

The Role of Emotion Regulation in Mitigating Aggression Among Female High School Students Through Positive and Negative Affect

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Abstract

Background: Adolescent girls experience significant psychological and emotional changes, particularly during puberty, which can increase their vulnerability to aggression. This study aimed to explore the relationship between emotion regulation and aggressive tendencies, considering the mediating role of positive and negative emotions, among adolescent girls in secondary schools.

Methods: This descriptive correlational study was conducted in the 2023–2024 academic year. The target population were all adolescent girls attending secondary schools in Ahvaz, Iran. Using a multi-stage cluster random sampling approach, a group of 200 students was chosen. Data were collected using the Emotion Regulation Questionnaire (ERQ), Positive and Negative Affect Schedule (PANAS), and Aggression Questionnaire (AQ). Also, the data were analyzed using Pearson's correlation analysis in SPSS version 24 and structural equation modeling (SEM) in AMOS version 21.

Results: The proposed model of this study demonstrated a strong overall fit to the data. Specifically, emotion regulation had a significant positive direct influence on positive affect and a significant negative direct influence on negative affect ($P=0.001$). In contrast, emotion regulation showed no significant direct impact on aggression. Meanwhile, positive affect was linked to a significant direct reduction in aggression, while negative affect was associated with a significant direct increase in aggression ($P=0.001$). Notably, emotion regulation indirectly reduced aggression via the mediating pathways of positive affect ($P=0.008$) and negative affect ($P=0.040$).

Conclusions: The present study concluded that emotion regulation indirectly influences aggression through the mediating pathways of positive and negative affect. These findings underscore the importance of developing and implementing interventions focused on emotion regulation and affective management to effectively reduce aggressive behaviors in female adolescents.

Keywords: Adolescent, Aggression, Affect, Emotion Regulation

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Introduction

Adolescence, as a critical phase of development, is marked by profound shifts in physical, cognitive, and emotional realms that play a vital role in shaping mental health and overall wellness (1). For adolescent girls, this stage is particularly complex, involving hormonal shifts, social pressures, and academic stressors that significantly influence their psychological characteristics and emotional states (2). This rapid transformation can heighten the risk of developing problematic behaviors, with aggression being a key concern (3). Aggression is a widespread concern that is commonly defined as behavior intended to cause harm or injury to others. In girls, aggression often manifests as verbal and relational aggression, which can involve harming others' social standing or relationships through behaviors such as spreading rumors, social

exclusion, and malicious gossip (4). The underlying causes of such behaviors are multifaceted, with factors such as family dynamics, parental conflict, and experiences of discrimination playing important roles. Given that girls may develop more advanced social skills than their male peers, they may be more likely to employ verbal and relational forms of aggression, making this an important area of research for promoting healthy social and psychological development (5).

Emotion regulation is a central psychological construct linked to aggression. It refers to the processes by which individuals influence which emotions they experience, when they experience them, and how they experience and express those emotions (6). Emotion regulation encompasses both antecedent-focused strategies (e.g., cognitive reappraisal) and response-focused strategies (e.g.,

expressive suppression) (7). Maladaptive emotion regulation strategies, such as rumination and persistent worry, are strongly associated with psychological difficulties, including aggressive behavior and impulsive aggressive responses. In contrast, effective emotion regulation is associated with better psychological well-being and greater adaptability (8). A substantial body of research has established a link between emotion regulation and aggression (9, 10). Also, previous studies (9, 10) consistently reported a significant negative association between emotion regulation ability and aggressive tendencies, suggesting a potential protective role of effective emotion regulation.

The link between emotion regulation and aggression may be mediated by affect, specifically positive and negative affect. Positive affect refers to an individual's propensity to experience pleasant emotions like joy, enthusiasm, and contentment, which are associated with heightened energy and life satisfaction. High positive affect enables individuals to broaden their thought-action repertoires and creativity, contributing to overall well-being (11). In contrast, negative affect is the tendency to experience unpleasant emotions such as sadness, anger, and fear, often in response to stressful situations (12). Elevated negative affect tends to narrow attentional focus and negatively affect psychological functioning and overall life satisfaction (13). Earlier investigations delved into the interconnections between these constructs, revealing that effective emotion regulation correlates positively with positive affect and negatively with negative affect (14, 15). Moreover, existing research has consistently found that positive affect is negatively associated with aggression, whereas negative affect is positively associated with aggression (16).

