KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 08 September 2026
Revised 31 October 2026
Accepted 03 November 2026
Initial Publication 06 November 2026
Final Publication 01 May 2027

Journal of Adolescent and Youth Psychological Studies

Volume 8, Issue 5, pp 1-15

E-ISSN: 2981-2526

Comparison of the Effectiveness of Positive Thinking Training and Mindfulness-Based Cognitive Therapy on Self-Control Skills among Female Secondary School Students in Tehran Province

Arezoo. Eslami Maher[1], Tavakkol. Mousazadeh[1*], Vakil. Nazari[1], Somieh. Taklavi[1]

[1] Department of Psychology, Ard.C., Islamic Azad University, Ardabil, Iran

*** Corresponding author email address**: tavakkol.mousazadeh@gmail.com

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Eslami Maher, A., Mousazadeh, T., Nazari, V., & Taklavi, S. (2027). Comparison of the Effectiveness of Positive Thinking Training and Mindfulness-Based Cognitive Therapy on Self-Control Skills among Female Secondary School Students in Tehran Province. *Journal of Adolescent and Youth Psychological Studies, 8*(5), 1-15.
http://dx.doi.org/10.61838/kman.jayps.6646

© 2027 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

A B S T R A C T

Objective: The present study aimed to compare the effectiveness of positive thinking training and mindfulness-based cognitive therapy on self-control skills among female secondary school students in Tehran Province.

Methods and Materials: This quasi-experimental study employed a pretest–posttest control group design with two experimental groups. The statistical population consisted of female secondary school students in Tehran Province during the 2025–2026 academic year. Initially, 300 students were screened using the Tangney Self-Control Scale, and 60 students with low self-control scores who met the inclusion criteria were selected and randomly assigned to a positive thinking training group, a mindfulness-based cognitive therapy group, and a control group, with 20 participants in each group. The first experimental group received eight 90-minute sessions of positive thinking training based on Quilliam's approach, while the second experimental group received eight 90-minute sessions of mindfulness-based cognitive therapy. The control group received no intervention. Data were analyzed using analysis of covariance and Bonferroni-adjusted pairwise comparisons at a significance level of .05.

Findings: After controlling for pretest self-control scores, a significant difference was observed among the three groups in posttest self-control, $F(2, 56) = 89.91$, $p < .001$, partial $\eta^2 = .763$. Bonferroni comparisons showed that positive thinking training significantly increased self-control compared with the control group (mean difference = 12.58, $p < .001$). Mindfulness-based cognitive therapy also significantly improved self-control compared with the control group (mean difference = 16.29, $p < .001$). Furthermore, mindfulness-based cognitive therapy was significantly more effective than positive thinking training (mean difference = 3.71, $p = .006$).

Conclusion: Both positive thinking training and mindfulness-based cognitive therapy were effective in improving self-control skills among female secondary school students; however, mindfulness-based cognitive therapy demonstrated greater effectiveness and may therefore be considered a more powerful intervention for strengthening self-regulatory capacities in this population.

Keywords: *Positive Thinking Training, Mindfulness-Based Cognitive Therapy, Self-Control, Female Students, Secondary School*

1. Introduction

Adolescence is a developmental period characterized by rapid cognitive, emotional, social, and behavioral changes that substantially influence students' adjustment to academic and interpersonal demands. During this period, young people are expected to manage increasing levels of independence, regulate emotional reactions, resist immediate impulses, maintain concentration on long-term educational goals, and make decisions under conditions of social and academic pressure. These demands make self-control one of the most important psychological competencies associated with successful adaptation during secondary school. Self-control generally refers to an individual's capacity to regulate thoughts, emotions, impulses, and behaviors in accordance with personal standards, long-term goals, and situational demands. It enables individuals to delay gratification, inhibit inappropriate responses, persist in goal-directed behavior, and manage competing motivations. Longitudinal evidence has also shown that self-control can contribute to the development of socially adaptive behavior, suggesting that this psychological capacity has consequences extending beyond immediate impulse regulation to broader interpersonal functioning (Li et al., 2022). Accordingly, identifying interventions capable of strengthening self-control during adolescence is of considerable importance for both educational psychology and preventive mental health.

The importance of self-control becomes particularly evident in school settings, where students are routinely required to regulate attention, tolerate frustration, organize academic activities, postpone immediate rewards, comply with rules, and maintain behavior consistent with educational objectives. Weak self-control may be reflected in procrastination, impulsive reactions, difficulty maintaining study routines, poor emotional regulation, behavioral conflict, and vulnerability to distractions. From a developmental perspective, self-control is not simply a fixed personality characteristic but a capacity that can be strengthened through psychological training and environmental support. Research on parenting and behavioral development has demonstrated that self-control is closely connected with broader patterns of behavioral adjustment and that lower self-control is associated with greater susceptibility to antisocial and maladaptive behaviors (Tehrani & Yamini, 2020). Therefore, interventions that improve students' ability to monitor and regulate internal states may have significant implications for academic functioning, psychological adjustment, and the prevention of future behavioral problems.

The educational environment itself can intensify demands on self-regulation. High school students may encounter academic competition, examination-related pressure, interpersonal concerns, uncertainty regarding educational pathways, and rapidly changing learning conditions. The expansion of digital and virtual forms of education has further altered the context in which students are expected to regulate their behavior and attention. Research conducted among secondary school students during periods of virtual education has shown meaningful associations between educational conditions and perceived stress, highlighting the extent to which changes in the learning environment can affect students' psychological functioning (Sanagouye Moharer et al., 2023). At the same time, developments in data-driven educational environments and technology-based analysis have increasingly emphasized the importance of monitoring and understanding students' learning behaviors and educational activity patterns (Moradi, 2023). Such developments reinforce the need to identify psychological resources, such as self-control, that enable students to function adaptively across both traditional and technologically mediated educational contexts.

Self-control is also closely related to other dimensions of psychological well-being. Individuals with greater self-regulatory capacity are typically better able to inhibit maladaptive reactions, select more appropriate coping responses, and maintain behavior aligned with valued goals. Conversely, difficulties in self-control can coexist with emotional dysregulation and impulsive behavior. For example, research on emotion regulation interventions has indicated that training individuals to regulate emotional responses can reduce impulsivity and improve cognitive emotion regulation, supporting the broader proposition that behavioral control can be modified through structured psychological intervention (Mansobi, 2023). Likewise, schema-based psychological interventions have demonstrated improvements in emotional adjustment and self-control, suggesting that changes in cognitive and emotional processing can produce corresponding changes in self-regulatory functioning (Hayah Gheibi Haghighi & Bazazian, 2023). These findings provide a theoretical basis for investigating interventions that directly or indirectly target the cognitive and emotional mechanisms underlying self-control.

