Psychological Achievements

(Psychol Achiev), 2025
32(*Special Issue*), 43-58
Received: 02 Sep 2025
Accepted: 04 Apr 2026
Doi: 10.22055/psy.2026.50460.3478

ISSN (E): 2588-6649
https://psychac.scu.ac.ir/

Open Access
Publish Free

Research Article

The Relationship Between Childhood Traumatic Experiences and Affective Styles: The Mediating Role of Cognitive Abilities

Zahra Javedanipour[1], Fatemeh Shahamat Dehsorkh[2]

1- M.Sc. Graduate of General Psychology, Department of Psychology, Faculty of Humanities, Khayyam University, Mashhad, Iran.
2- Assistant Professor, Department of Psychology, Faculty of Humanities, Khayyam University, Mashhad, Iran.

Article Info

Corresponding Author:
Fatemeh Shahamat Dehsorkh

Email:
f.shahamat@khayyam.ac.ir r

Keywords:
Traumatic Childhood Experiences; Cognitive abilities; Affective Style

Citation: Zahra Javedanipour, Z., & Shahamat Dehsorkh, F. (2025). The Relationship Between Childhood Traumatic Experiences and Affective Styles: The Mediating Role of Cognitive Abilities, *Psychological Achievements, 32*(Special Issue), 43-58

Abstract

Aim: Childhood trauma has lasting effects on emotional development and affective styles in adulthood. The potential mediating role of cognitive mechanisms—particularly cognitive abilities—in this relationship has not been thoroughly examined. This study investigated whether cognitive abilities mediate the link between childhood trauma and affective styles.

Methods: This study used a cross-sectional correlational design, with data analyzed through path analysis using SPSS 27 and AMOS. Participants were 331 adults (242 women, 89 men; mean age = 25.93, SD = 7.70). Measures included the Childhood Trauma Questionnaire (CTQ), the Affective Style Questionnaire (ASQ), and the Cognitive Abilities Questionnaire (CAQ).

Results: Childhood trauma was negatively associated with the Adjustment style directly (β = -.12, p < .05) and indirectly through cognitive abilities (β_indirect = -0.14, p < .05), indicating mediation. Its effects on concealing and tolerating styles were fully mediated by cognitive abilities (β_indirect = -.04 and -.05, respectively, p < .05), with no significant direct paths. Cognitive abilities were positively associated with all three affective styles (β = .44–.17, p < .01–.05), highlighting their key mediating role. The path analysis model showed good fit indices (NFI = .96, CFI = .97, GFI = .99, RMSEA = .069).

Conclusion: These findings suggest that cognitive abilities play a meaningful role in the association between childhood trauma and enduring affective styles. Furthermore, interventions targeting cognitive–affective processes could potentially contribute to reducing the long-term effects of childhood trauma.

© 2025 The Author(s). Published by Shahid Chamran University of Ahvaz. This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Affective styles are conceptualized as individual differences in emotion regulation (Davidson, 1998) and refer to the habitual, relatively stable patterns of emotional responses and expressions. These styles encompass consistent tendencies to experience and express emotions in specific ways across various situations (Davidson, 1998; Hofmann & Kashdan, 2010; Huang et al., 2025). Hofmann and Kashdan (Hofmann & Kashdan, 2010) classified affective styles into three primary types. The first, termed the Adjustment style, is observed in individuals who are adept at modulating their emotional experiences and expressions in line with situational demands. Such individuals rely on effective regulatory tools, such as cognitive reappraisal, which substantially contribute to their well-being and mental health. The Concealing style reflects a trait-like tendency to rely on suppression and avoidance strategies across situations. While suppression itself is a regulation strategy (Gross, 2002), its habitual and pervasive use constitutes a stable affective style (Hofmann & Kashdan, 2010). The Concealing style is associated with increased risks of depression and anxiety, as well as poorer social functioning (Gross & John, 2003). The third style reflects a non-defensive approach to emotional experiences, characterized by high tolerance for distress in emotional situations, which may ultimately prolong negative emotions (Hofmann & Kashdan, 2010).

Hofmann and Kashdan also conceptualize affective styles as constructs closely related to emotion self-regulation . Emotion regulation refers to the processes and strategies individuals employ to manage their emotions in various situations (Gross, 1998). In contrast, affective styles denote stable, trait-like patterns in how individuals habitually engage with emotions across contexts (Davidson, 1998). For instance, suppression may serve as a temporary regulation strategy, but when it becomes pervasive and consistent, it reflects the concealing affective style. These styles are more closely related to personality traits and mood tendencies and may serve as indicators of emotional vulnerability (Davidson, 1998; Miu et al., 2022), making them crucial for predicting future psychopathology As long-term emotional adaptation and psychopathology are influenced by long-term affective styles rather than momentary regulatory choices, affective styles are particularly valuable for understanding long-term emotional adaptation. Recent research has shown that trait-like emotion regulation tendencies—such as habitual reliance on cognitive reappraisal or expressive suppression—are systematically associated with mental health outcomes: greater use of adaptive strategies like reappraisal relates to fewer symptoms of depression and anxiety, whereas frequent suppression predicts higher psychological distress and poorer psychosocial functioning (Adolph & Margraf, 2024; Schlechter et al., 2023).

