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Orginal Article

The Effectiveness of Emotion Regulation Training on Social Cognition, Intolerance of Uncertainty and Distress Tolerance in Adolecents

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Abstract

Adolescence is a critical period in life characterized by significant changes in physical, sexual, social, cognitive, and emotional aspects. These changes can lead to distress, and adolescents often struggle to tolerate this distress, which can have both physical and psychological health consequences. However, various therapeutic and educational interventions have been employed to improve distress tolerance and related factors such as social cognition and intolerance of uncertainty. One promising intervention is emotion regulation training. The aim of the present study was to investigate the effectiveness of emotion regulation training on social cognition, intolerance of uncertainty, and distress tolerance in adolescents. This applied research utilized a quasi-experimental design with a pre-test/post-test approach and included a control group. The statistical population comprised all male students from public elementary schools in Mashhad in 2022. A total of 30 adolescent males from these schools were selected through convenience sampling and randomly assigned to either the experimental group or the control group. The experimental group participated in eight group training sessions based on Gross's emotion regulation model (Gross, 2002), while no intervention was provided to the control group. Participants completed the Intolerance of Uncertainty Scale (Carleton et al., 2007), the Social Stories Questionnaire (1986), and the Distress Tolerance Scale (Simons & Gaher, 2005). Data analysis was conducted using SPSS version 26, employing multivariate analysis of covariance, with a significance level set at 0.05. The average ages of the participants in the experimental and control groups were 12.06 and 12.13, respectively, with an overall average age of 12.01 for all participants. The results indicated a significant difference between the experimental and control groups regarding social cognition ($p = 0.001$) and distress tolerance ($p = 0.02$). However, no significant difference was found in terms of intolerance of

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uncertainty (p = 0.052). Overall, the findings suggest that emotion regulation training effectively enhances social cognition and distress tolerance among adolescents. Therefore, emotion regulation training can be utilized as an effective intervention by psychologists and mental health professionals to improve these areas in adolescents.

Keywords: Distress tolerance, emotion regulation, intolerance of uncertainty, social cognition

Extended Abstract

Introduction

Adolescence is a developmental period marked by significant cognitive, emotional, and social changes, making individuals particularly vulnerable to distress. Social pressures, uncertainties regarding peer acceptance, and sexual identity formation often contribute to stress and distress. Adolescents' ability to cope with such distress is referred to as distress tolerance, defined as the perceived capacity to endure and manage negative or uncomfortable emotional states. Low distress tolerance can have both physical and psychological consequences. Intolerance of uncertainty, a key dimension of distress tolerance, reflects the tendency to feel discomfort in uncertain situations. Adolescents with high intolerance of uncertainty often respond to ambiguous circumstances with negative emotions, behaviors, and thoughts, interpreting uncertain events as stressful or unfair. This trait is associated with difficulties in emotion regulation and may be especially pronounced during adolescence, increasing psychological vulnerability.

Another factor contributing to distress and psychological difficulties in adolescents is deficits in social cognition. Social cognition—the ability to perceive, interpret, and respond to others' emotions and intentions—is crucial for adolescents' social and emotional development. Various therapeutic and educational interventions have been used to enhance distress tolerance and related constructs, such as social cognition and intolerance of uncertainty. Emotion regulation training is one such intervention. Emotion regulation training supports psychological well-being and is associated with numerous positive outcomes, including improved interpersonal functioning, higher perceived well-being, and better physical health. Considering the significance of adolescence, the impact of social cognition, intolerance of uncertainty, and distress tolerance on adolescents' lives and mental health, and the need for school-based interventions targeting emotion regulation, the

present study aimed to examine the effectiveness of emotion regulation training on social cognition, intolerance of uncertainty, and distress tolerance in adolescents.

Method

This applied study employed a quasi-experimental design with a pretest-posttest and a control group. The statistical population included all male students of public elementary schools in Mashhad in 2022. Thirty male adolescents were selected through convenience sampling and randomly assigned to experimental and control groups. The experimental group participated in eight sessions of emotion regulation training based on the Gross model, while the control group did not receive any training. Inclusion criteria included being 11 to 15 years old, having no specific physical or psychological problems, and providing informed consent. Exclusion criteria included missing more than two sessions, participating in other psychological interventions, or unwillingness to continue. Ethical principles included obtaining informed consent from parents, ensuring confidentiality and anonymity, allowing participants to withdraw at any time, and avoiding any harm. Participants completed the Intolerance of Uncertainty Scale, the Social Stories Questionnaire, and the Distress Tolerance Scale. Data were analyzed using SPSS 26 with Multivariate Analysis of Covariance (MANCOVA), and the significance level was set at 0.05.

Results

The mean ages of the experimental group, control group, and total participants were 12.06, 12.13, and 12.01 years, respectively. Multivariate analysis of covariance revealed significant differences between the experimental and control groups in social cognition ($p = 0.001$, $F = 12.22$) and distress tolerance ($p = 0.02$, $F = 6.02$), while no significant difference was found for intolerance of uncertainty ($p = 0.052$, $F = 4.16$). In other words, the experimental group showed increased social cognition and distress tolerance compared to the control group.

Discussion

The results of this study indicate that emotion regulation training improves social cognition and distress tolerance in adolescents. This training helps participants understand different emotions and the importance of managing them in daily life. Adolescents learn strategies to prevent social withdrawal, enhance problem-solving and interpersonal skills, reduce vulnerability to negative emotions, increase positive emotions, and practice mindfulness. They are taught to stop rumination, redirect attention, and

understand the links between emotions, thoughts, and behaviors. Participants also practice the five key stages of emotion regulation: situation selection, situation modification, attentional deployment, cognitive change, and response modulation.

Keywords: Distress tolerance, emotion regulation, intolerance of uncertainty**,** social cognition

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