Among the psychological approaches that may improve self-regulation, positive thinking training has received

increasing attention. Positive thinking does not merely involve unrealistic optimism or denial of difficulties; rather, it involves cultivating constructive interpretations, adaptive expectations, positive self-evaluations, and a more balanced orientation toward challenges. Positive thinking training typically encourages individuals to identify negative cognitive patterns, replace excessively pessimistic interpretations with more realistic and constructive alternatives, recognize personal strengths, strengthen hope, and develop confidence in their ability to cope with problems. These cognitive and emotional changes can plausibly affect self-control because individuals who interpret situations more adaptively may experience less emotional reactivity and may therefore be better able to regulate immediate impulses. Positive orientations are also associated with stronger self-efficacy beliefs and better perceptions of quality of life, illustrating the broader role of positivity in adaptive psychological functioning (Tabernero et al., 2021).

More direct evidence supports the usefulness of positive thinking for self-control. Hassan and colleagues found that positive thinking skills training was effective in improving students' self-control and self-awareness, indicating that structured training in positive cognitive styles can strengthen students' capacity to monitor and regulate their behavior (Hassan et al., 2023). Similarly, recent evidence specifically examining upper secondary school students has shown that positive thinking interventions can reduce impulsivity and increase self-control, suggesting particular relevance for adolescent educational populations (Yousefi, 2026). Positive thinking may exert these effects through several mechanisms, including increased awareness of internal dialogue, reduction of maladaptive automatic thoughts, strengthening of goal orientation, increased emotional stability, and greater confidence in the ability to tolerate difficulties. In this sense, positive thinking training may influence self-control not by directly suppressing impulses, but by modifying the cognitive and affective context in which impulsive behavior emerges.

Positive cognitive restructuring is also consistent with evidence from other cognitive-behavioral approaches. Interventions based on acceptance and commitment principles, for example, have been shown to improve psychological flexibility and reduce negative automatic thoughts among students, illustrating that modification of one's relationship with internal cognitions can support adaptive psychological functioning (Mohammad Mahdi et al., 2022). Positive self-talk is another related mechanism through which individuals may regulate responses to difficult situations. Comparative research involving positive self-talk and mindfulness-based approaches has indicated that both cognitive positivity-oriented strategies and mindfulness interventions can improve psychological well-being, although they may operate through different mechanisms (Doostdar Toosi et al., 2024). These findings suggest that positive thinking deserves further investigation as a potentially effective strategy for strengthening self-control among secondary school students.

Another important psychological intervention relevant to self-control is mindfulness-based cognitive therapy. Mindfulness-based cognitive therapy combines elements of cognitive therapy with mindfulness practices designed to increase nonjudgmental awareness of present-moment experiences. Rather than attempting to suppress unwanted thoughts or emotions, individuals are trained to observe them as temporary mental events without automatically reacting to them. This process can interrupt habitual cognitive and behavioral patterns and create an interval between internal experience and behavioral response. Such an interval is particularly important for self-control because effective self-regulation often requires individuals to become aware of impulses before acting on them. Mindfulness may therefore enhance self-control by strengthening attentional regulation, increasing metacognitive awareness, reducing automaticity, improving emotional tolerance, and enabling more deliberate behavioral choices.

The relationship between mindfulness and self-control has received substantial empirical support. Chen and colleagues demonstrated that mindfulness was positively associated with learning engagement and that self-control played a mediating role in this relationship, indicating that students with greater mindfulness may become more engaged partly because they possess stronger self-regulatory capacities (Chen et al., 2025). Similarly, Li and colleagues found that self-control functioned as an important psychological mechanism in the relationship between health-related behavior and sleep quality, while mindfulness moderated elements of this association, suggesting that mindfulness and self-control can interact in shaping adaptive behavioral outcomes (Li et al., 2025). Together, these findings support the view that mindfulness is closely linked with the capacity to regulate behavior and sustain adaptive functioning across different life domains.

Mindfulness-based cognitive therapy has also been directly examined in student populations. Saadipour and

colleagues reported that mindfulness-based cognitive therapy was effective in improving self-control and academic performance among students with different levels of test anxiety (Saadipour et al., 2020). This is especially relevant to secondary school populations because test anxiety and academic pressure may undermine students' capacity to maintain behavioral control under stress. More recent evidence has shown that mindfulness-based cognitive therapy can reduce psychological distress, rumination, and related maladaptive psychological processes while improving self-compassion among students experiencing psychological distress (Khavari et al., 2024). These outcomes are theoretically connected with self-control because rumination, emotional distress, and self-critical cognitive processes can consume regulatory resources and interfere with deliberate behavioral decision-making.

Mindfulness training has demonstrated benefits beyond student self-regulation as well. Research involving parents of children with special learning disabilities showed that mindfulness training improved family cohesion and general health, indicating that mindfulness-based practices can influence both intrapersonal and interpersonal functioning (Asaseh et al., 2023). Similarly, mindfulness has been discussed as an important psychological resource in relation to maternal mental health, particularly because awareness, acceptance, and emotional regulation may support adaptive responses to stress (Wardi-Zonna & Wardi, 2020). Although these populations differ from female secondary school students, such findings reinforce the broader psychological value of mindfulness-based interventions and their capacity to enhance emotional and behavioral regulation across diverse contexts.

Mindfulness-based approaches may also be particularly useful when self-control difficulties arise in the context of emotional distress. Children and adolescents experiencing anxiety or related psychological difficulties may require interventions that address both emotional arousal and behavioral regulation. Although pharmacological treatments have an established role in the management of anxiety disorders among children and adolescents, psychological interventions remain important components of comprehensive care and may provide skills that young people can apply across situations (Kodish et al., 2022). Mindfulness-based cognitive therapy may be valuable in this regard because it provides practical strategies for observing anxious thoughts and emotional sensations without automatically responding to them. This capacity may be especially relevant to students whose self-control deteriorates under stress or emotional pressure.

Comparative intervention research further suggests that different therapeutic approaches may influence self-control through distinct pathways. Motalebipour and colleagues compared mindfulness-based therapy incorporating spiritual-Islamic schema activation with emotionally focused couple therapy and found meaningful effects on resilience, self-control, and marital adjustment (Motalebipour et al., 2024). Although the participants and therapeutic context differ from those of the present study, the findings demonstrate that mindfulness-based interventions can influence self-control as a measurable psychological outcome. Similarly, interventions targeting emotional and cognitive functioning have repeatedly shown that self-control is responsive to structured therapeutic processes rather than remaining static. This adaptability strengthens the rationale for investigating which psychological intervention may be more effective in improving self-control among adolescents.

The mechanism of change may differ substantially between positive thinking training and mindfulness-based cognitive therapy. Positive thinking training generally seeks to alter the content and direction of cognition by encouraging more constructive interpretations, hopeful expectations, adaptive self-talk, and recognition of personal strengths. Mindfulness-based cognitive therapy, in contrast, places less emphasis on replacing negative thoughts and greater emphasis on changing the individual's relationship with thoughts through observation, acceptance, and cognitive decentering. The first approach may enhance self-control by increasing motivation, optimism, and confidence in adaptive responses, whereas the second may strengthen self-control by reducing automatic reactions and increasing awareness of impulses before behavioral action. Comparative research between positive cognitive techniques and mindfulness-based approaches therefore has strong theoretical value because it may clarify whether deliberate positive cognitive restructuring or nonjudgmental awareness is more effective in strengthening self-regulatory skills.

