

Major Depressive Disorder: Etiology, Impact Factors and the Effectiveness of Mindfulness-Based Intervention

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Abstract. This comprehensive review discusses the implications of mindfulness-based interventions in treating Major Depressive Disorder (MDD) in children, an increasingly recognized global mental health issue. MDD cast significant challenges to a child's social interaction, academic performance, and overall personal development, necessitating effective interventions. While traditional therapies, such as cognitive-behavioral therapy and interpersonal therapy, have proven their effectiveness, this paper explores the emerging field of mindfulness-based interventions. These interventions, encompassing training in mindfulness meditation, focus on enhancing present-moment awareness, emotional regulation, and a non-judgmental acceptance of one's feelings and thoughts. Several studies have reported a reduction in MDD symptoms and improvements in emotional regulation in children due to mindfulness-based interventions. The study acknowledges some potential limitations and challenges with this approach but advocates for its promise in treating childhood MDD. The paper strongly urges for further research in this area to fully exploit this innovative therapeutic approach's potential, fine-tune its application, and investigate its efficacy across different clinical contexts.

Keywords: Children; Depressive Disorder; Mindfulness-Based Interventions; Disruptive Mood Dysfunction Disorder.

1. Introduction

Depressive disorders represent an increasingly prevalent and diverse range of mental health conditions that pose a considerable public health concern across the globe. These disorders transcend the barriers of age, gender, ethnicity, or socio-economic background, affecting individuals indiscriminately. A particularly concerning aspect of this global mental health issue is the symptoms of MDD's impact on children.

The Diagnostic and Statistical Manual of Mental Disorders (5th ed., text revision) defines Major Depressive Disorder (MDD) as a debilitating condition characterized by enduring feelings of profound sadness or a marked lack of interests in nearly all activities. This definition is supplemented by the presentation of additional symptoms, which may include significant weight or appetite changes, sleep disturbances, a lack of energy or fatigue, feelings of worthlessness or disproportionate guilt, cognitive difficulties, and recurrent contemplation of death or suicide [1].

In the context of a child struggling with MDD, these symptoms often manifest in ways that disrupt normal developmental trajectories. Children may display severe irritability, academic underperformance, and notable changes in their social interactions. The impacts of MDD on children, therefore, extend beyond their immediate experiences. They also carry the potential to influence the cognitive and social developments, potentially impacting their future life. This emphasizes the pressing need for careful attention, early identification, and appropriate therapeutic intervention for childhood MDD.

The main focus of this paper is to conduct an in-depth investigation into the potential effectiveness of mindfulness-based interventions as a therapeutic method for children diagnosed with MDD. Mindfulness-based intervention fosters a non-judgmental awareness of the present moment, enabling individuals to break free from habitual, often unconscious emotional and physiological reactions to everyday events [2]. The application of such interventions in a therapeutic context aims to provide individuals with strategies to regulate their emotional responses and to develop more adaptive coping mechanisms.

Adopting a mindfulness-based approach to intervention, this study seeks to contribute to a comprehensive understanding of children with MDD. It aims to shed light on how children experiencing this disorder can be more efficiently and empathetically assisted through mindfulness-based therapeutic strategies. While conventional therapies have their advantages, exploring mindfulness-based interventions opens the door for potential innovations in treatment. As looking deeper into the realm of mindfulness-based interventions, they also can be good at assisting children recover from MDD. This paper aims to advocate further researches and discussions in this area, fostering a more holistic approach to mental health intervention in children suffering from MDD.

2. Literature Review

2.1. Methodology

The main method for the paper is a comprehensive review of related literatures on this topic of Mindfulness-based intervention on children with the major depressive disorder through some primary literatures like peer-reviewed articles and published books.

The sources of this paper include the DSM-5-TR for the definition and description of MDD and supported works by Segal, Williams, & Teasdale for the introduction for mindfulness-based interventions on children with MDD [2]. Furthermore, deeper analysis and explanations for children with MDD and the mindfulness-based intervention relationships and efficacy are supported by recent researches from multiple papers. The focus of this paper is to synthesize all the studies to give a complete and full understanding about the reasons and advantages of Mindfulness-based Intervention on the children with MDD through exploring the etiology and influences of MDD on children and the reasons and applications of Mindfulness-based intervention in treating MDD and the effects for this intervention on children with MDD.

