The Effectiveness of Emotion-Focused Therapy on Aggression and Distress Tolerance in Students with Clinical Aggression Symptoms: A Clinical Trial

Abstract

Aims: Aggression in early adolescence is a critical psychological challenge that often stems from deficits in emotional processing and low distress tolerance. This study aimed to evaluate the efficacy of Emotion-Focused Therapy (EFT) on aggression and distress tolerance among middle school female students exhibiting clinical symptoms of aggression.

Materials & Methods: This study was a randomized clinical trial using a pretest-posttest control group design with a three-month follow-up period. The statistical population consisted of all female middle school students in Tehran during the 2024–2025 academic year. Through multi-stage random sampling and clinical screening, 40 eligible students were selected and randomly assigned to either the experimental group (n=20) or the control group (n=20). The experimental group received eight 90-minute sessions of EFT, while the control group remained on a waitlist. Data were collected using the Ahvaz Aggression Inventory (AAI) and the Distress Tolerance Scale (DTS). Data analysis was conducted using SPSS-26 at a significance level of $\alpha=0.05$.

Findings: The results demonstrated that EFT significantly reduced aggression and increased distress tolerance in the experimental group compared to the control group ($P<0.001$). These therapeutic effects were successfully sustained during the three-month follow-up assessment.

Conclusion: EFT serves as an effective clinical intervention for middle school students, providing a structured approach to emotional regulation that leads to long-term reductions in aggressive behavior and improved psychological endurance.

Keywords: Emotion-focused therapy, Aggression, Distress tolerance, Adolescent, Clinical trial

Introduction

Adolescence represents a critical developmental window characterized by profound physiological, neurological, and social transitions. For many middle school students, particularly young females, this period is marked by heightened emotional reactivity and an increased vulnerability to psychological distress [1]. Clinical observations and recent statistics indicate a rising prevalence of externalizing behaviors among adolescent girls, with aggression emerging as a primary concern for educators and mental health professionals alike [2]. These students often struggle with the transition from childhood to early youth, where social expectations and peer dynamics can exacerbate underlying emotional sensitivities. When left unaddressed, early patterns of aggressive behavior in middle school settings can solidify into persistent personality traits, leading to academic underachievement, social isolation, and a higher risk of comorbid psychiatric disorders in later life [3, 4].

Aggression in this population is a multidimensional construct encompassing physical, verbal, and relational hostility. In the context of adolescent girls, aggression often manifests as a reactive response to perceived social threats or internal emotional turmoil [5]. This behavioral pattern is not merely a conduct issue but is deeply rooted in the inability to modulate intense affective states. Research suggests that high levels of aggression in middle school students are strongly correlated with poor self-regulation and a tendency to interpret neutral social cues as hostile [6]. Consequently, chronic aggression serves as a dysfunctional coping mechanism intended to exert control over one's environment or to mask underlying feelings of vulnerability and rejection [7].

Closely linked to the management of aggression is the construct of distress tolerance, defined as the perceived or actual capacity to withstand negative emotional states or other aversive experiences [8]. For adolescent girls exhibiting clinical aggression, distress tolerance is frequently impaired, leading to an "emotional urgency" where the individual feels compelled to act out to terminate an unpleasant feeling [9]. Individuals with low distress tolerance are characterized by an inability to accept emotional pain, often viewing it as catastrophic or unbearable. Enhancing this psychological capacity is essential, as it allows the adolescent to pause and process internal states rather than reacting impulsively through aggressive outbursts [10]. Therefore, strengthening distress tolerance is increasingly recognized as a foundational component in the successful treatment of behavioral dysregulation [11].

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To address these challenges, Emotion-Focused Therapy (EFT) has emerged as a potent evidence-based intervention. Rooted in the principle that emotions are inherently adaptive, EFT focuses on the transformation of "maladaptive" primary emotions—such as deep-seated shame or fear—through the activation of "adaptive" ones [12]. Previous research has demonstrated that EFT is highly effective in treating a variety of internalizing and externalizing disorders by helping individuals identify, experience, and make sense of their emotional lives [13]. In the context of aggression, EFT moves beyond mere behavioral modification; it guides the adolescent to access the vulnerable feelings beneath their anger, thereby fostering genuine emotional healing. Recent clinical trials have shown that short-term EFT interventions can lead to significant improvements in emotional resilience and interpersonal functioning among youth populations [14, 15].

