



# Effectiveness of mindfulness-based stress reduction program on emotion regulation and obsessive-compulsive symptoms of children with obsessive-compulsive disorder

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## Abstract

**Aim:** the purpose of this research was to investigate the effectiveness of mindfulness-based stress reduction program on emotion regulation and obsessive-compulsive symptoms of children with obsessive-compulsive disorder. **Method:** In terms of the objective, the current research was of an applied type, and in terms of the research design and method, it was a quasi-experimental design with a pre-test and post-test design with an experimental group and a control group and a three-month follow-up period. Therefore, the statistical population of the study included all children aged 6 to 11 years who were referred to psychotherapy and counseling centers in Tehran's 3rd district in 2022 for having obsessive-compulsive symptoms. Then, 40 people were selected by purposeful sampling and randomly assigned to an experimental group (20 people) and a control group (20 people). Finally, Alexander et al.'s (2012) mindfulness-based stress reduction program was administered to the experimental group. In order to collect data, the research tools of Gross and John (2003) emotion theory questionnaires and Goodman's algebraic obsession scale (1989) were used. In order to statistically analyze the data, frequency distribution tables were used in the descriptive part, and in the inferential part of the data analysis, mixed variance analysis with repeated measurements and Bonferroni's post hoc test and SPSS software version 26 were used. **Results:** The F value and the significance level of the obtained value were obtained in the variable of symptoms of obsessive-compulsive disorder ( $F = 12.22$  and  $P = 0.001$ ) and emotion regulation ( $F = 11.78$  and  $P = 0.001$ ). Therefore, it can be concluded that the independent variable (the effectiveness of the mindfulness-based stress reduction program) significantly changed the dependent variables (obsessive compulsive disorder symptoms and emotion regulation). This means that the changes made in the dependent variables were caused by the implementation of the effectiveness of the mindfulness-based stress reduction program on the members of the experimental group. Moreover, the results of the post-hoc test indicated the stability of the effectiveness of the therapy on the research variables. **Conclusion:** Based on the available findings, it can be concluded that the stress reduction program based on mindfulness has been effective on emotion regulation and obsessive-compulsive symptoms of children with obsessive-compulsive disorder. Therefore, this program can be used in the treatment of children with obsessive-compulsive disorder.

**Keywords:** stress reduction program, mindfulness, obsessive compulsive disorder, emotion regulation, children.

## Introduction

Obsessive-compulsive disorder or obsessive-compulsive disorder is considered as one of the debilitating and serious mental states (Yadollahi Ardestani et al., 2022). In epidemiological studies, the lifetime prevalence of obsessive-compulsive disorder in the general population has been estimated at 3.8-3.2% (Wichva, Butler, & Shotbolt, 2020). This disorder is known through three separate components, the first component is constant thinking or imaginations or ideas whose distinctive features are their unwantedness and intrusiveness. The second component of obsessions is compulsions, which are specific behavioral activities, unconscious mental rituals (rituals), attempts to neutralize obsessions, or behaviors that indicate indecisiveness. In addition to these two components, people suffering from this disorder show avoidance behaviors in order to prevent the stimulation of obsessions and compulsions that accompany them (Kaiser et al., 2020). One of the major problems in these patients is the existence of inefficiency in internal and external processes, which are defined in the form of reviewing, evaluating and adjusting emotional indicators (McCann, 2009). During research conducted on various patients, including obsessive-compulsive patients, defects in the factors based on emotions have been reported (Zulfaqari et al., 2022). Also, one of the most basic concepts in people with OCD are obsessions and compulsions that reduce distress, and these emotional arousals are usually known as fear or anxiety (Blaki et al., 2017). On the other hand, dysfunctional attributions and suppressed emotions are significantly more in the family members of obsessive-compulsive patients compared to normal people, and these attributions show themselves in the form of attributing problems to uncontrollable factors (Renshaw et al., 2017). The research results show that the higher the anxiety sensitivity in the family members and caregivers of the patient, the more likely they are involved in the obsessive symptoms of the patient family member and strengthen his symptoms. It has been determined that the existence of problems in emotions is manifested in concepts such as stress, cognitive coping, attachment and the theories proposed in relation to emotions (Gross, 2013). Zulfiqari et al. (2022) showed in their research that emotional indicators also played a significant role in explaining obsessive-compulsive disorder and these indicators were stronger predictors than other indicators (Zulfiqari et al., 2022).

One of the treatments that seems to be effective considering the dimensions of this disorder is the stress reduction program based on mindfulness. Mindfulness is an important underlying factor to achieve liberation. The presence of mind means that a person directs his awareness from the past and future to the present. Bishab (2018) believes that mindfulness in contemporary psychology as an approach to increase awareness in responding to mental processes including emotional disorders is very new and effective in reducing anxiety symptoms and other mood disorders. It is suggested that mindfulness interventions may cause processes that underlie psychological well-being (Dan et al., 2022). Mindfulness-based therapies have been reported to be highly effective for the treatment of some clinical disorders and physical diseases due to the fact that they address both physical and mental dimensions (Dan et al., 2022).

Therefore, considering the importance of treating disorders in childhood and the lack of research on the effectiveness of mindfulness-based stress reduction programs, the purpose of this study was to answer the following question:

Is the mindfulness-based stress reduction program effective on emotion regulation and obsessive-compulsive symptoms of children with obsessive-compulsive disorder?

### **Method**

In terms of the objective, the current research was of an applied type, and in terms of the research design and method, it was a quasi-experimental design with a pre-test and post-test design with an experimental group and a control group and a three-month follow-up period. Therefore, the statistical population of the study included all children aged 6 to 11 years who were referred to psychotherapy and counseling centers in Tehran's 3rd district in 2022 for having obsessive-compulsive symptoms. Then, 40 people were selected by purposeful sampling and randomly assigned to an experimental group (20 people) and a control group (20 people). Finally, Alexander et al.'s (2012) mindfulness-based stress reduction program was administered to the experimental group. In order to collect data, the research tools of Gross and John (2003) emotion theory questionnaires and Goodman's algebraic obsession scale (1989) were used. In order to statistically analyze the data, frequency distribution tables were used in the descriptive part and in the inferential part of the data analysis, mixed variance analysis with repeated measurements and Bonferroni's post hoc test and SPSS software version 26 were used.

### **Results**

The F value and the significance level of the obtained value were obtained in the variable of symptoms of obsessive-compulsive disorder ( $F = 12.22$  and  $P = 0.001$ ) and emotion regulation ( $F = 11.78$  and  $P = 0.001$ ). Therefore, it can be concluded that the independent variable (the effectiveness of the mindfulness-based stress reduction program) significantly changed the dependent variables (obsessive compulsive disorder symptoms and emotion regulation). This means that the changes made in the dependent variables were caused by the implementation of the effectiveness of the mindfulness-based stress reduction program on the members of the experimental group. Moreover, the results of the post-hoc test indicated the stability of the effectiveness of the therapy on the research variables.

### **Conclusion**

The present study was conducted with the aim of investigating the effectiveness of mindfulness-based stress reduction program on emotion regulation and obsessive-compulsive symptoms of children with obsessive-compulsive disorder. The results of data analysis using analysis of variance with repeated measurements showed that this method of treatment had a significant effect on emotion regulation and obsessive-compulsive symptoms of 6-11-year-old children with obsessive-compulsive disorder; According to the results of Bonferroni's post hoc test, this effect was stable in the follow-up phase.

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