According to developmental psychology, these enduring affective styles are not formed in isolation but rather emerge from cumulative emotional learning throughout childhood, making early relationships and environmental adversities critical contexts for their development. (Palmier-Claus et al., 2025). Traumatic experiences in childhood, such as physical, emotional, or sexual abuse, neglect, and household dysfunction, can adversely affect one's emotional and physical well-being long-term. Childhood trauma refers to a wide range of negative experiences that occur during childhood and deviate significantly from one's expected environment. (Sætren et al., 2024). Childhood trauma initiates repeated and intense emotional responses that can become biologically embedded in neural systems, leading to

lasting changes in emotional reactivity. Early adversity alters corticolimbic circuits, including the amygdala and anterior insula, increasing sensitivity to negative cues and amplifying emotional responses compared to non-trauma-exposed individuals (McLaughlin et al., 2020). After repeated exposure, habitual emotional responses such as avoidance or suppression become default responses rather than situational strategies (Zhang et al., 2024). Over time, these persistent patterns can become enduring affective styles, reflecting the long-term effects of early adversity on emotional adaptation and how emotions are experienced and expressed, lasting into adulthood (Gee, 2022).While early trauma has been studied for its effect on emotion regulation, it remains unclear how these experiences shape enduring affective styles, especially in non-Western cultures.

Moreover, according to Perry's use-dependent development theory (Perry et al., 1995), repeated adverse experiences in childhood can lead to atypical brain organization, particularly in regions associated with cognitive abilities. Thus, cognitive abilities represent an important variable that may be affected by childhood adversity. Cognitive abilities encompass cognitive flexibility, inhibition, working memory, decision-making, planning, sustained attention, and social cognition. These abilities enable individuals to engage in goal-directed and regulated behavior (Schäfer et al., 2024). Previous studies have shown that traumatic experiences in childhood can significantly impact higher-order cognitive functions associated with the prefrontal cortex, such as cognitive flexibility, inhibition, and working memory (Armbruster-Genç et al., 2025; Rahapsari & Levita, 2024). Neuroscientific evidence indicates that the prefrontal cortex and limbic system interact to integrate cognitive and emotional pathways, supporting reasoning, judgment, and adaptive affective responses. When these cognitive systems are compromised, individuals are less able to engage in cognitive reappraisal or other adaptive emotion regulation strategies, increasing reliance on less effective habitual responses (Feller et al., 2020; Halse et al., 2024). Despite evidence that childhood trauma impacts cognitive abilities, which in turn influence affective styles, it remains unclear whether cognitive abilities mediate this relationship. This study aims to address this question.

2. Objectives

Despite extensive literature on emotion regulation and childhood adversity, relatively little research has examined affective styles as distinct dispositional tendencies. These differ conceptually from flexible, situation-based emotion regulation strategies. Whereas emotion regulation refers to specific processes individuals employ to modulate their emotions, affective styles reflect more stable, trait-like patterns in emotional reactivity and recovery (Davidson, 1998; Hofmann & Kashdan, 2010). Highlighting this distinction allows us to explore whether enduring affective tendencies—rather than momentary regulatory choices—play a role in linking adverse childhood experiences with cognitive abilities.

Furthermore, most studies in this domain have been conducted in Western contexts. Cross-cultural research suggests that collectivistic cultures, including many in Asia and the Middle East, tend to favor expressive suppression over emotional expression. In contrast, individualistic cultures place greater emphasis on emotional expression and cognitive reappraisal strategies (Ramzan & Amjad, 2017). For example, a comparative study found that Iranian children exhibited significantly higher levels of emotion suppression than their

German peers, reflecting cultural norms of emotional restraint in the Iranian context (Tahmouresi et al., 2014). Furthermore, evidence suggests that although suppression is often viewed negatively in Western settings, in many East Asian cultural settings it may not carry the same maladaptive connotations (Nagulendran & Jobson, 2020). Because cultural factors shape both emotional expression and regulation, examining these relationships in an Iranian sample offers valuable insights. It highlights how cultural norms surrounding emotional expression may influence the interplay between early adversity, affective styles, and cognitive abilities. This cross-cultural perspective strengthens the novelty and potential contribution of the current study. The aim of the present study is to investigate how stable affective tendencies mediate the impact of childhood adversity on cognitive abilities within a culturally relevant context.