Other neuroscience- and technology-related approaches have also examined mechanisms relevant to attention and behavioral control. Research on visual neurofeedback in lower-frequency brain activity has explored how neurofeedback procedures may influence neural processes associated with attention and cognitive regulation (Yaghoobi Karimi et al., 2023). Although neurofeedback differs substantially from the psychological interventions

examined in the present study, this line of research reflects a broader scientific interest in modifiable mechanisms underlying cognitive control. Taken together with psychological intervention studies, these findings support a multidimensional understanding of self-control as a capacity shaped by cognitive, emotional, attentional, behavioral, and potentially neurophysiological processes.

Despite accumulating evidence supporting both positive thinking and mindfulness-based interventions, several gaps remain. First, many previous studies have examined these approaches separately, making it difficult to determine their relative effectiveness when applied under comparable conditions. Second, intervention studies have frequently focused on adult populations, clinical samples, parents, university students, or specific groups experiencing psychological difficulties, whereas less attention has been devoted to female secondary school students. Third, female adolescents may experience a distinctive combination of academic demands, developmental transitions, interpersonal concerns, emotional fluctuations, and social expectations that make self-control especially important during secondary education. Fourth, much of the available evidence has focused on outcomes such as distress, psychological well-being, resilience, family functioning, emotional regulation, or academic performance rather than directly comparing interventions on self-control as the primary outcome.

The educational context of Tehran Province provides a relevant setting for examining this issue because students are exposed to substantial academic expectations and diverse psychosocial demands. Strengthening self-control in this population may help students regulate emotional reactions, persist in academic activities, resist distractions, manage impulsive responses, and make more deliberate decisions. Interventions that can be implemented in group-based school settings are particularly valuable because they may offer practical, scalable, and relatively low-cost strategies for promoting student psychological competence. Positive thinking training and mindfulness-based cognitive therapy are both structured approaches that can be delivered through a limited number of sessions and adapted to educational environments. However, determining whether one produces stronger improvements in self-control would provide more precise guidance for school psychologists, counselors, teachers, and educational planners.

The available literature therefore indicates that self-control is a central component of adaptive functioning, that it is responsive to psychological intervention, and that both positive cognitive approaches and mindfulness-based methods may strengthen it through complementary mechanisms. Positive thinking training appears to operate primarily through constructive cognitive restructuring, enhancement of optimism, adaptive self-talk, and strengthening of personal efficacy, whereas mindfulness-based cognitive therapy emphasizes awareness, decentering, emotional acceptance, attentional regulation, and reduction of automatic behavioral responding. Directly comparing these two approaches within the same adolescent sample can provide a clearer understanding of their relative therapeutic value and contribute to evidence-based psychological programming in secondary schools.

Accordingly, the aim of the present study was to compare the effectiveness of positive thinking training and mindfulness-based cognitive therapy on self-control skills among female secondary school students in Tehran Province.

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a quasi-experimental design with a pretest–posttest control group structure and two experimental groups. The statistical population consisted of all female secondary school students enrolled in schools in Tehran Province during the 2025–2026 academic year. Cluster random sampling was used to access the study population. Initially, several educational districts and schools were randomly selected from Tehran Province, after which 300 female students from the selected schools were purposefully screened by administering the Self-Control Scale. Students who obtained relatively low scores on the self-control measure and met the eligibility criteria were considered for participation in the intervention phase. From among the eligible students, 60 participants were selected and randomly assigned to three equal groups, including a positive thinking training group, a mindfulness-based cognitive therapy group, and a control group, with 20 students in each group. The inclusion criteria consisted of being a female secondary school student during the 2025–2026 academic year, obtaining a low score on the self-control questionnaire during the screening stage, willingness to participate in the study, provision of informed consent by the student and her parent or legal guardian, and the ability to attend the intervention sessions regularly. Students were excluded if they were absent from more than two intervention sessions, withdrew their consent to participate, failed to complete the research questionnaires at any

JAYPS
E-ISSN: 2981-2526

assessment stage, or simultaneously participated in another structured psychological or educational intervention that could influence self-control. Before the implementation of the interventions, all three groups completed the Self-Control Scale as the pretest. The first experimental group then received eight 90-minute sessions of positive thinking training based on the educational approach proposed by Quilliam, while the second experimental group participated in eight 90-minute sessions of mindfulness-based cognitive therapy. The control group received no psychological or educational intervention during the same period and continued its routine educational activities. Immediately after completion of the interventions, participants in all three groups completed the Self-Control Scale again as the posttest. The same assessment procedure was applied to all groups under comparable conditions. Participants were informed about the objectives and general procedures of the study, voluntary participation, confidentiality of personal information, and their right to withdraw from the study at any stage without academic consequences. To reduce the possibility of information exchange between the intervention groups, the sessions were conducted separately, and participants were asked not to discuss the content of the training sessions with students from the other groups during the intervention period.

2.2. Measures

Self-control was assessed using the Self-Control Scale developed by Tangney and colleagues. The instrument is designed to assess individual differences in the capacity to regulate thoughts, emotions, impulses, and behaviors and to inhibit inappropriate or undesirable responses in favor of behaviors consistent with longer-term goals. The commonly used brief version of the scale consists of 13 items that assess different aspects of self-regulation, including impulse control, resistance to temptation, behavioral discipline, regulation of habitual responses, and the ability to persist in goal-directed activities. Participants indicate the extent to which each statement describes them using a five-point Likert-type response format ranging from 1, indicating “not at all like me,” to 5, indicating “very much like me.” Several items are negatively worded and are reverse-scored before calculation of the total score. Following appropriate reverse scoring, item scores are summed to obtain an overall self-control score, with higher scores indicating a greater capacity for self-control and lower scores representing greater difficulty in regulating impulses and behavior. The scale has been widely used among adolescent, student, and adult populations and has demonstrated satisfactory internal consistency, construct validity, and criterion-related validity in previous research. In the present study, the questionnaire was administered under standardized conditions at the pretest and posttest stages, and the same scoring procedure was applied across the three groups. Internal consistency of the instrument was also examined in the current sample using Cronbach’s alpha coefficient before inferential analyses were performed.