Despite the growing body of literature on adolescent mental health, there remains a critical gap in understanding how integrated emotional interventions specifically impact the dual challenges of aggression and distress tolerance in middle school girls. Most traditional approaches focus strictly on cognitive-behavioral techniques, often overlooking the profound affective drivers of behavior. Given the unique developmental needs of this age group and the lasting impact of early intervention, there is an urgent need for specialized clinical trials that evaluate the sustainability of therapeutic gains. This research was necessary to provide a robust framework for school-based psychological interventions that prioritize emotional depth over surface-level behavior. Consequently, this study aimed to investigate the efficacy of EFT on aggression and distress tolerance among middle school female students through a randomized clinical trial with a three-month follow-up.

Materials and Methods

Design

This study utilized a randomized clinical trial (RCT) design involving a pretest, posttest, and a three-month follow-up phase.

Participants

The statistical population comprised all female middle school students in Tehran during the 2024–2025 academic year. Using multi-stage random sampling, one educational district was selected, from which schools were screened for clinical aggression. A total of 40 students who met the inclusion criteria were selected and randomly assigned to either the experimental group (n=20) or the waitlist control group (n=20). Inclusion criteria included a diagnosis of clinical aggression based on the Ahvaz Aggression Inventory (AAI), being an active eighth-grade student, and providing informed parental consent. Exclusion criteria were defined as missing more than two intervention sessions, receiving concurrent psychological counseling, or a self-reported desire to withdraw from the study. Ethically, participants were informed of their right to withdraw at any stage, and confidentiality was strictly maintained. To adhere to ethical standards, the control group was placed on a waitlist to receive the intervention after the completion of the follow-up phase.

Procedure and Intervention

Upon obtaining necessary permits and ethical clearances, participants in both groups underwent a pretest assessment. The experimental group then received eight 90-minute sessions of EFT conducted weekly, while the control group received no intervention during this period. The EFT protocol was adapted from the models of Greenberg and Johnson [16], focusing on identifying and transforming maladaptive emotions. Following the intervention, a posttest was administered to both groups, and a follow-up assessment was conducted three months later to evaluate the sustainability of the results. The summary of the EFT sessions is presented in Table 1.

Table 1. Summary of emotion-focused therapy (EFT) sessions

Session	Objective and Core Activities
1	Introduction & Alliance: Building rapport, explaining the role of emotions in aggression, and establishing group norms.
2	Emotional Identification: Learning to differentiate between primary and secondary emotions and naming affective states.
3	Exploring Vulnerability: Identifying underlying feelings (e.g., shame, fear) that drive aggressive outbursts.
4	Body Awareness: Recognizing physiological cues associated with emotional distress and tension.

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5	Emotional Processing: Accessing and deepening maladaptive emotions within a safe environment to facilitate change.
6	Transforming Emotions: Using adaptive emotions (e.g., self-compassion) to transform maladaptive primary emotions.
7	Enhancing Tolerance: Developing strategies to withstand distressing states without resorting to impulsive aggression.
8	Closure & Consolidation: Reviewing gains, discussing relapse prevention, and planning for future emotional challenges.

Instruments

Ahvaz Aggression Inventory (AAI): This self-report scale was developed by Zahedifar et al. [17] to assess aggression levels in the Iranian population. It consists of 30 items rated on a 4-point Likert scale (0 = Never to 3 = Always), with total scores ranging from 0 to 90. Higher scores indicate a higher severity of aggressive behavior. In previous Persian validation studies, the AAI has shown high internal consistency, with Cronbach's alpha coefficients reported around 0.84 [17]. In the current study, the Cronbach's alpha was calculated at 0.89, confirming its robust reliability for assessing aggression in female adolescents.

Distress Tolerance Scale (DTS): Developed by Simons and Gaher [18], the DTS is a 15-item instrument designed to measure the perceived capacity to experience and withstand negative psychological states. Responses are recorded on a 5-point Likert scale (1 = Strongly Agree to 5 = Strongly Disagree). The scale covers four sub-dimensions: tolerance, absorption, appraisal, and regulation. Higher total scores reflect a higher level of distress tolerance. Validation studies in Iran have reported a Cronbach's alpha of 0.82 for the total scale [19]. For the present study, the internal consistency was found to be 0.84, indicating high psychometric stability for this population.