3. Methods

3.1. Sample and Procedure

The study population consisted of Iranian adults aged 18 to 50 years who were selected using convenience sampling through widely accessed Persian-language channels. A cross-sectional correlational design was employed, and data were analyzed descriptive statistics and Pearson correlation tests in SPSS version 27, followed by path analysis in AMOS version 24. After applying exclusion criteria, 331 participants remained in the final sample. Exclusion criteria included scores above 12 on the Minimization/Denial scale of the Childhood Trauma Questionnaire (indicating a tendency to underreport maltreatment), age under 18 or over 50 years, non-Iranian nationality, and statistically extreme responses or uniform responding. The final sample consisted of 242 women and 89 men with a mean age of 25.93 years (SD = 7.70). Regarding marital status, 237 participants (71.6%) were single, and 94 (28.4%) were married. Educational levels were distributed as follows: less than high school diploma (5.1%), diploma (22.1%), bachelor's degree (49.5%), master's degree (21.1%), and doctoral degree (2.1%). The data were collected during the summer of 2023.

3.2. Research Tools

The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003) comprises 28 items rated on a Likert scale from “Never True” (1) to “Very Often True” (5). Higher scores indicate greater severity of childhood trauma. This instrument assesses five types of maltreatment: emotional neglect, physical neglect, emotional abuse, physical abuse, and sexual abuse. Additionally, it includes three items designed to detect minimization or denial of childhood experiences. The Cronbach's alpha coefficients for the subscales range from .78 (emotional neglect) to .95 (sexual abuse), reflecting strong internal consistency. Concurrent validity, assessed through therapist ratings, has been reported to range between .59 and .78. In Iranian samples, the Persian version (Ebrahimi et al., 2014) has demonstrated strong internal consistency, with Cronbach's alpha values ranging from .81 to .97 across subscales. Construct validity was supported by expert review and exploratory factor analysis, confirming the original five-factor structure. In the present study, Cronbach’s alpha for the total score of the questionnaire was .78.

The Cognitive Abilities Questionnaire (Nejati, 2013) comprises 30 items that assess cognitive abilities on a five-point Likert scale ranging from (1) "Never" to (5) "Always." Higher scores indicating better cognitive abilities. This instrument encompasses seven components: memory, inhibitory control and selective attention, decision-making, planning, sustained attention, social cognition, and cognitive flexibility. The questionnaire has demonstrated a Cronbach's alpha of .83. Construct validity was supported through exploratory factor analysis, which confirmed the seven-factor structure with item loadings ranging from .33 to .72. Pearson correlation coefficients for all components—except social cognition—were significant ($p < .01$). In the present study, Cronbach's alpha was 0.83.

The Affective Style Questionnaire (Hofmann & Kashdan, 2010) assesses stable, trait-like affective tendencies rather than situational emotion regulation strategies. It comprises 20 items rated on a five-point Likert scale, ranging from (1) "Not at all true of me" to (5) "Very true of me." This instrument assesses three affective styles: the Adjusting (7 items), the Concealing (8 items), and the Tolerating (5 items). In U.S. student samples, the Cronbach's alpha coefficients for the Concealing, Adjusting, and Tolerating styles were reported as .84, .80, and .66, respectively. The Persian version of the ASQ has been validated for use in Iranian populations. Construct validity was confirmed through exploratory and confirmatory factor analyses, which indicated a good model fit (CFI = .90). The reliability of the Persian version, assessed with Cronbach's alpha, was reported as .81 (Karsheki, 2013).In the present study, Cronbach's alpha was calculated for each of the affective styles, yielding the following values: Adjustment: .79, Concealing: .75, and Tolerating: .31.

3.3. Ethical Considerations

This study was approved by the Ethics Committee (IR.KHAYYAM.REC.1402.014) and written consent was obtained from all participants prior to partticipation.

4. Results

A model was developed to examine the link between childhood trauma and affective styles, with cognitive abilities serving as a mediator. In this model, affective styles—namely, the Adjusting, Concealing, and Tolerating—were considered outcome variables, while childhood trauma was treated as the predictor variable.

Prior to assessing model fit, key assumptions for path analysis were verified: normality, absence of multicollinearity, and independence of errors. Skewness and kurtosis indices were within ±2 and ±7, respectively, indicatory normality. Variance Inflation Factors (VIFs) were below 10, and tolerance values ranged between 0 and 1, exceeding the recommended cutoff of 0.1. These results indicated no multicollinearity among the predictor variables. The Durbin–Watson statistic was below 4, supporting the assumption of independence of errors(Meyers et al., 2017). Descriptive statistics and correlations among the study variables, analyzed using Pearson's correlation coefficient, are presented in **Table 1.**

To evaluate model fit, several indices were examined: the chi-square to degrees of freedom ratio (χ^2/df), Normed Fit Index (NFI), Comparative Fit Index (CFI), Goodness-of-Fit Index (GFI), Standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA). The initial model demonstrated poor fit, with the following indices: χ^2/df = 27.10, NFI = .65, CFI = .65, GFI = .92, and RMSEA = .28.