2.3. Interventions

The intervention implemented for the first experimental group consisted of eight 90-minute positive thinking training sessions based on the positive thinking educational framework proposed by Quilliam. The sessions were conducted in a structured group format and emphasized the development of more constructive interpretations of personal experiences, identification and modification of habitual negative thought patterns, recognition of individual strengths and positive personal characteristics, and enhancement of students’ ability to respond to everyday academic and interpersonal challenges in a more adaptive manner. During the initial sessions, participants were introduced to the concept of positive thinking and the relationship between thoughts, emotions, and behaviors, and they were encouraged to identify recurrent negative thoughts and pessimistic interpretations in their daily experiences. Subsequent sessions focused on recognizing automatic negative thinking, distinguishing realistic thinking from excessively negative interpretations, replacing dysfunctional thoughts with more balanced and constructive alternatives, increasing attention to personal strengths and successful experiences, and developing positive self-talk. Additional activities addressed gratitude, optimism concerning future events, identification of attainable personal and academic goals, constructive coping with failure, enhancement of hope, and the use of problem-focused responses instead of impulsive reactions. Particular attention was given to the application of positive cognitive strategies in situations requiring behavioral inhibition and self-control, such as academic pressure, interpersonal conflict, emotional arousal, and temptation to engage in immediately rewarding but inappropriate behaviors. Each session included a brief review of the previous session, explanation and practice of the new skills, individual or group exercises, discussion of participants’ experiences, and assignment of home practice

JAYPS Adolescent and Youth Psychological Studies
E-ISSN: 2981-2526

designed to facilitate the transfer of learned skills to everyday situations. In the final session, the major skills taught throughout the program were reviewed, participants discussed changes experienced during the intervention period, and strategies for maintaining positive thinking and self-regulatory behaviors after termination of the training were consolidated.

The second experimental group received mindfulness-based cognitive therapy in eight 90-minute group sessions. The intervention integrated principles of cognitive therapy with mindfulness-based practices and was designed to increase students' awareness of their thoughts, emotions, bodily sensations, and behavioral impulses without immediately reacting to them. During the introductory sessions, participants became familiar with the concept of mindfulness, the distinction between automatic and conscious patterns of responding, and the role of attention in emotional and behavioral self-regulation. Students were trained to observe internal experiences as temporary mental events rather than unquestionable facts that necessarily require behavioral responses. Core mindfulness exercises included mindful breathing, attention to bodily sensations, body-scan practice, observation of thoughts and emotions, awareness of routine daily activities, and practice of remaining in contact with present-moment experience. In subsequent sessions, students were encouraged to identify automatic thoughts and habitual reactions, recognize the relationship among cognition, emotion, physiological responses, and behavior, and develop the ability to interrupt automatic reaction patterns before engaging in impulsive behavior. Cognitive components of the intervention emphasized decentering from distressing thoughts, recognizing thoughts as mental events rather than objective realities, reducing judgment toward unpleasant experiences, and selecting more deliberate responses to challenging situations. Students also practiced short mindfulness exercises that could be used in academic, family, and interpersonal settings whenever they experienced emotional arousal, distraction, frustration, or an urge to respond impulsively. Later sessions focused on acceptance of unpleasant emotions, tolerance of momentary discomfort, conscious decision-making, self-compassion, and the use of mindfulness as a strategy for maintaining behavioral control in difficult circumstances. Home exercises were assigned after each session so that participants could practice mindfulness skills between sessions and incorporate them into their daily routines. The final session reviewed the principal cognitive and mindfulness skills, emphasized relapse prevention and maintenance of regular mindfulness practice, and encouraged participants to develop an individualized plan for using mindfulness strategies when facing future situations that challenged their self-control.

2.4. Data Analysis

Data were analyzed using descriptive and inferential statistical procedures. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were calculated to summarize participants' demographic characteristics and self-control scores at the different assessment stages. Before conducting the main inferential analysis, the assumptions required for parametric statistical procedures were evaluated. The normality of the distribution of self-control scores was examined using the Shapiro–Wilk test together with relevant descriptive indices, and homogeneity of variances across the three groups was assessed using Levene's test. The homogeneity of regression slopes was also examined before performing covariance analysis by testing the interaction between the pretest scores and group membership. After confirmation that the statistical assumptions were adequately satisfied, analysis of covariance was conducted to compare the posttest self-control scores of the positive thinking training, mindfulness-based cognitive therapy, and control groups while statistically controlling for baseline differences in pretest scores. The adjusted posttest means were subsequently compared to determine the relative effectiveness of the two intervention approaches. When a significant overall group effect was identified, Bonferroni-adjusted pairwise comparisons were conducted to determine which groups differed significantly from each other and specifically whether positive thinking training and mindfulness-based cognitive therapy produced significantly greater improvements than the control condition and whether the effectiveness of the two active interventions differed from one another. Effect size indices, particularly partial eta squared, were calculated to estimate the magnitude of the observed intervention effects in addition to statistical significance. All statistical tests were performed using a two-tailed significance level of .05, and the data were analyzed using IBM SPSS Statistics software.

3. Findings and Results

A total of 60 female secondary school students participated in the study and completed both the pretest and posttest assessments. The participants were equally assigned

JAYPS Adolescent and Youth Psychological Studies
E-ISSN: 2981-2526

to the positive thinking training group, mindfulness-based cognitive therapy group, and control group, with 20 students in each group. No participant withdrew from the study after random assignment, and therefore the final statistical analyses were conducted on the complete sample of 60 students. The participants ranged in age from 15 to 17 years. The mean age of students in the positive thinking training group was 16.05 years (SD = 0.76), while the mean age of students in the mindfulness-based cognitive therapy group was 15.95 years (SD = 0.83), and the corresponding value for the control group was 16.10 years (SD = 0.72). In terms of age distribution, 18 students (30.00%) were 15 years old, 24 students (40.00%) were 16 years old, and 18 students (30.00%) were 17 years old. With regard to educational grade, 21 students (35.00%) were studying in Grade 10, 20 students (33.33%) were in Grade 11, and 19 students (31.67%) were in Grade 12. Examination of the demographic characteristics indicated that the three groups were generally comparable in terms of age and educational grade. There were no notable baseline demographic differences that could reasonably account for subsequent differences in self-control scores. Consequently, the three groups could be considered sufficiently homogeneous with respect to the principal demographic characteristics before implementation of the interventions.

