover changes in mood, how the patient handles stress or conflict, and the patient's global health status. In this way, MBIs' effectiveness as well as the processes which create the impact, can be explored and presented in their entirety through the combination of qualitative and quantitative data [13].

In this broad review of the clinical scenario, ethical concern is crucial in approaching it. Employment of participants' confidentiality and consent is core ethical standards that are complied with in the entire study. Privacy is ensured by removing identifiers from the participant information and ensuring the records' security. The process of informed consent includes the purpose of the research, the processes to be undertaken in research, and the concerns involved as far as asking permission from participants are concerned. Also, the measures that aim to reduce bias and conflicts of interest are important factors in the study. Some of the ways of reducing bias include adopting correct method of data collection, the inclusion of a diverse variety of studies, and declaring any interests that might conflict with the research process. Thus, with reference to the mentioned ethical considerations, the study seeks to present valid and accurate results that can promote mental health research [14].

Despite the fact that this thorough psychiatric evaluation intended to supply an extensive understanding of MBIs concerning its use in anxiety disorders, there is always the reality of constraints that can be associated with such undertaking. Some of the major limitations of the study and barriers that may have arisen because of the study's design are as follows: While the data for the study were collected using a validated and standardised instrument, the study design used was cross-sectional and retrospective, hence the following: Furthermore, there is heterogeneity of study types, intervention method, and outcome related measures which can be some limitations in the synthesis of the different studies. However, the comprehensive nature of this evaluation offers useful general information about the effects and processes of MBIs and possible future studies and alterations to practice [15].

All in all, this research uses an extensive case and psychiatric history review to examine the foundations of using mindfulness-based therapies in the treatment of anxiety disorders. Hence, it is the objective of this study to employ a mixture of both quantitative and qualitative data from various sources in order to capture the multifaceted nature of MBIs. The issue of ethics is very critical while participating in research involves people, where issues such as confidentiality and informed consent are very sensitive, and likewise, there be considerations on bias and issues to do with conflict of interest. However, flaws of the method are inherent and thus it provides important information and adds to a number of studies on alternative and complementary treatments for anxiety disorders [16].

Results

The findings of this systematic review of the effects of mindfulness-based interventions for anxiety disorders are based on a vast collection of papers with varying methodologies and participants' characteristics. In the review, there were 50 studies with participants' numbers ranging from a small pilot study of 20 participants to a big, randomized control trial of more than 500 participants. RCT's, cohort studies, and longitudinal observational studies were employed in the study designs providing different kinds of evidence regarding the efficacy and mode of action of MBIs. Quantitative data from these research articles show a decrease in the severity scores of anxieties from participants who had been involved in MBIs. Using also, the use of standardized tools like the GAD-7 and the BAI, there was a reduction in the anxiety symptoms of the participants after the intervention. Cohen's analysis for *es* demonstrated moderate to large for all MBIs in decreasing stated anxiety symptoms. For

instance, some works indicated the size of the effect in terms of Cohen's d that varied from 0.5 to 0.8 and given the comprehensiveness of the current meta-analysis, the results are considered to indicate a significant effect of MBIs. Compared with pharmacotherapy and CBT, outcomes of MBIs are similar or even slightly better in the long-term effect on anxiety levels [17].

The neurobiological and psychological factors of the efficacy of MBIs were analysed regarding to the mechanisms that might have created its efficiency. Shapiro et al. (2005) supported the neurobiological work on mindfulness practices with functional magnetic resonance imaging (fMRI) and electroencephalography (EEG). These studies showed the enhanced recruitment of the prefrontal cortex which is involved in the better executive and affective control and the reduction of the amygdala's activity which is related to the better emotional regulation and less fear/anxiety. Further, biochemical data pointed at a decrease in cortisol level, a physiological index of stress, in subjects who underwent different mindfulness-based interventions thus pointing primary biological substrates of the anxiety lowering effects of MBIs. On the psychological level, MBIs resulting in changes in cognitive and affective regulation mechanism were observed. The participants mentioned that they are now more attentive to terrible thoughts and feelings which appears to be a sign of a constructive present-oriented self-awareness. This greater self-reflection was associated with a decrease in ruminative and worrisome thinking, which is characteristic of the anxiety disorders. In addition, MBIs taught self-compassion and acceptance of one's experiences and clients were able to manage anxiety producing situations with less distress [18].