Table 1. Pearson correlation coefficient matrix

VARIABLES	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. emotional abuse	7.97	3.04	1.00																
2. physical abuse	5.95	1.43	.52**	1.00															
3. sexual abuse	5.92	1.61	.22**	.23**	1.00														
4.emotional neglect	11.20	4.48	.56**	.36**	.16**	1.00													
5. physical neglect	7.77	2.89	.54**	.39**	.21**	.64**	1.00												
6. total trauma	38.84	10.20	.80**	.60**	.39**	.86**	.82**	1.00											
7. Memory	11.12	3.57	-.25**	-.13*	-.13*	-.25**	-.24**	-.29**	1.00										
8.Inhibitory control and selective attention	15.51	4.15	-.32**	-.19**	-.08	-.32**	-.31**	-.36**	.35**	1.00									
9. decision making	11.12	3.16	-.06	.05	.03	-.05	-.08	-.05	.24**	.28**	1.00								
10. planning	7.52	2.88	-.14*	-.15**	-.07	-.13*	-.09	-.16**	.24**	.37**	.31**	1.00							
11.Sustained attention	8.59	2.45	-.08	-.06	-.02	-.15**	-.03	-.11*	.29**	.42**	.23**	.30**	1.00						
12. social cognition	6.61	1.94	.10	.05	.06	-.07	-.04	.006	-.02	-.03	.007	-.009	-.09	1.00					
13. cognitive flexibility	9.56	2.81	-.25**	-.12*	-.03	-.25**	-.17**	-.25**	.41**	.51**	.37**	.36**	.38**	.008	1.00				
14. total cognitive abilities score	70.07	12.93	-.27**	-.15**	-.07	-.30**	-.26**	-.32**	.64**	.76**	.59**	.62**	.62**	.18**	.73**	1.00			
15. tolerance	12.93	4.91	-.10	-.02	-.04	-.18*	-.10	-.15**	.14*	.11*	.06	.12*	.07	.10	.12*	.17**	1.00		
16.concealment	22.71	4.86	.05	.04	-.006	.005	-.03	.01	.09	.07	.12*	.03	.14*	.02	.08	.13*	-.16**	1.00	
17. adjustment	22.78	4.91	-.25**	-.11*	.01	-.27**	-.18**	-.26**	.28**	.39**	.23**	.31**	.33**	.12*	.35**	.49**	.18**	.40**	1.00