2.2. Connotation

2.2.1. Major Findings

An extensive analysis of academic literature provides substantial evidence in support of the efficacy of mindfulness-based interventions for treating Major Depressive Disorder (MDD) in children. These interventions, incorporating training in mindfulness meditation and the integration of mindfulness awareness into children's daily activities such as school and home life, have significantly reduced MDD symptoms and improved emotional regulation. Neurological studies have confirmed these interventions' biological impact on the brain, leading to change and activation in neural structures [3]. This implies that mindfulness-based interventions extend beyond only shifting attitudes or perspectives; they could physically influence the human brain. In fact, recent studies like Tseng and his team provide compelling academic evidence supporting the effectiveness of mindfulness-based interventions in reducing MDD symptoms in children [4].

Furthermore, research indicates that the etiology of MDD is multifactorial, encompassing biological, developmental, and environmental factors. MDD in children is associated with social isolation, academic underperformance, and significant developmental challenges. However, the application of mindfulness-based interventions has demonstrated promising results, not only in reducing MDD symptoms but also in enhancing social and academic functionality in children [5-7]

Regarding prognosis and treatment, early intervention can substantially influence outcomes, with different kinds of treatments like Mindfulness-Based Cognitive Therapy (MBCT), Cognitive-behavioral therapy (CBT), and Interpersonal therapy (IPT), all playing crucial roles. However, the multifaceted nature of mental health interventions underlines the need for ongoing research and careful application of these treatments. The evidence for mindfulness-based interventions' effectiveness in treating depression in children and reducing MDD symptoms, despite these complexities, indicates a promising path forward in managing MDD in children [5].

2.2.2. Etiology

The MDD's etiology is multifactorial and the biological factors are playing important roles in genetic predispositions and the changes in the brain structures are profoundly associated with MDD [1]. Moreover, the essay by Zhou and his team has pointed out several factors which contribute to the MDD like fatty acid metabolism and purine metabolism in young patients [8]. On top of that, developmental factors could also play an important role in influencing people with MDD. For example, cognitive patterns, including unfavorable thinking patterns and ineffective coping strategies, have been linked to the major depressive disorder and people in the early stage like in childhood and adolescence may experience some trauma and stressors to increase their risks for having MDD [1]. Developmental factors are like biological factors, people cannot ignore their influences in MDD. Then, environmental factors could significantly influence potentials for people to develop MDD like stressful life events, such as the losses of loved ones or drastic events can trigger depressive disorders to people [1]. Hence, the MDD etiology is not a simple concept to understand but a multifactorial problem required further studies.

2.2.3. Individual and Social Impact

Major Depressive Disorder (MDD) indeed poses significant challenges for children, affecting various aspects of their lives such as their social interactions, academic performance, and overall personal development. Symptoms of MDD in children may be displayed as increased lethargy or agitation, sadness or irritable mood, anhedonia (loss of interest in activities they once enjoyed), and diminished self-esteem [1]. In the social sphere, children with MDD often struggle with social isolation due to the severe symptoms of the disorder. Their low mood and anhedonia could lead them to withdraw from their interactions with peers and avoid social situations they usually enjoyed. Such withdrawal exacerbates feelings of loneliness and can further intensify their depressive symptoms, resulting in a vicious cycle of social disconnection and deteriorating mental health.

Simultaneously, MDD significantly impairs a child's academic performance. Depression diminishes concentration, energy levels, and motivation. Those important factors which could influence academic performance are impacted by MDD. Consequently, children with MDD are at a higher risk of academic underachievement than their peers due to these cognitive impairments. A report by Humensky highlights this correlation between adolescent depression and decreased academic performance [9].

Nevertheless, Mindfulness-based interventions could help children with MDD. A study by Malboeuf-Hurtubise has conducted a deep analysis of mindfulness-based interventions on students in elementary period diagnosed with MDD that demonstrated some encouraging results: a majority of participants reported experiencing improvements in their anxiety and depression levels after the intervention and the students' abilities to regulate their emotions improved, which is an essential skill for navigating social situations and managing academic pressure [5].

Mindfulness-based interventions facilitate the development of skills like focus, attention, and emotional regulation, which are key in both social and academic contexts. These interventions are suggesting great potential in not only alleviating the debilitating symptoms of MDD but also in bolstering social and academic functioning among children affected by the disorder.

For instance, a study by Zenner supports this claim, presenting the effectiveness of mindfulness-based interventions in improving social-emotional resilience and academic achievement in children [6]. Further corroborating these findings, Klingbeil and his team have concluded that this kind of intervention positively impact self-regulation, one of the key competencies linked to academic success and healthy social relationships [7].