Although prior research (9, 10, 14) advanced our understanding of these relationships, an integrated framework that simultaneously examines the mediating roles of positive and negative affect in the association between emotion regulation and aggressive tendencies, particularly among adolescent girls, is still lacking. Despite these advances, an important gap remains. Based on the literature search, no study has simultaneously investigated the mediating roles of positive and negative affect in the association between emotion regulation and aggression, particularly among adolescent girls. Clarifying this mechanism is

essential because adolescent girls constitute a particularly vulnerable group, and identifying the pathways underlying aggression can inform more targeted prevention strategies. Therefore, the present study aimed to explore the relationship between emotion regulation and aggressive tendencies, considering the mediating role of positive and negative affect, among adolescent girls in secondary schools.

2. Methods

2.1. Design

This descriptive correlational study was conducted in the 2023–2024 academic year.

2.2. Selection and Description of Participants

The target population included all female secondary school students in Ahvaz, Iran. To achieve sufficient statistical power for the structural equation model (considering the four key constructs: emotion regulation, positive affect, negative affect, and aggression), a sample of 200 participants was recruited using a multi-stage cluster random sampling approach (17). First, multiple school districts in Ahvaz, Iran were randomly selected. From each selected district, one girls' high school was randomly chosen. Within each school, several classrooms were then randomly selected, and all eligible students in those classrooms were invited to participate. Inclusion criteria were female students in secondary high school (grades 10–12) during the 2023–2024 academic year and written informed consent from both the students and their parents. Those who submitted incomplete questionnaires were excluded from the study. Written informed consent was obtained from all participants and their parents, and all were assured that their data would be kept confidential.

2.3. Data Collection and Measurements

2.3.1. Emotion Regulation Questionnaire (ERQ): Developed by Gross and John (18), ERQ is a 10-item self-administered tool for evaluating emotion regulation, focusing on two primary approaches including cognitive reappraisal (assessed via 6 items) and expressive suppression (assessed via 4 items). Responses are provided on a 7-point Likert scale, from 1 (Strongly disagree) to 7 (Strongly agree). Higher scores on each subscale reflect

greater reliance on that particular strategy. Previous research has documented Cronbach's alpha coefficients of 0.91 for the reappraisal subscale and 0.86 for the suppression subscale (19). In the present study, the internal consistency of the questionnaire was confirmed with a Cronbach's alpha of 0.85 for reappraisal and 0.79 for suppression. Additionally, the Persian adaptation of ERQ achieved a Content Validity Index (CVI) of 0.92 and a Content Validity Ratio (CVR) of 0.85, underscoring its robust content validity (19).

2.3.2. Positive and Negative Affect Scale (PANAS): Developed by Watson and co-workers (20), PANAS consists of 20 items intended to evaluate two facets of emotion including positive affect (through 10 items) and negative affect (through 10 items). The study participants indicated their responses on a 5-point Likert scale, from 1 (Very slightly or not at all) to 5 (Extremely). Higher scores on each subscale signify stronger experiences of the corresponding emotional dimension. Previous research documented Cronbach's alpha coefficients of 0.87 for positive affect and 0.85 for negative affect (21). In the present study, the internal consistency of the scale was calculated to be 0.89 for positive affect and 0.86 for negative affect. Furthermore, the Persian adaptation of PANAS achieved a CVI of 0.90 and a CVR of 0.82, supporting its content validity for use in this population (21).

2.3.3. Aggression Questionnaire (AQ): Created by Buss and Perry (22), the Aggression Questionnaire (AQ) comprises 29 items designed to evaluate four key dimensions: physical aggression, verbal aggression, anger, and hostility. Participants respond to questions based on a 5-point Likert scale, from 1 (Extremely uncharacteristic of me) to 5 (Extremely characteristic of me). Higher total scores on the measure indicate greater overall aggression. Previous research indicated a Cronbach's alpha of 0.81 for the total scale (23). In the present study, the reliability of the questionnaire was confirmed with a Cronbach's alpha of 0.89. Moreover, the Persian adaptation of AQ achieved a CVI of 0.88 and a CVR of 0.80, thereby confirming its content validity (23).

2.4. Procedure

After obtaining the necessary permissions, the researcher visited the selected schools. Initial meetings were held with school principals and

deputies to thoroughly explain the objectives of the study. According to a predetermined schedule and in coordination with school staff, the researcher visited the selected classrooms. The students were provided with a detailed explanation of the study's objectives, the content of the questionnaires, and the measures taken to ensure data confidentiality. To minimize potential response bias, participants were given sufficient time to complete the questionnaires anonymously. Upon completion, the questionnaires were collected in separate packets and delivered to the researcher. All data collection procedures were carefully monitored throughout the 2023–2024 academic year.