* $p < .05$, **$p < .01$

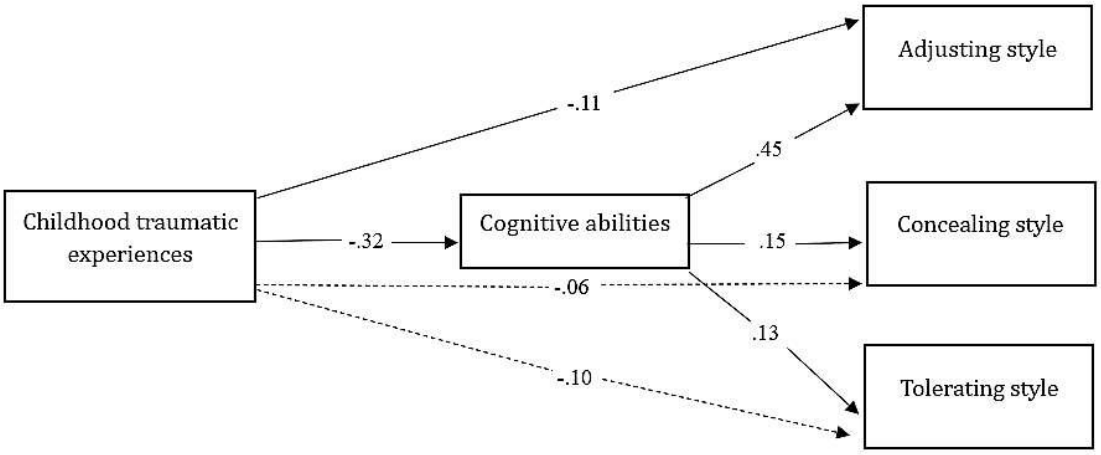


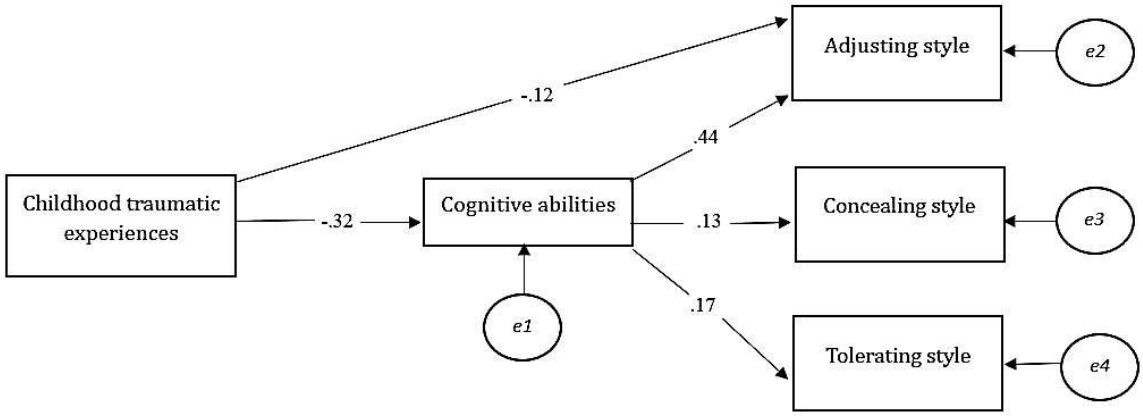
Figure 1. The initial model for effective styles

After removing non-significant paths from childhood trauma to the concealing and tolerating styles, the revised model demonstrated substantially better fit compared with the initial model.

Table 2. Goodness-of-Fit Indices for the Confirmed Model

Fit Index	Acceptable Value	Obtained Value	Interpretation
χ^2	_	7.65	_
df	_	3	_
χ^2/df	< 3 (lower is better)	2.55	Good fit
NFI	≥ .95	.96	Excellent
CFI	≥ .95	.97	Excellent
GFI	≥ .95	.99	Excellent
RMSEA	< .08 desired; poor fit > .10	.069	Good fit

Figure 2. The final verified model for effective styles



Path coefficients for the final model are illustrated in **Figure 2.** Direct, indirect, and total effects, as well as critical ratios (C.R.), are presented in **Table 3.** According to the findings, t-values greater than 1.96 and the results shown in **Table 3.** support the proposed research model. In other words, cognitive abilities significantly mediate the relationship between

childhood trauma and affective styles (p < .05). In addition, childhood trauma showed both a direct and an indirect association with the adjusting style (p < .05).

Table 3. Standardized effects and C.R.s for affective styles

Construct	Test Results			
	Direct effect	Indirect effect	Total effect	C.R.
childhood trauma → adjusting style	-.12	-.14	-.27	-2.81
childhood trauma → concealing style	.00	-.04	-.04	-
childhood trauma → tolerating style	.00	-.05	-.05	-
childhood trauma → cognitive abilities	-.32	.00	-.32	-6.23
cognitive abilities → adjusting style	.44	.00	.44	8.99
cognitive abilities → concealing style	.13	.00	.13	2.45
cognitive abilities → tolerating style	.17	.00	.17	3.19

Table 4. Bootstrap Test Results for Direct, Indirect, and Total Effects

Path	Type of Effect	β	Boot SE	95% CI Lower	95% CI Upper	P
Trauma → Adjustment Style	Indirect	-.145	.030	-.208	-.089	< .001
	Total	-.273	.047	-.366	-.182	< .001
Trauma → Concealing Style	Indirect	-.044	.020	-.089	-.011	.010
	Total	-.044	.020	-.089	-.011	.010
Trauma → Tolerating Style	Indirect	-.056	.023	-.104	-.017	.002
	Total	-.056	.023	-.104	-.017	.002

As presented in **Figure 4,** bootstrap analyses demonstrated that the indirect effects of trauma on adjustment, concealing, and tolerating affective styles through cognitive abilites were statistically significant, as the 95% confidence intervals did not include zero. The direct effects of trauma on the concealing and tolerating styles were non-significant, whereas the indirect effects remained significant, indicating full mediation by cognitive abilites. In contrast, both the direct and indirect effects of trauma on the adjustment style were significant, supporting partial mediation in this pathway.

5. Discussion

A key strength of this study is its focus on affective styles as enduring, trait-like dispositions, rather than momentary emotion regulation strategies. The findings demonstrate that cognitive abilities uniquely mediate the association between traumatic childhood experiences and affective styles. This underscores the importance of distinguishing affective styles from emotion regulation strategies, which are often used interchangeably in the literature. Moreover, by focusing on an Iranian sample, our study highlights how cultural norms of emotional expression and regulation may shape these pathways. Such findings underscore the need for culturally sensitive models of emotional development and psychopathology.