Data Analysis

Data were analyzed using SPSS-26. Descriptive statistics (mean and standard deviation) were used to summarize the data. For the inferential analysis, a repeated measures analysis of variance (ANOVA) was employed to compare the differences between the experimental and control groups across the three time points (pretest, posttest, and 3-month follow-up), ensuring the assumptions of normality and homogeneity of variance were met.

Results

The demographic profile of the participants revealed that the sample consisted of 40 female eighth-grade students with a mean age of 14.45 years (SD=0.58), ranging from 14 to 15 years. Preliminary analysis showed no significant differences between the experimental and control groups regarding age or initial academic standing (P>0.05), ensuring the homogeneity of the participants at the baseline. All participants completed the full course of the intervention and the subsequent follow-up assessments, resulting in no attrition rate for the duration of the study.

Table 2 presents the mean and standard deviation of the research variables across the three assessment stages. In the experimental group, the mean score for aggression decreased from 61.29±7.31 at pretest to 42.90±4.58 at posttest, remaining stable at 42.05±4.72during the three-month follow-up. In contrast, the control group's scores showed no significant change (64.08 at pretest vs. 63.83 at follow-up). For distress tolerance, the experimental group showed a marked increase from 27.85±8.02 at pretest to 49.84±6.81at posttest and 50.09±5.39 at follow-up, while the control group remained relatively constant.

Table 2. Descriptive statistics for aggression and distress tolerance

Variable	**Group**	**Pretest Mean ± SD**	**Posttest Mean ± SD**	**Follow-up Mean ± SD**
Aggression	EFT	61.29 ± 7.31	42.90 ±4.58	42.05 ± 4.72
	Control	64.08 ± 8.27	63.94 ± 7.02	63.83 ± 7.93
Distress tolerance	EFT	27.85 ± 8.02	49.84 ± 6.81	50.09 ± 5.39
	Control	25.91 ± 9.06	26.06 ± 8.4	25.74 ± 8.94

SD: Standard Deviation

Prior to conducting the main inferential analyses, the fundamental assumptions of parametric statistics were rigorously evaluated. The Shapiro-Wilk test confirmed the normality of the distribution for both aggression and distress tolerance scores across all measurement stages

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(P>0.05). Additionally, Levene's test was performed to verify the homogeneity of variances, which yielded non-significant results, indicating that the groups had equal variances. For the repeated measures analysis, Mauchly's test of sphericity was conducted; where the assumption was violated, the Greenhouse-Geisser correction was applied to ensure the robustness of the F-statistics.

To examine the effectiveness of EFT, a mixed-design ANOVA was conducted. As shown in Table 3, the interaction effect of group × time was statistically significant for both aggression (F=70.41, P=0.001, η^2=0.69) and distress tolerance (F=80.61, P=0.001, η^2=0.66). These results indicate that the intervention led to significant improvements in both variables over time compared to the control group.

Table 3. Repeated measures ANOVA results for inter-group and intra-group comparisons

Variable	Source	SS	df	MS	F	P	η^2
Aggression	Group	6027.49	1	6027.49	81.25	0.001	0.68
	Time	824.96	1.73	478.23	59.73	0.001	0.70
	Group × Time	928.06	1.73	538.01	70.41	0.001	0.69
Distress tolerance	Group	1905.78	1	1905.78	64.85	0.001	0.89
	Time	709.61	1.47	481.74	65.89	0.001	0.73
	Group × Time	911.08	1.47	618.52	80.61	0.001	0.66

Bonferroni post-hoc tests (Table 4) were utilized to pinpoint the timing of these changes. For aggression, the difference between pretest and posttest was significant (MD=21.38, P=0.001), but the difference between posttest and follow-up was not (MD=-0.31, P=0.209), indicating the stability of the treatment effect. Similarly, for distress tolerance, a significant increase was observed from pretest to posttest (MD=-22.82, P=0.001), with no significant decay in the follow-up phase (MD=-0.29, P=0.103).