2.5. Data Analysis

Data analysis was performed in SPSS version 24 and AMOS version 21. Descriptive statistics, including the mean and standard deviation, were used to summarize the data. Inter-variable associations were assessed via Pearson correlation analysis. Structural equation modeling (SEM) was used to evaluate the hypothesized model and examine the mediating roles of positive and negative affect in the direct and indirect relationships among the study variables. Figure 1 illustrates the conceptual framework and the hypothesized pathways among the study variables. The proposed framework hypothesizes that emotion regulation is directly associated with positive and negative affect, which, in turn, mediate the relationships between emotion regulation and aggression.

3. Results

The study sample consisted of 200 female high school students from Ahvaz, Iran. Participants were 10th–12th graders (ages 15–18). Demographic analysis showed that the majority of students were in the 11th grade (38.0%), followed by the 10th grade (35.0%) and 12th grade (27.0%). Furthermore, an analysis of parents' educational background showed that the largest proportion of fathers (56.0%) and mothers (51.0%) held Master's degree.

Table 1 presents descriptive statistics, including means, standard deviations, skewness, and kurtosis values, along with the Pearson correlation coefficients for all study variables. The findings highlighted a substantial inverse association between emotion regulation and aggression ($r = -0.18$, $P < 0.01$).

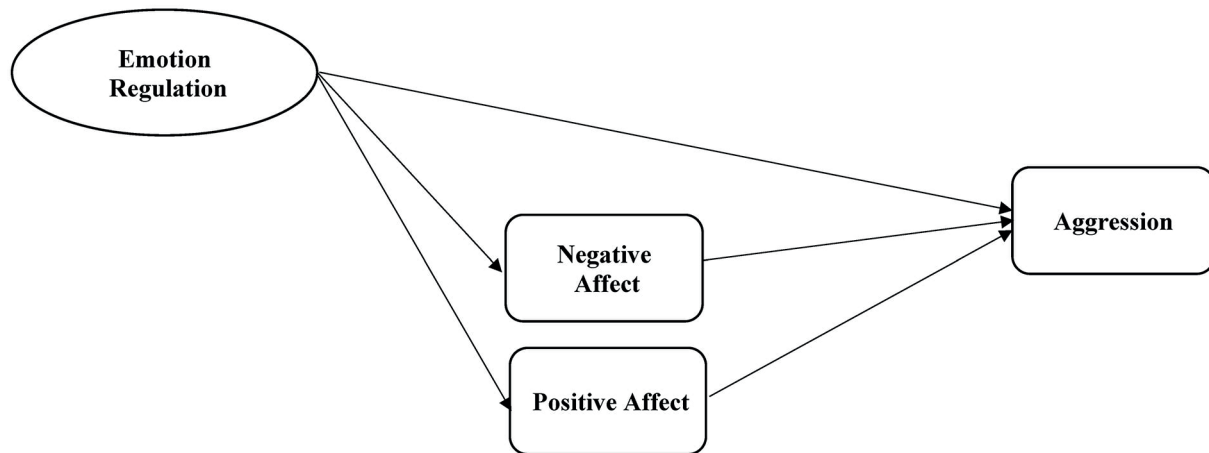


Figure 1: The figure shows the conceptual model; the relationship between emotion regulation and aggression with positive and negative affect as mediators.

Table 1: Descriptive statistics and Pearson correlations among the variables

Variable	Mean	SD	Skewness	Kurtosis	Emotion Regulation	Positive Affect	Negative Affect	Aggression
Emotion Regulation	41.07	4.81	-0.41	0.32	-			
Positive Affect	38.16	4.60	0.35	-0.21	0.26**	-		
Negative Affect	25.33	6.79	0.28	-0.15	-0.19*	-0.43**	-	
Aggression	71.12	5.05	0.52	-0.39	-0.18*	-0.38**	0.35**	-

*P<0.05, **P<0.01; SD: Standard Deviation

Table 2: Model fit indices for the research model

Index	Calculated Value	Acceptance Threshold
Chi-Square/Degrees of Freedom (χ^2/df)	2.54	<3
Normed Fit Index (NFI)	0.95	> 0.90
Comparative Fit Index (CFI)	0.97	> 0.90
Incremental Fit Index (IFI)	0.94	> 0.90
Root Mean Square Error of Approximation (RMSEA)	0.06	< 0.08

Positive affect showed a significant inverse association with aggression ($r = -0.38$, $P < 0.01$), whereas negative affect showed a significant positive association with aggression ($r = 0.35$, $P < 0.01$). These preliminary findings support the study's conceptual framework, suggesting that difficulties in emotion regulation and higher levels of negative affect are associated with greater aggression.