The present study demonstrates that traumatic childhood experiences were significantly and negatively associated with the adjustment style in adulthood. This finding is consistent with previous research showing that individuals with childhood trauma histories often display reduced adaptability and a greater reliance on maladaptive coping strategies(Orozco-Vargas et al., 2021; Tzouvara et al., 2023). Chronic exposure to early-life adversity has been associated with dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, leading to abnormal

cortisol secretion and heightened amygdala responsiveness to threatening stimuli. Such alterations (Ruby et al., 2017). may contribute to maladaptive stress responses, which can negatively affect both psychological and physiological health (Goltser-Dubner et al., 2025). These changes may increase vulnerability to adjustment disorders(Kascakova et al., 2020). Meeting children's emotional needs is crucial for the identification and regulation of emotions. Emotional deprivation, however, can result in inappropriate emotional reactions and maladaptive stress responses(Letkiewicz et al., 2021). Thus, individuals who have experienced childhood maltreatment may struggle to adapt effectively to different situations. In such cases, they may rely on their limited capacity for emotion regulation(Mahmoud Alilou et al., 2014), which often fails to reflect normative adjustment.

Studies conducted in Iranian populations have indicated that childhood trauma can have lasting negative effects on adaptive and affective styles within this specific cultural context. For example, Iranian adults who experienced early adversity demonstrate lower social-emotional competence and reduced cognitive flexibility, which impair their capacity to adjust effectively to social and emotional demands(Farahani et al., 2023). Moreover, cultural norms in Iran—, such as emphasizing emotional restraint and conformity within family and social groups—may amplify the impact of early trauma on maladaptive coping and hinder the development of flexible, adaptive affective styles (Saedi et al., 2025).These findings confirmed that the negative relationship between childhood trauma and adult adjustment universal and shaped by Iranian socio-cultural factors, highlighting the need to consider cultural context in models of emotional development and psychopathology.

However, not all studies have reported uniformly significant direct relationships between childhood trauma and adult adjustment outcomes. For instance, research employing latent class analysis suggested that the long-term impact of childhood adversity on adult mental health may vary depending on the number, type, and configuration of the adverse experiences, and that simple cumulative models may not always capture these complexities. (Kamis et al., 2024). Additionally, some research on post-traumatic growth has indicated that a subset of individuals who experienced early trauma may report positive psychological transformation and resilience in adulthood, reflecting complex pathways beyond uniform maladjustment (Harding-White et al., 2025). These nuanced findings may arise from differences in measurement, sample characteristics, and the interplay of moderating or mediating factors such as social support and coping resources, suggesting that the relationship between childhood trauma and adult adjustment is multifaceted rather than universally deterministic.

The present study demonstrates that cognitive abilities mediate the relationship between traumatic childhood experiences and affective styles. Specifically, the direct paths from childhood trauma to the concealing and tolerating styles were not significant and were removed from the final model. This suggests that the effects of trauma on these tendencies are primarily indirect. This interpretation is consistent with prior evidence that individuals with a history of childhood trauma often show impaired cognitive abilities. These deficits reduce their ability to flexibly use affective styles and emotion regulation strategies (Dark et al., 2020; Lantrip et al., 2016). Studies on various neural systems have identified sensitive developmental periods during which brain regions and their associated functions are highly susceptible to environmental influences. Indeed, cognitive abilities are closely linked to the contexts in which children are raised (Thompson & Steinbeis, 2020). Specifically, the timing, type, and severity of

trauma, together with critical periods of brain development, can adversely affect cognitive abilities(Schaefer et al., 2022). Child maltreatment can affect brain function. Compared to control groups, individuals with a history of maltreatment exhibit altered brain activity in regions such as the superior temporal gyrus and precuneus when responding to threatening emotions. Changes in the amplitude of low-frequency fluctuations (fALFF) in these areas may be linked to specific cognitive and emotional processing disorders(Lu et al., 2017). Childhood traumatic experiences may disrupt emotional processing by altering neural pathways and structures, such as the limbic system, hippocampus, amygdala, and prefrontal cortex (Lu et al., 2024). These alterations have been linked to neurophysiological changes in stress response systems, reduced prefrontal cortex volume, and damage to its circuits(Peverill et al., 2023), which, in turn are associated with cognitive impairments(de la Fuente et al., 2022). Deficits in cognitive abilities can lead to emotional instability and difficulties in self-regulation(Hammud et al., 2023) as self-regulation requires a broad range of skills, including self-control, planning, and other cognitive abilities(Vatankhah et al., 2020). Individuals with lower cognitive abilities often display weaker relationships, social isolation, negative emotions, and increased aggression compared to their peers. Consequently, these impulsive behaviors are related with behavioral and social problems and, more broadly, to adjustment disorders(Su et al., 2024; Zhu et al., 2023). On the other hand, individuals who employ concealment styles tend to suppress their emotions and avoid expression. It should be noted, however, that suppression itself is a situational regulation strategy (Gross, 1998). When this tendency becomes habitual and pervasive, it constitutes the Concealing affective style(Hofmann & Kashdan, 2010). Research indicates that effective cognitive skills are essential for successful suppression (Talwar et al., 2017). Prior studies have shown that concealment behaviors, such as lie-telling in children, require substantial executive resources including working memory and inhibitory control(Lavoie & Talwar, 2020). This highlights that higher cognitive abilities are correlated with a greater tendency to use suppression in social interactions. These abilities include working memory, inhibitory control, and social cognition (Mohammed et al., 2022). Additionally, regarding the relationship between cognitive abilities and the tolerance style suggests that children with stronger cognitive abilities, and those raised by parents who consistently engage in positive parenting practices from early childhood, tend to exhibit higher levels of resilience. This association underscores the importance of both cognitive development and supportive parenting in fostering children's ability to adapt and tolerate(Rungsattatharm et al., 2025).