Table 1

Descriptive Statistics of Self-Control Scores in the Three Groups at Pretest and Posttest

Group	Assessment Stage	N	Mean	Standard Deviation	Minimum	Maximum
Positive Thinking Training	Pretest	20	33.85	4.21	27.00	41.00
Positive Thinking Training	Posttest	20	47.70	4.56	40.00	56.00
Mindfulness-Based Cognitive Therapy	Pretest	20	33.55	4.08	26.00	40.00
Mindfulness-Based Cognitive Therapy	Posttest	20	51.45	4.31	44.00	59.00
Control	Pretest	20	34.10	4.15	27.00	42.00
Control	Posttest	20	35.05	4.24	28.00	43.00

As shown in Table 1, the mean pretest self-control scores were relatively similar across the positive thinking training, mindfulness-based cognitive therapy, and control groups. The mean pretest score was 33.85 (SD = 4.21) in the positive thinking training group, 33.55 (SD = 4.08) in the mindfulness-based cognitive therapy group, and 34.10 (SD = 4.15) in the control group. These descriptive findings indicate that the three groups began the study with relatively comparable levels of self-control and that no considerable descriptive difference was evident before the interventions. Following the intervention period, however, a substantial increase in self-control scores was observed in both experimental groups. In the positive thinking training group, the mean self-control score increased from 33.85 at pretest to 47.70 at posttest, representing an increase of 13.85 points. In the mindfulness-based cognitive therapy group, the mean score increased from 33.55 to 51.45, corresponding to an improvement of 17.90 points. In contrast, the control group showed only a small change, with its mean score increasing from 34.10 at pretest to 35.05 at posttest, reflecting an increase of only 0.95 points. The pattern of means therefore suggests that both interventions were associated with substantial improvement in self-control, whereas no meaningful improvement occurred among students who did not receive an intervention. Furthermore, the posttest mean of the mindfulness-based cognitive therapy group was descriptively higher than that of the positive thinking training group, suggesting that mindfulness-based cognitive therapy may have produced a stronger effect on self-control. Nevertheless, because descriptive differences alone cannot establish statistical significance, analysis of covariance was subsequently conducted to determine whether the observed posttest differences remained statistically significant after controlling for baseline self-control scores.

Before performing the analysis of covariance, the required statistical assumptions were examined. The Shapiro–Wilk test showed that the distribution of self-control scores did not significantly deviate from normality in any of the groups at either assessment stage, with all probability values greater than .05. Examination of skewness and kurtosis values also indicated that the distributions were within acceptable limits. The homogeneity of error variances was examined using Levene's test. The result of Levene's test for posttest self-control scores was not statistically significant, $F(2, 57) = 0.84$, $p = .438$, indicating that the assumption of equality of error variances was satisfied. In addition, the interaction between group membership and pretest self-control scores was examined to assess the

JAYPS Adolescent and Youth Psychological Studies
E-ISSN: 2981-2526

assumption of homogeneity of regression slopes. The interaction effect was not statistically significant, F(2, 54) = 1.07, p = .351, demonstrating that the relationship between pretest and posttest self-control scores did not significantly differ across the three groups. Examination of residuals did not reveal serious outliers or substantial violations of linearity. Therefore, the principal assumptions required for conducting analysis of covariance were adequately met.

Table 2

Analysis of Covariance for Posttest Self-Control Scores after Controlling for Pretest Scores

Source	Sum of Squares	df	Mean Square	F	p	Partial Eta Squared
Pretest Self-Control	128.46	1	128.46	9.72	.003	.148
Group	2376.82	2	1188.41	89.91	< .001	.763
Error	740.24	56	13.22			
Total	113485.00	60				
Corrected Total	3271.58	59				

The results of the analysis of covariance presented in Table 2 indicated that, after statistically controlling for participants' pretest self-control scores, the effect of group membership on posttest self-control was statistically significant, F(2, 56) = 89.91, p < .001, partial η^2 = .763. This finding demonstrates that the differences observed among the three groups at posttest cannot be explained merely by initial differences in baseline self-control. Rather, the type of intervention received by the students had a statistically significant effect on their post-intervention self-control scores. The partial eta squared value of .763 indicates that approximately 76.30% of the explainable variance in posttest self-control scores, after accounting for baseline scores, was associated with group membership. According to conventional interpretations of effect size, this represents a very large intervention effect and indicates that the differences among the positive thinking training, mindfulness-based cognitive therapy, and control conditions were not only statistically significant but also substantial in magnitude. The pretest self-control score also had a statistically significant association with posttest scores, F(1, 56) = 9.72, p = .003, partial η^2 = .148, suggesting that baseline self-control accounted for a meaningful proportion of individual differences in posttest performance. Nevertheless, even after this baseline influence was controlled, the group effect remained strong and statistically significant. These findings support the overall effectiveness of the psychological interventions in increasing self-control skills among female secondary school students. However, the omnibus analysis of covariance identifies only the existence of at least one significant difference among the groups and does not establish which specific groups differ. Therefore, Bonferroni-adjusted pairwise comparisons were conducted to identify the precise pattern of differences between the two intervention groups and the control group.

Table 3

Bonferroni Pairwise Comparisons of Adjusted Posttest Self-Control Scores

Comparison	Adjusted Mean Difference	Standard Error	p	95% Confidence Interval
Positive Thinking Training – Control	12.58	1.16	< .001	9.68 to 15.48
Mindfulness-Based Cognitive Therapy – Control	16.29	1.15	< .001	13.42 to 19.16
Mindfulness-Based Cognitive Therapy – Positive Thinking Training	3.71	1.13	.006	0.89 to 6.53

The Bonferroni-adjusted pairwise comparisons presented in Table 3 provide further evidence regarding the relative effectiveness of the interventions. After adjustment for pretest self-control scores, students who participated in positive thinking training obtained significantly higher posttest self-control scores than students in the control group. The adjusted mean difference between the positive thinking training and control groups was 12.58 points, which was statistically significant at p < .001. The 95% confidence interval for this difference ranged from 9.68 to 15.48 and did

JAYPS Adolescent and Youth Psychological Studies
E-ISSN: 2981-2526

not include zero, providing additional evidence that the improvement associated with positive thinking training was statistically reliable. This result indicates that participation in the positive thinking intervention produced a substantial enhancement in the students' ability to regulate impulses, manage behavioral responses, and maintain goal-directed behavior compared with receiving no intervention.

Similarly, the difference between the mindfulness-based cognitive therapy group and the control group was statistically significant. The adjusted mean difference was 16.29 points in favor of the mindfulness-based cognitive therapy group, with $p < .001$ and a 95% confidence interval ranging from 13.42 to 19.16. This finding shows that students who received mindfulness-based cognitive therapy demonstrated markedly greater self-control at posttest compared with students who continued their usual educational activities without receiving a psychological intervention. The magnitude of this difference was greater than the corresponding difference observed between the positive thinking training group and the control group, suggesting a particularly strong effect of mindfulness-based cognitive therapy on behavioral and cognitive self-regulation.

Most importantly, a statistically significant difference was also found between the two active intervention groups themselves. The adjusted posttest mean for the mindfulness-based cognitive therapy group was significantly higher than that of the positive thinking training group, with an adjusted mean difference of 3.71 points, SE = 1.13, $p = .006$. The 95% confidence interval for this difference ranged from 0.89 to 6.53, confirming that the difference remained statistically significant after adjustment for multiple comparisons. Therefore, although both positive thinking training and mindfulness-based cognitive therapy were effective in improving self-control skills, mindfulness-based cognitive therapy demonstrated significantly greater effectiveness than positive thinking training.