The proposed model's fit was evaluated using several standard fit indices (Table 2). The results indicated that the proposed model demonstrated a good fit to the data. The chi-square divided by degrees of freedom (χ^2/df) stood at 2.54, falling under the cutoff point of 3.0. Moreover, the Normed Fit Index (NFI=0.95), Comparative Fit Index (CFI=0.97), and Incremental Fit Index (IFI=0.94) surpassed the 0.90 benchmark. Lastly, the Root Mean Square Error of Approximation (RMSEA)

was 0.06, below the recommended threshold of 0.08, indicating an acceptable fit of the model to the data. Taken together, these fit indices indicated that the proposed model adequately represents the interrelationships among the study variables.

As shown in Table 3, the SEM findings revealed both direct and indirect relationships among the variables specified in the hypothesized framework. Emotion regulation was significantly and positively associated with positive affect ($\beta = 0.27$, $SE = 0.06$, $P = 0.001$) and significantly and negatively associated with negative affect ($\beta = -0.19$, $SE = 0.05$, $P = 0.001$). Emotion regulation did not exert a significant direct effect on aggression ($\beta = -0.09$, $SE = 0.07$, $P = 0.180$). Positive affect significantly reduced aggression ($\beta = -0.29$, $SE = 0.06$, $P = 0.001$), whereas negative affect significantly increased aggression ($\beta = 0.23$, $SE = 0.05$, $P = 0.001$).

Table 3: Direct and indirect effects in the model

Path	Beta	SE	P
Direct effect of emotion regulation on positive affect	0.27	0.06	0.001
Direct effect of emotion regulation on negative affect	-0.19	0.05	0.007
Direct effect of emotion regulation on aggression	-0.09	0.07	0.180
Direct effect of positive affect on aggression	-0.29	0.06	0.001
Direct effect of negative affect on aggression	0.23	0.05	0.001
Indirect effect of emotion regulation on aggression via positive affect	-0.09	0.03	0.008
Indirect effect of emotion regulation on aggression via negative affect	-0.05	0.02	0.040

SE: Standard Error

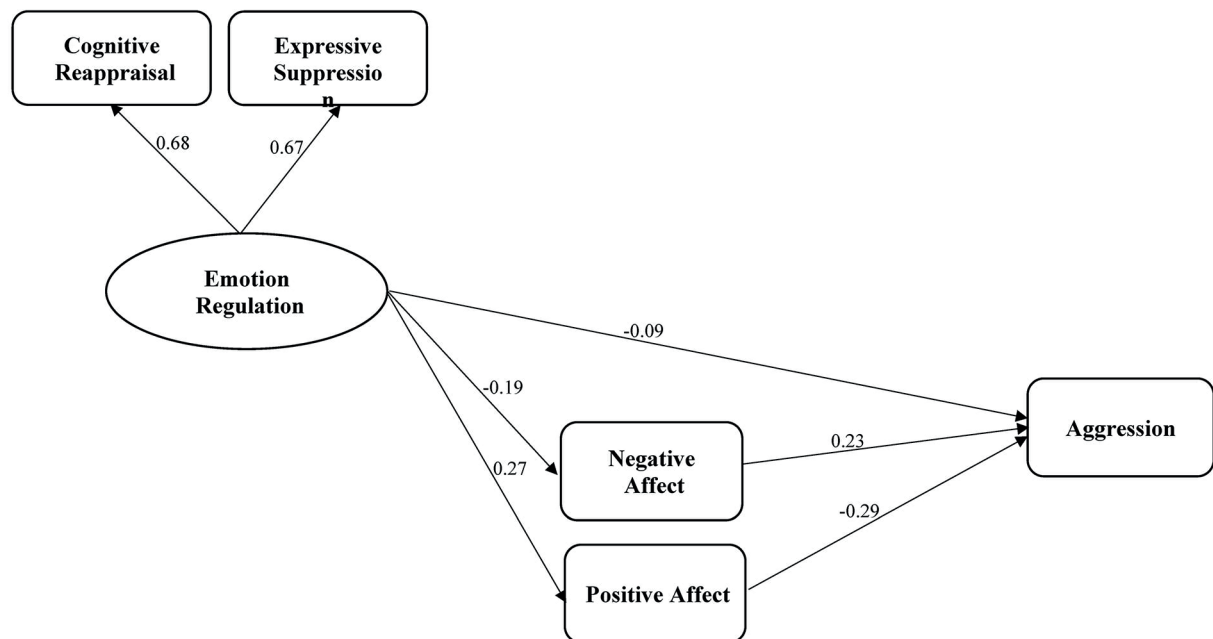
Importantly, emotion regulation exerted significant indirect effects on aggression through positive affect ($\beta = -0.09$, $SE = 0.03$, $P = 0.008$) and negative affect ($\beta = -0.05$, $SE = 0.02$, $P = 0.040$).