According to Iranian cultural norms, habitual responses to emotional experiences—such as suppression (associated with the Concealing style) or emotional endurance (associated with the Tolerating style)—are influenced not only by childhood trauma but also by longstanding social norms governing emotional expression. Cross-cultural evidence suggested that suppression and emotional inhibition are more prevalent and socially reinforced in collectivistic cultures, where emotional restraint is encouraged to maintain social harmony and interpersonal respect (Vatandoost et al., 2024). Consequently, these culturally normative patterns of emotional responding may attenuate the direct relationship between early trauma and concealing or tolerating affective styles in adulthood, as such responses are already widely practiced in everyday life. Instead, the influence of childhood trauma on these affective tendencies may operate primarily through cognitive-regulatory mechanisms such as cognitive

abilities, which shape how individuals flexibly implement culturally normative emotional responses under conditions of stress or demand. From this perspective, concealing and tolerating styles may emerge as more distal consequences of childhood trauma, becoming evident mainly when executive control capacities are compromised rather than as direct outcomes of early adverse experiences alone.

6. Limitation and Recommendation

Despite the confirmation of hypotheses using valid statistical methods, several limitations should be considered regarding the validity of this study. First, reliance on self-report measures may introduce biases, such as social desirability and recall bias, potentially confounding the observed associations. Second, the use of convenience sampling and the wide age range of participants threaten external validity, limiting the generalizability of findings to other populations or age groups. Third, the role of gender and other potential confounders was not examined, which could have influenced internal validity. Future research should employ longitudinal designs, diverse and probability-based sampling, and multi-method assessments to strengthen both internal and external validity.

7. Conclusion

This study highlights the associations between childhood adversity, cognitive abilities, and affective styles, suggesting that difficulties in cognitive abilities may contribute to less adaptive emotional tendencies. These findings imply that interventions aimed at enhancing executive skills and adaptive emotional responses could be beneficial. Future research and programs may focus on parental training, cognitive flexibility, and emotion regulation strategies to support both children and adults exposed to early adversity.

8. Author Contributions

Author1 was responsible for data collection, data analysis and interpretation, and manuscript writing. Author 2 was responsible for topic selection, study design, supervision of the research, and oversight of data.

9. Acknowledgment

The authors thank all colleagues and professors who have helped us in this research.

10. Conflicts of Interest

The authors declare there is no conflict of interest in this article. This article is extracted from the M.A. thesis, conducted under the supervision of Dr. Fatemeh Shahamat Deh-Sorkh by Zahra Javedanipour.

11. Funding

This article did not receive financial support.

References

Adolph, D., & Margraf, J. (2024). Differential effects of trait-like emotion regulation use and situational emotion regulation ability across the affective and anxiety disorders spectrum: a transdiagnostic examination. *Scientific Reports*, *14*.

Armbruster-Genç, D. J. N., Neil, L., Valton, V., Phillips, H., Rankin, G., Sharp, M., Rapley, J., Viding, E., Roiser, J. P., & McCrory, E. (2025). Childhood maltreatment is associated with lower exploration and disrupted prefrontal activity and connectivity during reward learning in volatile environments. *Journal of Child Psychology and Psychiatry*, *66*(6), 846–856. https://doi.org/10.1111/jcpp.14095

Dark, H. E., Harnett, N. G., Goodman, A. M., Wheelock, M. D., Mrug, S., Schuster, M. A., Elliott, M. N., Emery, S. T., & Knight, D. C. (2020). Violence exposure, affective style, and stress-induced changes in resting state functional connectivity. *Cognitive, Affective and Behavioral Neuroscience*, *20*(6), 1261–1277. https://doi.org/10.3758/s13415-020-00833-1

Davidson, R. J. (1998). Affective Style and Affective Disorders: Perspectives from Affective Neuroscience. *Cognition and Emotion*, *12*(3), 307–330.

de la Fuente, J., Martínez-Vicente, J. M., Pachón-Basallo, M., Peralta-Sánchez, F. J., Vera-Martínez, M. M., & Andrés-Romero, M. P. (2022). Differential Predictive Effect of Self-Regulation Behavior and the Combination of Self- vs. External Regulation Behavior on Executive Dysfunctions and Emotion Regulation Difficulties, in University Students. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.876292

Ebrahimi, H., Dejkam, M., & Seghatoleslam, T. (2014). Childhood traumas and suicide attempt in adulthood. In *Iranian Journal of Psychiatry and Clinical Psychology* (Vol. 19, Issue 4, pp. 275–282).

