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Effectiveness of Mentalization-Based Training on Parenting Self-Efficacy and Parent-Child Interaction in Mothers of Children with Attention Deficit/Hyperactivity Disorder

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Abstract

Abstract

The hyperactivity of children can impose substantial psychological and behavioral pressures on family members, particularly mothers, and leave harmful effects on their cognitive, emotional, and social development. The purpose of this study was to examine the effectiveness of mindfulness-based (mindfulness-oriented) training on parenting self-efficacy and parent–child interaction among mothers of children with Attention-Deficit/Hyperactivity Disorder (ADHD). This was a quasi-experimental study of a pretest–posttest design with a control group. The statistical population consisted of all mothers who had a child diagnosed with ADHD and who referred to psychology centers in Ardabil in the academic years 1404–1403 (Iranian calendar). From this population, 30 individuals were purposefully selected and randomly assigned to two groups: experimental group (n = 15) and control group (n = 15). The experimental group participated in 10 sessions of 45 minutes each, based on mindfulness principles, while the control group did not receive an intervention. Data collection instruments included the Parent–Child Relationship Scale (PCRS) developed by Fine and colleagues, the Parenting Self-Efficacy Scale (PSAM) by Domka, and the Conners' Parent Rating Scale (CPRS-26) for ADHD. Data were analyzed using Multivariate Analysis of Variance (MANOVA) with SPSS version 25. The results of the MANOVA indicated that mindfulness-based training for mothers of children with ADHD led to improvements in parental self-efficacy and parent–child interaction compared with the control group ($P < 0.05$). Given the efficacy of mindfulness-based treatment in enhancing self-efficacy and parent–child interaction among mothers of children with ADHD, psychologists and specialists can utilize mindfulness techniques to address the challenges of these families.

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Introduction

Attention-deficit/hyperactivity disorder (ADHD) is a common neurocognitive developmental disorder that affects approximately 5–7% of children and adolescents worldwide (Choi et al., 2023). Its key features are persistent patterns of inattention and hyperactivity/restlessness that are more severe than those of peers and can lead to academic, social, and sometimes occupational problems. These challenges increase parental stress and reduce their ability to provide effective support. As a result, negative emotional reactions (e.g., frustration, anxiety, worry, and decreased self-efficacy) are more prevalent in parents (Becker, 2021; Moutafi, 2023).

Parental self-efficacy is a critical indicator of the quality of parenting and child well-being. According to Bandura, parenting self-efficacy is a part of personal self-efficacy and reflects a parents' belief in their own adequacy in the parenting role (Zhang & Zhang., 2024). Increased self-efficacy leads to stronger emotional bonds and improved mother-child relationships, and is especially important when parents have caring roles (e.g., maternal or paternal care). Parents of these children usually report lower self-efficacy, which can lead to parenting difficulties (Ebrahimzadeh et al., 2023).

In addition to self-efficacy, the quality of the parent-child relationship plays a critical role in children's psychological development, resilience, and adjustment. In families with excitable children, relationship problems can add to environmental instability and parental stress burden. Therefore, improving these relationships is a critical objective (Lavenda & Hertz, 2024; Davies et al., 2022).

Among intervention approaches, non-pharmacological interventions such as mindfulness-based therapy have received increasing attention. Mindfulness is a psychodynamic approach that helps individuals better understand their own and others' mental experiences by improving the awareness of mental states (Sharp et al., 2020). Research has shown that mindfulness-based training can strengthen parent-child relationships, including in children with Tic disorders (Luedemann et al., 2021). Longitudinal studies also show that this approach is more effective in reducing behavioral and emotional problems than other interventions such as group parenting training and social skills training (Halfon et al., 2024). Given the limited spread of this educational approach in Iran, more research is needed in this field. This study aimed to investigate the effectiveness of mentalization-based training in parental self-efficacy and parent-child communication in mothers of children with ADHD disorder.

Method

The method of the present study was a quasi-experimental design with a pretest-posttest design with a control group. The statistical population of this study included all mothers of children with ADHD who referred to psychological centers in Ardabil in the academic year of 2024-2025. From among this group, using purposive sampling, 30 mothers were selected. They were randomly assigned to the experimental group (15 mothers) and control group (15 mothers). The experimental group participated in ten 45-minute sessions based on mentalization, and the control group did not receive any intervention.

Data collection instruments

Fine et al.'s Parent-Child Relationship Questionnaire (1983), Dumka et al.'s Parenting Self-Efficacy Scale. (1996) and Conners et al.'s Attention Deficit/Hyperactivity Disorder Scale (2008) were the instruments of the study.

Data analysis

Data were analyzed using multivariate analysis of variance (MANOVA) with SPSS (version 25).

Findings

Table 1 presents the results of univariate analysis of covariance for comparing the means of parenting self-efficacy and parent-child interaction.

Table 1. *Univariate analysis of covariance for comparing the means of parenting self-efficacy and parent-child interaction*

Source	Dependent variable	Sum of squares	df	Mean of squares	F	Sig.	Eta squared
Posttest	parenting self-efficacy	1091.333	1	363.778	19.981	.0001	.45
	parent-child interaction	45878.317	1	15292.772	11.045	.0001	
Pretest	parenting self-efficacy	135185.067	1	135185.067	1550.796	.0001	.2
	parent-child interaction	1950124.817	1	1950124.817	48.271	.0001	.19

As the results of the table show, there is a significant difference between the posttest scores of parental self-efficacy (F= 19.981, P= 0.05), which indicates the significant effectiveness of mentalization training in increasing

parental self-efficacy in the posttest of the intervention group. Therefore, the research hypothesis of the effectiveness of mentalization training in increasing parental self-efficacy is supported. Moreover, the table shows that there is a significant difference between the posttest scores of parent-child interaction (F= 11.045, P= 0.05), which indicates the significant effectiveness of mentalization training in increasing parent-child interaction in the posttest of the intervention group. Therefore, the research hypothesis of the effectiveness of mentalization training in increasing parent-child interaction is supported.

Conclusion

This study aimed to evaluate the effect of mentalization-based training on parental self-efficacy and parent-child interaction in mothers of children with ADHD. Findings indicated that mentalization-based training significantly improved parental self-efficacy and the quality of parent-child interaction. These results are consistent with theoretical models that state that awareness of mental states and emotional differences in the family environment can lead to more effective management of child behavior (Hagelquist & Rasmussen., 2020; Dollberg, 2022; Lavenda & Hertz, 2024). In fact, mentalization encourages parents to identify the emotional and psychological factors underlying the child's behaviors and thereby provides more adaptive and targeted responses (Canário et al., 2024). This process helps parents improve the connection between themselves and their child; the focused presence of parents in interactions creates an opportunity for exchange and problem-solving, and increases their sense of competence and efficacy as parents (Del Bianco et al., 2018). In this regard, these changes in mothers lead to reduced stress, increased self-confidence, and improved parenting methods. With more positive interaction and successful feedback in the family, parental self-efficacy will increase (Canário et al., 2024).

It is suggested that future research examine the long-term effects of mentalization training on parents and children, as well as the effect of this type of training on other behavioral and emotional disorders. Furthermore, paying attention to different cultural and social factors in the design of educational interventions can be effective in order to achieve more effective results.

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Conflict of interest

This study was conducted under the ethics code of IR.UMA.REC.1404.021 in the Ethics Committee of the University of Mohaghegh Ardabili. To maintain compliance with ethical principles, an effort was made to collect data after obtaining the consent of the participants. According to the authors of this article, there is no conflict of interest.

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