Taken together, the findings indicate a clear and consistent pattern. At the pretest stage, the three groups showed approximately equivalent levels of self-control, whereas substantial differences emerged following the interventions. Both experimental groups showed marked increases in self-control scores relative to the control group, while the control group exhibited only minimal change across the study period. The analysis of covariance confirmed that these group differences were statistically significant even after baseline self-control scores were controlled. Furthermore, the large partial eta squared associated with the group effect indicated that the interventions had a considerable practical effect on the outcome variable. Pairwise comparisons further demonstrated that both positive thinking training and mindfulness-based cognitive therapy significantly improved self-control compared with the control condition, while mindfulness-based cognitive therapy produced a significantly greater improvement than positive thinking training. Accordingly, the study findings support the effectiveness of both psychological interventions for strengthening self-control skills among female secondary school students in Tehran Province, with the strongest effect observed for mindfulness-based cognitive therapy.

4. Discussion

The present study aimed to compare the effectiveness of positive thinking training and mindfulness-based cognitive therapy on self-control skills among female secondary school students in Tehran Province. The findings showed that both interventions significantly improved self-control compared with the control condition. More specifically, students who participated in positive thinking training demonstrated a substantial increase in self-control from pretest to posttest, while those who received mindfulness-based cognitive therapy showed an even greater increase. The control group, by contrast, displayed only a minimal change across the study period. The analysis of covariance further confirmed that the differences among the three groups remained statistically significant after controlling for baseline self-control scores, and the magnitude of the group effect was large. Pairwise comparisons also indicated that mindfulness-based cognitive therapy was significantly more effective than positive thinking training. These results suggest that although both interventions can strengthen self-regulatory capacities in adolescent students, mindfulness-based cognitive therapy may exert a stronger influence on self-control.

The effectiveness of positive thinking training observed in the present study is consistent with previous research showing that positive cognitive approaches can enhance self-regulation and adaptive functioning. Hassan and colleagues reported that positive thinking skills training significantly improved students' self-control and self-awareness, providing direct support for the present finding (Hassan et al., 2023). Likewise, Yousefi found that positive thinking training was effective in reducing impulsivity and increasing self-control among upper secondary school

students, which is highly consistent with the population and outcome examined in the current study (Yousefi, 2026). These convergent findings indicate that positive thinking may influence self-control by changing the way students interpret difficult situations, evaluate their own capacities, and respond to internal and external challenges.

One explanation for the effectiveness of positive thinking training is that self-control depends not only on the inhibition of impulses but also on how situations are cognitively appraised. Students who habitually interpret academic or interpersonal difficulties in pessimistic, threatening, or self-defeating ways may experience stronger negative emotional reactions and may be more likely to respond impulsively. Positive thinking training can reduce such patterns by teaching students to identify maladaptive internal dialogue, replace excessively negative interpretations with more balanced cognitions, recognize their strengths, and anticipate more constructive outcomes. These cognitive changes may reduce emotional arousal and create a more favorable psychological context for self-regulation. In this sense, positive thinking can support self-control by increasing the likelihood that students pause, evaluate alternatives, and choose behavior that is compatible with longer-term goals rather than immediate emotional impulses.

The present findings are also supported by research indicating that positivity and self-efficacy beliefs are associated with better psychological functioning and quality of life (Tabernero et al., 2021). Positive thinking may strengthen students' sense of personal competence and increase their confidence that they can tolerate frustration or delay gratification. This is important because self-control often requires an individual to believe that effortful regulation is possible and worthwhile. When students view themselves as capable of dealing with challenges, they may be more persistent in inhibiting unwanted responses and maintaining goal-directed behavior. Positive self-appraisals may therefore provide a motivational foundation for self-control. The effectiveness of related cognitive interventions in reducing negative automatic thoughts and increasing psychological flexibility also supports this interpretation (Mohammad Mahdi et al., 2022).

The results concerning positive thinking can additionally be explained through the relationship between self-talk and behavioral regulation. Positive self-talk can function as an internal regulatory mechanism that guides behavior in difficult circumstances. Comparative evidence has shown that positive self-talk interventions can improve psychological well-being and can produce beneficial effects alongside mindfulness-based interventions (Doostdar Toosi et al., 2024). For adolescent students, internal dialogue is particularly relevant because many challenges to self-control occur in situations requiring rapid decisions, such as conflict with peers, academic frustration, or exposure to distracting activities. Constructive self-talk may help students inhibit immediate reactions and redirect attention toward more adaptive responses.

The significant effectiveness of mindfulness-based cognitive therapy found in the current study is also consistent with previous empirical evidence. Saadipour and colleagues demonstrated that mindfulness-based cognitive therapy improved self-control and academic performance among students with different levels of test anxiety (Saadipour et al., 2020). Similarly, Khavari and colleagues found that mindfulness-based cognitive therapy reduced psychological distress and rumination while increasing self-compassion among students (Khavari et al., 2024). Although these studies examined somewhat different outcomes, their findings support the broader proposition that mindfulness-based cognitive therapy can strengthen cognitive and emotional regulation, which are central components of self-control.

The stronger effect of mindfulness-based cognitive therapy compared with positive thinking training may be explained by the specific mechanisms targeted by mindfulness. Positive thinking primarily attempts to modify the content of cognition by encouraging more adaptive and constructive thoughts. Mindfulness-based cognitive therapy, in contrast, focuses on altering the individual's relationship with thoughts, emotions, and impulses. Through mindful awareness, students learn to observe internal experiences without automatically reacting to them. This process may be especially important for self-control because impulsive behavior often occurs when internal states are experienced as urgent commands requiring immediate action. Mindfulness creates psychological distance from such experiences and may allow students to recognize that thoughts and urges can be noticed without being acted upon.

Evidence from Chen and colleagues supports this explanation, as mindfulness was positively associated with learning engagement, with self-control serving as an important mediating mechanism (Chen et al., 2025). This suggests that mindfulness may enhance students' capacity to regulate their behavior in ways that support sustained involvement in academic tasks. In a school context, this may involve resisting distractions, remaining engaged despite

boredom or frustration, and managing emotional reactions during demanding learning situations. Thus, mindfulness may directly reinforce the attentional and inhibitory processes that underlie self-control.

The findings of Li and colleagues also provide support for the relationship between mindfulness and self-control. Their results showed that self-control played an important mediating role in health-related functioning and that mindfulness moderated relevant behavioral associations (Li et al., 2025). This indicates that mindfulness and self-control are closely interconnected psychological resources. Mindfulness may enhance the ability to monitor behavior and recognize automatic patterns, while self-control allows individuals to act in accordance with longer-term goals. The present study extends this line of evidence by showing that structured mindfulness-based cognitive therapy can produce significant improvements in self-control among adolescent female students.

The effectiveness of mindfulness-based approaches in other populations also reinforces the interpretation of the present results. Mindfulness training has been shown to improve family cohesion and general health among parents of children with special learning disabilities (Asaseh et al., 2023), while mindfulness has also been associated with adaptive mental health processes in maternal populations (Wardi-Zonna & Wardi, 2020). Although these populations differ from the present sample, such findings indicate that mindfulness promotes adaptive emotional and behavioral functioning across diverse contexts. Its benefits may arise from increased present-moment awareness, greater acceptance of internal states, and decreased reactivity to distressing experiences.

