

Effect Mindfulness Based Training on Attention, Hyperactivity and Emotion Regulation Among Children with ADHD: A Randomized Controlled Trails

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Abstract

Background:

The aim:

Setting:

Subjects

Tools:

Results:

Recommendation:

Keyword:.

Introduction

Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental disorder that commonly affects children and adolescents and can persist into adulthood (Azzam et al., 2021; Liu et al., 2018). It is one of the leading causes for children to be referred to psychology and psychiatric clinics. A recent systematic review found that the global prevalence of ADHD is 7.6% (Salari et al., 2023), with higher estimates among children aged 3-17 years varying from 6% to 16% (Danielson et al., 2022). In Egypt, epidemiological studies indicate that ADHD is a widespread condition that affects 9.4 to 21.8% of children, which is higher than the worldwide incidence (Aboul-ata & Amin, 2015; Bishrry et al., 2018; EL-Gendy et al., 2017).

While research on the prevalence of ADHD in Egypt is limited, and further studies are needed to better understand the extent of this disorder in the country. Hence, implementing evidence-based practices to address the symptoms of ADHD is crucial to improving the well-being of both affected children and families (Aboul-ata & Amin, 2015; Bishrry et al., 2018; EL-Gendy et al., 2017).

ADHD symptoms can have a significant impact on the child and their family. The symptoms of hyperactivity, inattention, and impulsivity can affect the child's academic performance, social interactions, and overall quality of life. Children may struggle with tasks, organizing activities, and following instructions, and their emotions may be difficult to control. The family of a child with ADHD may also be affected, experiencing stress, frustration, and a sense of helplessness. This can lead to emotional exhaustion and financial strain for parents and caregivers due to the cost of treatment and missed work (Bishry et al., 2008; Peñuelas-Calvo et al. 2020)

Attention deficit is one of hallmark symptom of ADHD, making it difficult for them to concentrate, stay focused, and complete tasks. This can have a significant impact on their academic performance, social interactions, and self-esteem. In the classroom, children with ADHD may struggle with following instructions, organizing their work, and controlling their behavior. However, with proper support and intervention, children with ADHD can learn to manage their symptoms and lead successful lives (Bruno et al., 2023; Singh et al., 2015).

Moreover, hyperactivity is a common symptom of ADHD and can take various forms, such as fidgeting, restlessness, excessive talking, and impulsiveness. This can make it challenging for children to engage in calm activities, follow rules, and finish tasks. Additionally, they may find it difficult to socialize and maintain friendships as their behavior can be disruptive and overwhelming for others. The constant movement and restlessness can cause fatigue and difficulty sleeping, further affecting their daily life. This can be stressful for family members who may have difficulty managing the child's behavior and needs. However, with appropriate interventions and support, children with hyperactivity can learn to manage their symptoms and improve their overall well-being. (Hinshaw et al., 2021; Fioravante, Lozano-Lozano, Martella, 2022).

Emotion regulation is the ability to manage and control one's emotional responses to different environmental stimuli. Children diagnosed with (ADHD) often experience difficulties with emotion regulation. These challenges can take various forms, such as difficulty with emotional self-awareness and self-monitoring due to inattentive symptoms, impulsive emotional reactions due to impulsivity, and heightened emotional arousal and difficulty calming down due to hyperactivity (Soler-Gutiérrez, Pérez-González, & Mayas, 2023). These emotion regulation difficulties can have significant negative consequences for children with ADHD, including increased risk for anxiety and depression, social difficulties, and academic and occupational impairments (Walter et al., 2023). Therefore, it is crucial to address difficulties in emotion regulation, attention, and behavior as part of the comprehensive treatment of ADHD. Effective interventions, such as cognitive-behavioral therapy, mindfulness-based interventions, and medication management, can assist people with ADHD in developing effective emotion regulation skills and enhancing their overall functioning. (Haugan et al., 2022; Jenkins, et al., 2020; Lee, Chen & Lin, 2022).

Mindfulness training is a promising form of training for children with ADHD, as it focuses on attention and has gained empirical support as a complementary or alternative intervention. It involves increasing awareness and nonjudgmental observation of present-moment experiences while reducing automatic responding (Cairncross, & Miller 2016; Santonastaso et al., 2020). Attention regulation is a fundamental mechanism of mindfulness meditation, which involves training to sustain focus on present-moment experiences and gently shifting attention back to the meditation object when the mind drifts (Bishop, et al., 2004). Mindfulness meditation is a relatively new approach for reducing stress and emotion regulation difficulties among children. While researching the efficacy of mindfulness training in children is a new domain, existing evidence suggests that it has positive effects on psychological well-being, pain management, emotion dysregulation, negative behaviors, and cognitive/executive functions and attention (Evans et al., 2018; Zhang, Díaz-Román, & Cortese, 2018).

Nurses have an important role in caring for children with ADHD, particularly in the context of mindfulness-based interventions. They can provide education and support to both parents and children regarding the benefits of mindfulness practice and can help implement mindfulness programs in clinical and community settings. Nurses can assist children with ADHD to develop mindfulness skills, including paying attention to present-moment experiences and managing their emotions. This can be done through individual or group sessions, where nurses can guide children through various mindfulness exercises and provide feedback and support. Collaborating with other healthcare professionals such as psychologists and psychiatrists, nurses can ensure that children with ADHD receive comprehensive and coordinated care. By integrating mindfulness into their care approach, nurses can help enhance attention, emotion regulation, and overall well-being in children with ADHD.

The aim of the study is to:

The research questions:

MATERIALS AND METHOD

MATERIALS

I. Research design:

II. Setting:

III. Subjects:

Tools:

Four tools were used for data collection in this study:

Tool I: A Socio-demographic and Academic Data Questionnaire:

Part 1 Socio-demographic data:

Part 2 Academic data:

Tool III:

Tool IV:

Ethical approval and consent to participate.

All methods were carried out according to the relevant guidelines and regulations of the Declaration of Helsinki (DoH-Oct2008). Study procedures were revised and approved by the research ethics committee of the faculty of nursing, Alexandria University and the Human Rights Protection Committee of the General Secretariat of Mental Health, Ministry of Health, and Population in Cairo (**IRB**). An informed written consent was obtained from all patients after explaining the purpose and nature of the study and who agreed to participate in the study.

Declaration

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

No potential conflict of interest was reported by the authors.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Authors contributions

Acknowledgements

Our sincere thanks go to all participants of the study.

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Overall, ADHD is a significant public health concern worldwide, and it is important to continue researching its prevalence and impact on children's development. Early diagnosis and intervention are crucial to improving outcomes for children with ADHD and helping them reach their full potential.

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