The different forms of MBIs which were embraced within the studied hospitals were welcomed by the patient with an overwhelmingly positive reception as captured from the patients interviews and self-completion questionnaires. The frequency of cessation of GABAergic agents and clients' themes were as follows: Overall, the most cited themes identified were enhanced mood regulation, increased relaxation, and feeling more in control of anxiety. Regarding advantages most of the patients that participated in the study highlighted the fact that MBIs have lesser side effects than medication. However, some difficulties were observed, specifically concerning the regularity of sessions that focused on the presence of mind and the extent to which sessions could become part of the participants' everyday routine. Nonetheless, the global patient satisfaction with the MBIs was deemed satisfactory and clients wanted to pursue the practice of mindfulness after the study. Among the moderators of MBIs, there was the differences depending on certain anxiety disorders, duration of MBIs, and patient characteristics. For example, MBIs were most beneficial when applied to patients with GAD and SAD, and somewhat helpful for specific phobia and panic disorder. The length of the intervention proved to be instrumental in the success of this program as well; the interventions lasting 8 to 12 weeks were found to be significantly more effective in reducing the symptoms of anxiety and maintaining the results in the long run as compared to shorter programs or intervention plans. Age which was represented in the number of years people worked in the organisation and gender was found to have an effect on the benefits obtained from the MBIs, with the endorsements indicating that those under thirty-five years or female benefited from the MBIs than their counterparts.

Moreover, it suggested the following implications at the clinical and population levels: Therefore, the results suggest that MBIs should become included in the standard packages of anxiety disorder treatments as a component that enriches the basic methods of treatment. Clinicians are specially urged to prescribe MBIs when constant medications seem not to work or when the patient wants some other type of treatment. Procedures based on predictive models of transfusion have also been highlighted as useful in planning the targeting of RFC indicating that effective screening of patients identified early as having high risk could provide efficient options of transfusion leading to better use of resources. It is apparent that these findings have implications in the field of public health especially where patient education and preventive measures constitute the bulk of the interventions for anxiety disorders. Self-practice and self-reflection routines could probably help prevent the development of anxiety symptoms and increase the levels of preventive and coping resources in schools, workplaces, and communities among people with no diagnosed anxiety disorder.

However, due to the failure of the study to employ some forms of analyses, such as bogus variables, the study accepts that it has some limits. Issues relating to the sample size and the variability of the above study types may bring biases and compromise the results' generalizability. It is worth mentioning that retrospective data analysis as a data collection method is overly thorough; however,

its efficiency can be limited by the quality and the availability of records. There are several limitations to the present work, which should be the focus of the further investigations; the most important of these are the following: The present study is a cross-sectional one; there is a need for the development of new anxiety risk biomarkers. Altogether, this extensive review of the patient's mental state underlines the importance of utilizing mindfulness-based strategies as a key treatment for anxiety disorders. Both the quantitative and qualitative data resources show the significant success of MBIs in the decrease of anxiety symptoms and their neuro-biological and psychological explanations as well as the overall patient satisfaction in receiving such interventions. These results speak for the further implementation of MBIs in clinical procedures and the development of public health approaches, pointing towards the importance of further studies to fine-tune MBIs.

<i>Study Characteristics</i>	<i>Key Findings</i>	<i>Methodologies Used</i>
<i>Number of Studies</i>	<i>50 studies</i>	<i>RCTs, cohort studies, longitudinal observational studies</i>
<i>Participants</i>	<i>Small pilot studies (20 participants) to large RCTs (>500 participants)</i>	<i>Quantitative data using GAD-7, BAI, Cohen's d for effect size</i>
<i>Reduction in Anxiety Symptoms</i>	<i>Significant decrease in anxiety severity scores</i>	<i>Statistical analyses for efficacy and mode of action</i>
<i>Comparison with Pharmacotherapy and CBT</i>	<i>Similar or slightly better long-term effects on anxiety levels compared to pharmacotherapy and CBT</i>	<i>Correlation analyses for neurobiological and psychological factors</i>
<i>Patient Satisfaction</i>		

	<i>Positive reception and high satisfaction rates among patients</i>	<i>Patient interviews, self-completion questionnaires</i>
Moderators of Effectiveness	<i>More effective for GAD and SAD; length of intervention (8-12 weeks) crucial for sustained effects</i>	<i>Analysis based on anxiety disorder types and intervention duration</i>
Clinical Implications	<i>Integration of MBIs into standard anxiety disorder treatments; consideration for non-responsive cases</i>	<i>Public health approaches and preventive measures</i>
Limitations	<i>Varied methodologies and sample sizes; retrospective data analysis limitations</i>	<i>Need for biomarker development and further refinement of MBIs</i>

Discussion

This article reflects on the findings related to the efficacy of MBIs in alleviating anxiety disorders and place the results into the context of prior research, consider possible rationales for the observed effects, and discuss practice and public health implications of the findings as well as the limitations of the studies in question and directions for future investigation. When cross-referencing the results with the studies documented in the research, it can be noted that MBIs prove effective in decreasing the level of anxiety in different groups of people and different environment. Various investigations reveal that MBSR and MBCT has been effective in reducing anxiety by respective analysis having moderate to large effect size similar to numerous meta-analytical studies conducted. Nevertheless, controversy still surrounds the extent of such effects due to differences in study features, participants' characteristics, and applied treatment regimens. Although, some studies provide fewer encouraging results, the magnitude of decrease could be even more pronounced in severe anxiety cases or when control groups included active ones such as cognitive behavioural therapy or medication. This implies that there is potential to distil the currently unclear picture of what kind of context is conducive to MBI intervention effectiveness.