Figure 2 presents the proposed structural equation model, with standardized beta coefficients for each hypothesized path. The model illustrates the mediating roles of positive and negative affect in the relationship between emotion regulation and aggression. Emotion regulation was significantly associated with both positive and negative affect. Furthermore, positive affect was negatively associated with aggression, whereas negative affect was positively associated with aggression.

4. Discussion

The present study aimed to clarify how positive and negative affect mediate the relationship between emotion management and aggressive behavior among adolescent girls in secondary

schools. The findings showed that there was a strong positive association between emotion regulation and positive affect, alongside a strong negative association between emotion regulation and negative affect. These results align with fundamental concepts in emotion regulation theory, which posits that individuals with higher emotion regulation abilities are better equipped to manage their emotional responses and maintain more adaptive affective states (24). This ability allows individuals to reappraise challenging situations more effectively, thereby attenuating negative affect and promoting positive affect. Consequently, individuals who employ adaptive emotion regulation strategies tend to experience better psychological well-being and lower levels of emotional distress (9). These findings are consistent with prior investigations (25, 26). Notably, Young and colleagues (25) demonstrated that employing flexible emotion regulation strategies was associated with higher levels of positive affect and lower levels of negative affect among adolescents.

**Figure 2:** The figure shows the path diagram of the structural equation model.

Similarity, Gao and Yang (26) reported that greater emotion regulation abilities were associated with lower levels of negative affect among college students.

It was also found that emotion regulation was not significantly associated with aggression through a direct pathway. This pattern indicated that the pathway from emotion regulation to aggression was indirect rather than direct. Put differently, emotion-regulation skills do not reduce aggression in isolation; instead, they first modify affective states, which in turn influence aggressive responses. This pattern aligns with prior work highlighting the intermediary effects of additional factors in this dynamic (27, 28). For example, Sabri and co-workers (27) illustrated how childhood emotional mistreatment indirectly fosters adult aggression by impairing emotion management processes. Similarly, Demichelis and colleagues (28) revealed that difficulties in emotion regulation mediated the relationship between stress and aggressive behavior. Taken together, the findings of previous research and the present study underscore the importance of investigating the mechanisms underlying the association between affective experiences and behavioral outcomes (27, 28).

In addition, emotion regulation was positively associated with positive affect and negatively associated with negative affect. These results are consistent with emotion-regulation theory (29), which posits that adaptive strategies enable individuals to maintain more favorable affective states (24). The findings also align with earlier adolescent and young-adult research: Young and colleagues (25) reported that flexible emotion-regulation strategies were linked to higher positive affect and lower negative affect, while Gao and Yang (26) observed that greater emotion-regulation ability predicted reduced negative affect.

Also, emotion regulation showed no significant direct effect on aggression. This pattern indicated that the influence of emotion regulation on aggressive behavior operates indirectly through affective states rather than through a direct pathway. Comparable indirect mechanisms have been documented previously; Sabri and co-workers (27) found that childhood emotional maltreatment predicted adult aggression via impaired emotion regulation, and Demichelis and colleagues (28) demonstrated that emotion-regulation difficulties mediated the stress-aggression association.

Negative affect exerted a significant positive direct effect on aggression. This result is consistent with drive theories of aggression, which propose that persistent or acute negative affective states (e.g., anger, frustration, hostility) can trigger aggressive responses (8). The finding is further supported by developmental evidence that neural systems supporting impulse control remain immature in adolescence, thereby increasing susceptibility to aggressive outbursts (16). Parallel results appear in the literature; Yang and colleagues (30) reported a positive association between anger rumination and cyber aggression among adolescents, and Gao and Yang (26) observed a negative correlation between emotional maturity and aggression.