As a result of that, mindfulness-based interventions could serve as a promising treatment to help children with MDD which navigates their daily lives more successfully, underscored by the mounting evidence of their efficacy in both research and clinical contexts.

2.2.4. Prognosis and Treatment

Major the prognosis of MDD for children could be quite variable. Factors which influence the onset of MDD in Children could be multifactorial. The American Psychiatric Association notes that early intervention and treatment can have a significant impact on the prognosis and can reduce the risk of recurrent depressive episodes later in life. The treatments for children with MDD which usually used in clinic cases are Cognitive-behavioral therapy (CBT) and Interpersonal therapy (IPT), as outlined by the American Psychiatric Association currently [1].

The Cognitive-behavioral therapy (CBT), as a modality of psychotherapeutic intervention, is founded on the principle of imparting the skills to patients to identify, challenge, and ultimately transform irrational or maladaptive thought patterns. Several empirical studies have corroborated the efficacy of CBT in mitigating symptoms and improving overall functionality in children suffering from MDD. For instance, a pivotal study by Curry has shown that CBT is being proven successfully reduce some depressive symptoms and improves overall functioning in children [10].

Moreover, Interpersonal therapy (IPT) adopts an attachment-oriented perspective, emphasizing the improvement of interpersonal relationships and social functioning as a therapeutic strategy to alleviate depressive symptoms. Weisz conducted a comprehensive study demonstrating the significant benefits of IPT in treating the depression in teenagers that supported the efficiency of IPT in treating depression, noting improvements in depressive symptoms, social functioning, and school performance [11].

Nonetheless, mindfulness-based interventions have been recognized as a potentially effective method to treat children with MDD. It includes training in mindfulness meditation, a practice that encourages present-moment awareness and acceptance of one's thoughts and feelings without judgment. One specific type of mindfulness-based intervention is Mindfulness-Based Cognitive Therapy (MBCT). This therapy mentioned by Segal, Williams, and Teasdale, combines mindfulness techniques with elements of CBT. Their study suggests that MBCT helps children become aware of their thought patterns, especially those that could lead to a depressive relapse, and cultivate a more adaptive response [2].

Research has shown promising applications for this method. A study by Tseng found that this method could reduce symptoms of MDD [4] and research by Malboeuf-Hurtubise has also demonstrated that mindfulness-based interventions are beneficial for students at improving emotion regulation in children from 6 to 12 years old, reducing symptoms of MDD and improving emotional regulation at the same time [5]. This is significant because developing this treatment can aid in navigating stressful situations, promote empathy, increase attention span, and reduce negative reactivity in children.

In essence, while CBT and IPT have traditionally been the therapeutic cornerstones in treating MDD in children, the emergence of mindfulness-based interventions, especially MBCT provides clinicians with more options to treat patients. Each approach carries its unique strengths and nuances, and their selection should be thoughtfully considered with the situations of the differences of individual cases.

Given existing studies and research on the mindfulness-based interventions on treating children with MDD, there are still some aspects and problems for future research to pay attention to. In the study of Malboeuf-Hurtubise, the teachers of the study have reported deteriorating scores on anxiety and depression for two participants following the mindfulness-based intervention [5]. This data has displayed some potential problems on the efficacy of the mindfulness-based intervention and this discrepancy on the teachers' reports and participant's self-reports have showed that complexity of evaluating mental health interventions. It is a reminder that different people may have different perspectives on a child's mental health, and that all of these aspects are important to consider and evaluate a person's mental well-being, especially for children with MDD.

3. Conclusion

This literature reviews the significant impact of Major Depressive Disorder (MDD) on children, including the physiological, psychological, and social ramifications. It delved into the multifactorial etiology of MDD, including biological, developmental, and environmental factors. Furthermore, the effectiveness of mindfulness-based interventions has been examined as potential treatments for children suffering from MDD. The review of those literatures revealed promising results, suggesting that mindfulness-based interventions can be a successful way to reduce symptoms of MDD and enhance emotional regulation in children.

Although there are studies have pointed out potential problems of the MBCT on treating Children with MDD, overall, these findings underscore the potential promise of MBCT as a potent therapeutic tool to treat children in MDD. More studies and efforts are required to extend the knowledge frontier of this innovative therapeutic approach and its applicability in diverse clinical contexts. While traditional therapies such as CBT and IPT remain valid treatment options for children with MDD, mindfulness-based interventions and particularly MBCT have emerged as promising supplementary approaches. And the efficacy of the mindfulness-based interventions has given a promising future to treat children with MDD and a clear direction for future clinicians to dig in and improve the treatments for children.

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