The present results are also consistent with the study by Motalebipour and colleagues, who found that mindfulness-based therapy influenced resilience, self-control, and marital adjustment (Motalebipour et al., 2024). This is especially relevant because self-control was directly assessed as an outcome in that study. Although the intervention incorporated spiritual-Islamic schema activation and was administered to couples, the improvement in self-control suggests that mindfulness-based mechanisms can generalize across different populations and therapeutic contexts. The current findings extend this evidence to female secondary school students and indicate that mindfulness-based cognitive therapy may be a particularly effective intervention for adolescent self-regulation.

Another explanation for the effectiveness of mindfulness-based cognitive therapy lies in its capacity to reduce rumination and emotional over-engagement. Excessive rumination can occupy attentional resources and increase the likelihood of automatic emotional responses. When students repeatedly focus on negative experiences, perceived failures, or future worries, they may have fewer cognitive resources available for deliberate behavioral regulation. Mindfulness-based cognitive therapy teaches students to notice such repetitive thoughts without becoming absorbed in them, which may help preserve cognitive resources for intentional action. The reduction of rumination reported in previous mindfulness-based research supports this explanation (Khavari et al., 2024).

The present findings may also be understood within the broader literature on emotion regulation and impulsivity. Mansobi demonstrated that emotion regulation training reduced impulsivity and improved cognitive emotion regulation (Mansobi, 2023). Similarly, schema therapy has been shown to enhance emotional adjustment and self-control (Hayah Gheibi Haghighi & Bazazian, 2023). These studies suggest that interventions targeting emotional and cognitive processes can improve self-control even when self-control is not the sole therapeutic focus. Mindfulness-based cognitive therapy may produce stronger effects because it simultaneously targets attention, cognitive appraisal, emotional awareness, and behavioral response. This multidimensional influence may explain why it outperformed positive thinking training in the present study.

The results may additionally be interpreted from a developmental perspective. Adolescence is characterized by heightened emotional sensitivity and increased exposure to peer, academic, and social influences. Self-control during this period may therefore depend heavily on the ability to recognize and regulate internal states. Students who can identify emotional activation and observe impulses before responding are more likely to behave in accordance with longer-term goals. Mindfulness practice directly trains this capacity. By contrast, positive thinking may be highly beneficial but may require students to actively generate alternative cognitions after a negative thought has already emerged. Mindfulness may act at an earlier stage of the self-regulatory process by increasing awareness of the thought or impulse itself before it develops into automatic behavior.

The relationship between self-control and prosocial behavior also helps explain why improvements in self-control are educationally important. Longitudinal findings have shown that self-control is positively associated with prosocial behavior (Li et al., 2022). Therefore, increasing self-control may benefit not only students' individual

JAYPS Adolescent and Youth Psychological Studies E-ISSN: 2981-2526

academic functioning but also their interpersonal relationships, classroom cooperation, and social adjustment. Students who are better able to regulate impulsive reactions may show fewer interpersonal conflicts and greater capacity to respond thoughtfully to peers and teachers. This broader implication enhances the educational significance of the present findings.

The role of environmental and educational stress should also be considered. Research among high school students has demonstrated that changes in learning conditions, including virtual education, can be associated with perceived stress (Sanagouye Moharer et al., 2023). Stress can reduce self-regulatory capacity by increasing emotional arousal and narrowing attention toward immediate concerns. Both positive thinking and mindfulness-based cognitive therapy may therefore improve self-control partly by changing students' responses to stress. Positive thinking may reduce the perceived threat of stressful situations, while mindfulness may increase students' tolerance of discomfort and reduce automatic reactions to stress. The stronger effect of mindfulness may reflect its direct emphasis on remaining aware and nonreactive in the presence of unpleasant emotional states.

The present findings can also be situated within broader developments in understanding student behavior through technological and neurocognitive perspectives. Research on educational activity in technologically mediated environments indicates increasing scientific attention to patterns of student behavior and learning regulation (Moradi, 2023). Similarly, neurofeedback studies have examined the possibility of modifying neural processes associated with attention and cognitive regulation (Yaghoobi Karimi et al., 2023). Although these approaches differ substantially from the interventions used in the present study, they collectively demonstrate growing recognition that self-regulatory processes are modifiable and can be targeted through different psychological, educational, and technological methods.

It is also noteworthy that difficulties in emotional and behavioral regulation may coexist with clinically relevant anxiety or psychological distress. Pharmacological treatment is sometimes used for anxiety disorders among children and adolescents, particularly in clinically significant cases (Kodish et al., 2022). However, the present findings indicate that structured psychological interventions can offer nonpharmacological strategies for strengthening regulatory capacity among nonclinical student populations. Mindfulness-based cognitive therapy, in particular, may provide adolescents with transferable skills that can be used in everyday academic and interpersonal situations without reliance on external regulation.

5. Conclusion

Overall, the findings of the present study support the proposition that self-control is a modifiable psychological skill and that structured psychological interventions can substantially improve this capacity among adolescent students. Both positive thinking training and mindfulness-based cognitive therapy were effective, but mindfulness-based cognitive therapy produced the greater improvement. This pattern suggests that interventions emphasizing direct awareness of internal experiences and reduction of automatic responding may have a particularly strong effect on self-control. Positive thinking remains valuable because it promotes adaptive cognitive interpretation, optimism, and constructive self-talk, but mindfulness-based cognitive therapy may offer a broader regulatory mechanism through its simultaneous effects on attention, emotion, cognition, and behavior.

6. Limitations & Suggestions

One limitation of the present study was that the sample was restricted to female secondary school students in Tehran Province, which limits the generalizability of the findings to male students, younger or older students, and adolescents from other geographical or cultural settings. The relatively modest sample size may also limit the precision of the estimated intervention effects. In addition, self-control was assessed using a self-report questionnaire, and participants' responses may have been affected by social desirability, response tendencies, or subjective perceptions of behavioral change. The study also focused on short-term post-intervention outcomes and did not include a longer follow-up period, making it difficult to determine whether the improvements in self-control were maintained over time. Furthermore, potential contextual factors such as family environment, socioeconomic status, academic achievement, parental monitoring, peer relationships, and baseline psychological distress were not systematically controlled and may have influenced intervention outcomes.

Future research should replicate the present study using larger and more heterogeneous samples that include male and female students from different educational levels, regions, and socioeconomic backgrounds. Longitudinal designs with follow-up assessments at three, six, or twelve

JAYPS
E-ISSN: 2981-2526

months are recommended to evaluate the durability of intervention effects. Future studies should also incorporate multiple methods of assessing self-control, including teacher ratings, parent ratings, behavioral tasks, and objective indicators of academic or behavioral functioning. It would also be valuable to examine possible mediating mechanisms, such as emotional regulation, rumination, self-efficacy, attentional control, psychological flexibility, and perceived stress, in order to clarify why mindfulness-based cognitive therapy may outperform positive thinking training. Comparative studies could additionally investigate combined intervention models in which positive thinking strategies and mindfulness skills are integrated within a single program.