Moreover, positive affect exerted a significant negative direct effect on aggression. Positive affect appears to function as a protective factor by broadening cognitive repertoires and facilitating constructive coping (11). Individuals experiencing higher positive affect are more likely to engage in prosocial behavior and peaceful problem-solving. These findings align with the study of Peláez-Fernández and colleagues (31), who linked a positive family emotional climate to reduced adolescent aggression, and the research by Dickerson and co-workers (32), who showed that interventions fostering positive emotions and problem-solving skills effectively decreased aggressive behavior.

Positive and negative affect significantly mediated the relationship between emotion regulation and aggression. Emotion regulation therefore influences aggression indirectly by increasing positive affect and reducing negative affect. Similar mediating frameworks have been identified in prior work; Mohseni and co-workers (33) demonstrated that emotion regulation mediated the link between early maladaptive schemas and aggression, and Le and colleagues (34) reported that negative emotions mediated the association between maladaptive parenting and risky behaviors. Collectively, these findings reinforce the robustness of the affective-mediation model proposed in the present study.

4.1. Limitations

The present study had several limitations. First, its descriptive correlational design prevented causal inferences. Second, the sample was limited

to female high school students in Ahvaz, Iran, which may limit generalizability to other genders, ages, or cultural contexts. Third, reliance on self-report measures introduced the possibility of social desirability bias or recall errors. Finally, unmeasured variables such as socioeconomic status or family environment may have influenced the observed associations.

5. Conclusions

In conclusion, effective interventions to reduce aggression among adolescents should extend beyond conventional anger management training. Instead, they should focus on strengthening emotion regulation skills (e.g., cognitive reappraisal) and promoting positive affect while reducing negative affect. Such integrated approaches have the greatest potential to decrease aggressive behaviors.

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Declaration of AI

The authors acknowledge the use of AI-assisted tools (Grammarly) for editing the language. All content was manually reviewed and edited by the authors to ensure its accuracy and academic integrity; the authors take full responsibility for the final content of the manuscript.

Authors' Contribution

Atena Farhang: Contributions to the conception and design of the work; acquisition, analysis, and interpretation of data for the work; drafting the work. Mohammad Hossein Mohebi Nouredinvand: Contributions to the conception and design of the work; analysis and interpretation of data for the work; reviewing the work critically for important intellectual content. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such as the questions related to the accuracy or integrity of any part of the work.

Conflict of Interest: None declared.

Funding: None.

Ethical Approval

The Ethics Committee of Islamic Azad University, Ahvaz Branch, Ahvaz, Iran approved the present study with the code of IR.IAU.AHVAZ.REC.1403.346. Also, written informed consent was obtained from the participants.

References

1. Baker AE, Galván A, Fuligni AJ. The connecting brain in context: How adolescent plasticity supports learning and development. *Dev Cogn Neurosci*. 2025;71:101486. doi: 10.1016/j.dcn.2024.101486. PubMed PMID: 39631105; PubMed Central PMCID: PMC11653146.
2. Aslinejad A, Abdoshahi M, Naiemikia M. The Effects of Body Combat and Body Balance Exercises on Mindfulness, Aggression Control and Cognitive Emotion Regulation in Female High- School Students. *Women Health Bull*. 2024;11(4):240–249. doi: 10.30476/whb.2024.102885.1295.
3. Abolhassani Z. Phenomenological Approaches to Adolescent Girls' Perceptions of Storywriting-based Design Thinking Focused on Aggression. *Int J School Health*. 2025;12(2):108–117. doi: 10.30476/intjsh.2025.101632.1387.
4. Madole JW, Johnson SL, Carver CS. A Model of Aggressive Behavior: Early Adversity, Impulsivity, and Response Inhibition. *J Aggress Maltreat Trauma*. 2020;29(5):594–610. doi: 10.1080/10926771.2019.1591561. PubMed PMID: 33716492; PubMed Central PMCID: PMC7951085.
5. Heizomi H, Jafarabadi MA, Kouzekanani K, Matlabi H, Bayrami M, Chattu VK, et al. Factors Affecting Aggressiveness among Young Teenage Girls: A Structural Equation Modeling Approach. *Eur J Investig Health Psychol Educ*. 2021;11(4):1350–1361. doi: 10.3390/ejihpe11040098. PubMed PMID: 34842661; PubMed Central PMCID: PMC8628754.
6. Kaveh MH, Zare E, Ghahremani L, Nazari M, Karimi M. The Correlation between Resilience, Self-Control, Self-Regulation, and Decision-Making Style and Aggressive Behavior in Adolescents: An Analysis Using Structural Equation Modeling. *Int J School Health*. 2025;12(1):33–41. doi: 10.30476/intjsh.2024.103145.1418.
7. Cricenti C, Mari E, Barchielli B, Quaglieri A, Burrai J, Pizzo A, et al. Can Emotion Regulation