The present study has evidenced that MBIs are effective with the above findings and their theoretical framework has been explained by making comparisons within the literature. The mindfulness-to-meaning theory indicates that the current mindfulness practices only recruit cognition reappraisal, decrease rumination, and emotion regulation that helps in lessening of anxiety symptoms. Research findings based on neurobiology of the disorder corroborate these mechanisms, stating that people experiencing major depressive disorder show variation in the areas of the brain that are responsible for attention control and regulation of emotions. Furthermore, self psychology and cognitively informed models explicate that client characteristics like baseline level of mindfulness, compliance with the programme and therapeutic relationship with the key worker are potential mediators of the treatment effects. All these hints make it possible to consider the requirement of individualized treatment strategies based on the patient's needs and features.

The above findings have deep consequences to the clinical practice in terms of admitting the MBIs into the arsenal of treatments for the anxiety disorders. Clinicians need to be trained if offering MBIs using approaches that incorporate mindfulness concepts within the therapeutic process, as well as adjusting the delivered exercises depending on the patient's responses. Things like the use of clear and detailed procedures, regular training and support, and assessment can apply pressure to be faithful to the materials and establish consistency in the facilitation of MBI. Also, the promotion of mindfulness in healthcare institutions can facilitate patients' involvement and compliance in maintaining their health. In terms of public health, a society practicing MBIs can live healthier psychologically and economically free from the impacts of the anxiety disorders. These approaches are adding MBIs to community-based programs, extending them to employer-provided wellness programs, and utilizing technology for telemedicine delivery. Mental health information services can help to raise awareness of the advantages of using MBIs to the general population which will also assist in eradicating the myths in any particular society thus enhancing the acceptance of such techniques.

To prevent misinterpretation of the findings of this study, it is crucial to consider the study's limitations. Limitations at the methodological level include the fact that some of the included research are conducted retrospectively, the different definitions and assessment of the outcome, and various biases potentially contained in self-assessment data. The measures used to identify changes in anxiety and mindfulness are self ratings, one can argue that it is merely a response bias, and the evidence may have publication bias since only articles with positive results would be submitted. Future studies should rectify these limitations by incorporating more robust paradigms such as employing randomised controlled trials with increased sample subjects, prolonged come across periods with objective assessment of the treatment results. Future research suggestions revolve around investigating the longer-term effectiveness of the MBIs in the maintenance of anxiety symptoms' decrease when the broad treatment programmes are over. Researchers can compare treatment formats of MBI's such as MBSR and MBCT and characteristics of clinical populations that may moderate treatment response on anxiety outcomes can be examined. Further, understanding how patients differ from one another in their response to treatment and finding predictors of the effectiveness of Mindfulness practice can improve personalized treatments. Further, to address the gaps in the evidence, both qualitative research to evaluate patient's subjective experience of MBI and/or attitudes towards it, is warranted for use in conjunction with quantitative to offer comprehensive effects of MBI. In conclusion, this extensive analysis underlines the contemporary function of MBIs in the management of anxious disorders, backed with evidence of effectiveness and processes of exercise. The implementation of MBIs in clinical practice present various possibilities of improving the quality of the patients' treatment, as well as the broad application of MBIs in public health interventions point to more overall mental wellness. It is only when study limitations and future research directions are discussed that this evidence basis will be strengthened, and the implementation of MBIs will be improved, which directs efforts to creating more efficient and effective approaches to managing patients with anxiety disorders in various healthcare facilities and in the community at large.

Conclusion

Therefore, this present work emphasises on the usefulness of such MBIs in treating anxiety disorders; it also reveals the overall efficacy of these MBIs on numerous clients and patients, as well as detailing how these types of MBIs work in addressing those disorders. MBIs such as MBSR and MBCT useful for anxiety disorders as it strengths the patient's ability to regulate emotions, decrease stress reactivity, and build psychological flexibility. The comprehensive patient benefits that have been observed when using MBIs demonstrate that such interventions should be incorporated into practice as an adjunct to other therapy forms. Therefore, the future studies and the increased utilization of MBIs in treating mental health disorders contribute towards the improvement of psychiatric conditions and serves to attend to the various needs of the clients experiencing anxiety disorders.

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