Table 4. Bonferroni post-hoc test for pairwise comparisons of time stages

Variable	Time	MD	SE	P
Aggression	Pretest – Posttest	21.38	0.30	0.001
	Pretest – Follow-up	21.07	0.53	0.001
	Posttest – Follow-up	-0.31	0.11	0.209
Distress tolerance	Pretest – Posttest	-22.82	0.33	0.001
	Pretest – Follow-up	-23.11	0.15	0.001
	Posttest – Follow-up	-0.29	0.21	0.103

MD: Mean Difference

Discussion

The present study aimed to investigate the effectiveness of EFT on aggression and distress tolerance among female middle school students exhibiting clinical symptoms of aggression. The findings demonstrated that EFT significantly reduced aggression levels and enhanced distress tolerance in the experimental group compared to the control group. Importantly, these therapeutic gains were maintained during the three-month follow-up period, suggesting that the intervention fosters enduring psychological changes rather than transient symptomatic relief [20].

The observed reduction in aggression following EFT can be attributed to the core mechanism of this approach: the transformation of primary maladaptive emotions. Adolescents often resort to aggression as a "secondary emotion" to mask underlying "primary" feelings of shame, fear, or rejection [21]. By facilitating a safe, empathic therapeutic environment, EFT allows students to access these vulnerable primary emotions and process them [22]. Instead of merely suppressing aggressive impulses through cognitive behavioral techniques, EFT encourages the "co-activation" of incompatible emotions [23]. For instance, by accessing self-compassion or assertive anger—as opposed to destructive rage—participants learn to reorganize their emotional schemes [24]. This internal reorganization reduces the need for externalized hostility, as the emotional triggers are resolved at their source rather than being repressed [25].

Furthermore, the significant increase in distress tolerance highlights the role of EFT in expanding the "window of tolerance" for adolescents [26]. Students with low distress tolerance often perceive

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negative emotional states as catastrophic and unendurable, leading to impulsive or aggressive outbursts as a desperate attempt to escape emotional pain [27]. EFT provides these individuals with "emotional coaching," teaching them to identify, label, and stay with their emotions rather than fleeing from them [28]. As participants learn to tolerate the physiological and psychological discomfort of intense feelings within the sessions, they internalize a sense of agency. This increased capacity to endure distress without resorting to maladaptive coping mechanisms explains the significant improvement in their distress tolerance scale scores.

The findings of this research are consistent with prior studies in the field of process-experiential therapies. For example, research by Watson and Greenberg indicated that EFT-based interventions effectively reduce externalizing behaviors and anger in adolescents by improving emotional regulation strategies [29]. Similarly, the study by Goldin et al. demonstrated that emotion-focused interventions significantly enhance psychological resilience and distress tolerance in clinical populations, reinforcing the idea that focusing on the emotional "meaning-making" process is a potent catalyst for behavioral change [14].

One of the most noteworthy aspects of the current study is the stability of results at the three-month follow-up. In the developmental stage of adolescence, where hormonal fluctuations and social pressures are at their peak, the maintenance of therapeutic effects suggests that EFT may have influenced the participants' underlying personality structures or "emotional scripts." By changing how these students relate to their inner experiences, the therapy provided them with a portable toolkit for navigating future stressors, thereby preventing a relapse into aggressive patterns [20, 16].

Despite the significant findings, this study faces certain limitations. First, the sample was restricted to female eighth-grade students in Tehran, which limits the generalizability of the results to male adolescents or different age groups and cultural contexts. Second, the reliance on self-report inventories may introduce social desirability bias. Future research should incorporate multi-informant assessments (e.g., teacher and parent reports) and explore the long-term efficacy of EFT across more diverse demographic cohorts to enhance external validity.

Conclusion

In conclusion, this clinical trial provides robust evidence that EFT is an effective intervention for mitigating aggression and enhancing distress tolerance in adolescent girls. By facilitating the transition from maladaptive secondary reactions to productive primary emotional processing, EFT enables students to achieve a state of emotional equilibrium that persists beyond the immediate therapeutic context. The stability of these improvements over a three-month follow-up period underscores the intervention's capacity for fostering long-term psychological resilience. Consequently, integrating emotion-focused protocols into school counseling frameworks is recommended to support students' behavioral regulation and overall mental health.

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