- Affect Aggressive Responses? A Study on the Ukrainian–Russian Conflict in a Non-Directly Exposed Sample. *Int J Environ Res Public Health*. 2022;19(10):6189. doi: 10.3390/ijerph19106189. PubMed PMID: 35627727; PubMed Central PMCID: PMC9140495
8. Navas-Casado ML, García-Sancho E, Salguero JM. Associations between maladaptive and adaptive emotion regulation strategies and aggressive behavior: A systematic review. *Aggression and Violent Behavior*. 2023;71:101845. doi: 10.1016/j.avb.2023.101845.
 9. Garofalo C, Gillespie SM, Velotti P. Emotion regulation mediates relationships between mindfulness facets and aggression dimensions. *Aggress Behav*. 2020;46(1):60–71. doi: 10.1002/ab.21868. PubMed PMID: 31559643; PubMed Central PMCID: PMC6916265.
 10. Zaki AA, Ismail N, Arshat Z. The Relationship between Emotion Regulation and Relational Aggression: A Systematic Literature Review. *International Journal of Academic Research in Business and Social Sciences*. 2024;14(10):2025–2038. doi: 10.6007/IJARBSS/v14-i10/23318.
 11. Abitante G, Haraden DA, Pine A, Cole D, Garber J. Trajectories of positive and negative affect across adolescence: Maternal history of depression and adolescent sex as predictors. *J Affect Disord*. 2022;315:96–104. doi: 10.1016/j.jad.2022.07.038. PubMed PMID: 35878831; PubMed Central PMCID: PMC9447402.
 12. Hamama L, Hamama-Raz Y. Meaning in Life, Self-Control, Positive and Negative Affect: Exploring Gender Differences Among Adolescents. *Youth & Society*. 2021;53(5):699–722. doi: 10.1177/0044118X19883736.
 13. Guevarra YA, Majeed NM, Hisham EM, Hartanto A. Positive and Negative Affect Differentially Predict Individual Differences and Intra-Individual Changes in Daily Cognitive Failures in Younger and Older Adults. *Brain Sci*. 2024;14(12):1259. doi: 10.3390/brainsci14121259. PubMed PMID: 39766458; PubMed Central PMCID: PMC11674940.
 14. Puchol-Carrión M, Schoeps K, De la Barrera U, Gil-Gómez J-A, Montoya-Castilla I. Context-related Impact of Positive and Negative Affect on Emotion Regulation: A Mobile-Conducted EMA Study. *Revista de Psicología Clínica con Niños y Adolescentes*. 2025;12(1):14–20. doi: 10.21134/rpcna.2025.12.1.5.
 15. Muehlbacher F, Mejeh M, Keller MM, Hagenauer G. Teachers' daily positive and negative affect and their relationship with teachers' emotion regulation strategies and daily work engagement – results of a diary study among team teachers. *Social Psychology of Education*. 2024;27(6):3369–3398. doi: 10.1007/s11218-024-09951-x.
 16. Quansah JE, Gagnon J. Toward an Integrative Approach to the Study of Positive-Affect-Related Aggression. *Perspect Psychol Sci*. 2025;20(2):357–370. doi: 10.1177/17456916231200421. PubMed PMID: 37938111; PubMed Central PMCID: PMC11881523.
 17. Ahmed SK. How to choose a sampling technique and determine sample size for research: A simplified guide for researchers. *Oral Oncology Reports*. 2024;12:100662. doi: 10.1016/j.oor.2024.100662.
 18. Gross JJ, John OP. Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *J Pers Soc Psychol*. 2003;85(2):348–62. doi: 10.1037/0022-3514.85.2.348. PubMed PMID: 12916575.
 19. Hasani J. Persian Version of the Emotion Regulation Questionnaire: Factor Structure, Reliability and Validity. *Int J Behav Sci*. 2016;10(3):108–113.
 20. Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: the PANAS scales. *J Pers Soc Psychol*. 1988;54(6):1063–70. doi: 10.1037//0022-3514.54.6.1063. PubMed PMID: 3397865.
 21. Lotfi M, Bahrampoori L, Amini M, Fatemitabar R, Birashk B, Shiasi Y. Developing the Persian Version of Positive and Negative Affect Scale for Children (Original and Short Form) and Assessing Its Psychometric Properties. *Iranian Journal of Psychiatry and Clinical Psychology*. 2020;25(4):440–453. doi: 10.32598/ijpcp.25.4.7.
 22. Buss AH, Perry M. The aggression questionnaire. *J Pers Soc Psychol*. 1992;63(3):452–9. doi: 10.1037//0022-3514.63.3.452. PubMed PMID: 1403624
 23. Samani S. Study of Reliability and Validity of the Buss and Perry's Aggression Questionnaire. *Iranian Journal of Psychiatry and Clinical Psychology*. 2008;13(4):359–365.
 24. Keskiner EŞ, Şahin E, Topkaya N, Yiğit Z. Behavioral Emotion Regulation Strategies and Symptoms of Psychological Distress Among Turkish University Students. *Behav Sci (Basel)*. 2024;15(1):6. doi: 10.3390/bs15010006. PubMed PMID: 39851811; PubMed Central PMCID: PMC11761923.
 25. Young KS, Sandman CF, Craske MG. Positive and Negative Emotion Regulation in Adolescence: Links