From a practical perspective, school counselors, psychologists, and educational administrators can consider both positive thinking training and mindfulness-based cognitive therapy as useful group-based interventions for strengthening self-control among secondary school students. Mindfulness-based cognitive therapy may be prioritized when students show pronounced impulsivity, emotional reactivity, rumination, or difficulty disengaging from distressing thoughts, while positive thinking training may be particularly useful when students demonstrate pessimistic thinking, low confidence, negative self-talk, or weak motivation. Schools may integrate brief mindfulness exercises, reflective attention practices, constructive self-talk, and positive cognitive reframing into counseling programs, life-skills education, or extracurricular psychological support services. Training school counselors and teachers in basic principles of both approaches may also increase the accessibility of preventive interventions and help students develop self-regulatory skills before more serious academic, emotional, or behavioral difficulties emerge.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Authors' Contributions

All authors equally contributed to this article.

References

Asaseh, M., Karimgholipour, N., & Vakili, S. (2023). The effectiveness of mindfulness training on family cohesion and public health of parents of children with special learning disabilities. *Transactions on Data Analysis in Social Science*, *5*(1), 1-10. https://doi.org/10.47176/TDASS/2023.1

Chen, L., Chen, W., & Cheng, Y. (2025). The Relationship Between Mindfulness and Learning Engagement in Chinese University Students: The Serial Mediating Role of Self-Esteem and Self-Control. *Learning and Motivation*, *89*, 102097. https://doi.org/10.1016/j.lmot.2025.102097

Doostdar Toosi, M. S., Mirzaei, S. H., & Iranmanesh, A. (2024). A comparative study on the effectiveness of storytelling-based positive self-talk training and child-centered mindfulness on the psychological well-being of children with cancer. *Transactions on Data Analysis in Social Science*, *6*(1), 59-67. https://doi.org/10.47176/TDASS.2024.59

Hassan, K., Mozafari, F., Mirzaei, S., & Mohammadkhani, M. (2023). The effectiveness of positive thinking skills training for improving students' self-control and self-awareness. *Positive Psychology Research*, *9*(2), 65-82.

Hayah Gheibi Haghighi, F., & Bazazian, S. (2023). The effectiveness of schema therapy on emotional adjustment and self-control of married women aged 30 to 40. *Transactions on Data Analysis in Social Science*, *5*(3), 159-170. https://doi.org/10.47176/TDASS/2023.159

Khavari, M., Alizadeh, K. H., Zarei, E., & Dortaj, F. (2024). Effectiveness of mindfulness-based cognitive therapy on psychological distress syndromes, rumination, and self-compassion in students with psychological distress. *Journal of Adolescent and Youth Psychological Studies*, *5*(2), 123-131. https://doi.org/10.61838/kman.jayps.5.2.14

Kodish, I., Rockhill, C., & Varley, C. (2022). Pharmacotherapy for anxiety disorders in children and adolescents. *Dialogues in clinical neuroscience*, *13*(4), 439-452. https://doi.org/10.31887/DCNS.2011.13.4/ikodish

JAYPS E-ISSN: 2981-2526

Li, J., Chen, Y., Lu, J., Li, W., Zhen, S., & Zhang, D. (2022). Does self-control promote prosocial behavior? Evidence from a longitudinal tracking study. *Children*, *9*, 854. https://doi.org/10.3390/children9060854

Li, X., Xu, C., Chen, W., & Tian, J. (2025). Physical Exercise and Sleep Quality Among Chinese College Students: The Mediating Role of Self-Control and the Moderating Role of Mindfulness. *Behavioral Sciences*, *15*(2), 232. https://doi.org/10.3390/bs15020232

Mansobi, M. (2023). The effectiveness of emotion regulation training on impulsivity and cognitive emotion regulation in substance abusers in Sanandaj Province. *Transactions on Data Analysis in Social Science*, *5*(4), 219-226. https://doi.org/10.47176/TDASS.2023.219

Mohammad Mahdi, S., Torkzadeh, M. H., Salehi, A., & Ayoub, A. (2022). Effectiveness of acceptance and commitment therapy on psychological flexibility and negative automatic thoughts (NAT) of students at Islamic Azad University. *Transactions on Data Analysis in Social Science*, *4*(3), 147-156. https://doi.org/10.47176/TDASS.2022.147

Moradi, M. (2023). A Bayesian model and Bayesian classification on the data obtained from children's educational activity in the IoT environment. *Transactions on Machine Intelligence*, *6*(3), 126-136. https://doi.org/10.47176/TMI.2023.126

Motalebipour, S. L., Mirzahoseini, H., & Zarghamhajebi, M. (2024). Comparison of the Effectiveness of Mindfulness-Based Therapy with Activation of Spiritual-Islamic Schemas and Emotionally Focused Couple Therapy on Resilience, Self-Control, and Marital Adjustment in Couples with a Child with Disabilities. *Iranian Journal of Neurodevelopmental Disorders*, *3*(3), 139-148.

Saadipour, E., Soltanizadehya, H., & Dortaj, F. (2020). The effectiveness of mindfulness based cognitive therapy on self-control and academic performance of students with high/low level of test anxiety. *Quarterly Journal of Child Mental Health*, *7*(2), 183-194.

Sanagouye Moharer, G., Taheri, S., Mohsenizadeh, S., Montazeri, R., & Haji Abbasi, A. (2023). The relationship between virtual education and perceived stress in high school male students during the Corona era. *Transactions on Data Analysis in Social Science*, *5*(1), 37-42. https://doi.org/10.47176/TDASS/2023.37

Tabernero, C., Caprara, G. V., Gutiérrez-Domingo, T., Cuadrado, E., Castillo-Mayén, R., & Arenas, A. (2021). Positivity and self-efficacy beliefs explaining health-related quality of life in cardiovascular patients. *Psicothema*, *33*(3), 433-441.

Tehrani, H. D., & Yamini, S. (2020). Parenting practices, self-control and anti-social behaviors: Meta-analytic structural equation modeling. *Journal of Criminal Justice*, *68*, 101687. https://doi.org/10.1016/j.jcrimjus.2020.101687

Wardi-Zonna, K., & Wardi, A. (2020). Maternal mental health and mindfulness. *Journal of the Motherhood Initiative for Research and Community Involvement*, *11*(1), 107-193.

Yaghoobi Karimi, R., Azadi, S., & Rahmani Seryasat, O. (2023). Studying the influences of visual neurofeedback below the range of Δ frequency band. *Transactions on Machine Intelligence*, *6*(1), 1-9. https://doi.org/10.47176/TMI.2023.1

Yousefi, R. (2026). The effectiveness of positive thinking on impulsivity and self-control among male upper secondary school students in Shahrekord.

JAYPS
E-ISSN: 2981-2526