- to Anxiety and Depression. *Brain Sci.* 2019;9(4):76. doi: 10.3390/brainsci9040076. PubMed PMID: 30934877; PubMed Central PMCID: PMC6523365.
26. Gao Z, Yang Y. The predictive effect of trait emotional intelligence on emotion regulation strategies: The mediating role of negative emotion intensity. *System.* 2023;112:102958. doi: 10.1016/j.system.2022.102958.
 27. Sabri F, Barzegar bafrooei K, Hassani H. The Role of Childhood Emotional Maltreatment in Adult Aggression with the Mediating Role of Emotion Regulation in Students at Yazd University. *Tolooebehdasht Journal.* 2025;23(6):33-48. doi: 10.18502/tbj.v23i6.18191. Persian.
 28. Demichelis OP, Grainger SA, Burr L, Henry JD. Emotion regulation mediates the effects of sleep on stress and aggression. *J Sleep Res.* 2023;32(3):e13787. doi: 10.1111/jsr.13787. PubMed PMID: 36384216.
 29. Gross JJ. The Emerging Field of Emotion Regulation: An Integrative Review. *Review of General Psychology.* 1998;2(3):271–299. doi: 10.1037/1089-2680.2.3.271.
 30. Yang J, Li W, Wang W, Gao L, Wang X. Anger rumination and adolescents' cyberbullying perpetration: Moral disengagement and callous-unemotional traits as moderators. *J Affect Disord.* 2021;278:397–404. doi: 10.1016/j.jad.2020.08.090. PubMed PMID: 33007631.
 31. Peláez-Fernández MA, Mérida-López S, Yudes C, Extremera N. How can the Social Family Climate Contribute to Emotional Intelligence in Preventing Suicidal Ideation and Promoting Life Satisfaction Among Adolescents? *Applied Research in Quality of Life.* 2024;19(5):2915–2932. doi: 10.1007/s11482-024-10354-5.
 32. Dickerson KL, Skeem JL, Montoya L, Quas JA. Using Positive Emotion Training With Maltreated Youths to Reduce Anger Bias and Physical Aggression. *Clin Psychol Sci.* 2020;8(4):773–787. doi: 10.1177/2167702620902118. PubMed PMID: 34136312; PubMed Central PMCID: PMC8204906.
 33. Mohseni S, Barzgar M, Rezaei A. The influence of cognitive emotion regulation strategies on the causal links between early maladaptive schemas, anger rumination and aggression. *Journal of Psychological Science.* 2022;21(119):2269. doi: 10.52547/JPS.21.119.2269.
 34. Le Y, Fredman SJ, Feinberg ME. Parenting stress mediates the association between negative affectivity and harsh parenting: A longitudinal dyadic analysis. *J Fam Psychol.* 2017;31(6):679–688. doi: 10.1037/fam0000315. PubMed PMID: 28318290; PubMed Central PMCID: PMC5607072.