Farahani, H., Azadfallah, P., Watson, P., Qaderi, K., Pasha, A., Dirmina, F., Esrafilian, F., Koulaie, B., Fayazi, N., Sepehrnia, N., Esfandiary, A., Abbasi, F. N., & Rashidi, K. (2023). Predicting the Social-Emotional Competence Based on Childhood Trauma, Internalized Shame, Disability/Shame Scheme, Cognitive Flexibility, Distress Tolerance and Alexithymia in an Iranian Sample Using Bayesian Regression. *Journal of Child & Adolescent Trauma*, *16*(2), 351–363. https://doi.org/10.1007/s40653-022-00501-1

Feller, L., Feller, G., Ballyram, T., Chandran, R., Lemmer, J., & Khammissa, R. A. G. (2020). Interrelations between pain, stress and executive functioning. *British Journal of Pain*, *14*(3), 188–194. https://doi.org/10.1177/2049463719889380

Gee, D. G. (2022). Neurodevelopmental mechanisms linking early experiences and mental health: Translating science to promote well-being among youth. *American Psychologist*, *77*(9), 1033–1045. https://doi.org/10.1037/amp0001107

Goltser-Dubner, T., Benarroch, F., Lavon, M., Amer, R., Canetti, L., Giesser, R., Kianski, E., Martin, J., Pevzner, D., Blum Weinberg, P., Ben-Ari, A., Bar-Nitsan, M., Alon, S., Yshai, S., Lotan, A., Galili-Weisstub, E., Segman, R., & Shalev, A. (2025). Childhood trauma cortisol and immune cell glucocorticoid transcript levels are associated with increased risk for suicidality in adolescence. *Molecular Psychiatry*. https://doi.org/10.1038/s41380-025-02923-3

Gross, J. J. (1998). The Emerging Field of Emotion Regulation: An Integrative Review. *Review of General Psychology*, *2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271

Gross, J. J. (2002). *Emotion regulation: Affective, cognitive, and social consequences*.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and In Social*

Psychology, 85, 348–362.

Halse, M., Steinsbekk, S., Bjørklund, O., Hammar, Å., & Wichstrøm, L. (2024). Emotions or cognitions first? Longitudinal relations between executive functions and emotion regulation in childhood. *Child Development*, *95*(5), 1508–1521. https://doi.org/10.1111/cdev.14096

Hammud, G., Avital-Magen, A., Schusheim, G., Barzuza, I., & Engel-Yeger, B. (2023). How Self-Regulation and Executive Functions Deficits Affect Quality of Life of Children/Adolescents with Emotional Regulation Disorders. *Children*, *10*(10), 1622. https://doi.org/10.3390/children10101622

Harding-White, M. F., Carson, J., & Mojtahedi, D. (2025). Growing Forward: Exploring Post-Traumatic Growth and Trait Resilience Following the COVID-19 Pandemic in England. *Psychiatry International*, *6*(2), 55. https://doi.org/10.3390/psychiatryint6020055

Hofmann, S. G., & Kashdan, T. B. (2010). The affective style questionnaire: Development and psychometric properties. In *Journal of Psychopathology and Behavioral Assessment 32*(2), 255–263. https://doi.org/10.1007/s10862-009-9142-4

Huang, R., Shen, H., Yuan, Y., Jiang, K., & Wang, Z. (2025). Exploring the Interplay Between Self-Identity, Affective Style, Emotion Regulation, and Anxiety: Based on Bayesian Network Model. *Brain and Behavior*, *15*(2). https://doi.org/10.1002/brb3.70290

Kamis, C., Lynch, S. M., & Copeland, W. E. (2024). Associations between Configurations of Childhood Adversity and Adult Mental Health Disorder Outcomes. *Society and Mental Health*, *14*(1), 23–38. https://doi.org/10.1177/21568693231197746

Karsheki, H. (2013). evaluation of the factor structure of emotional styles scale in students. *Journal of Behavioral Sciences Research*, *11*(3), 185–195.

Kascakova, N., Furstova, J., Hasto, J., Geckova, A. M., & Tavel, P. (2020). The unholy trinity: Childhood trauma, adulthood anxiety, and long-term pain. *International Journal of Environmental Research and Public Health*, *17*(2). https://doi.org/10.3390/ijerph17020414

Lantrip, C., Isquith, P. K., Koven, N. S., Welsh, K., & Roth, R. M. (2016). Executive Function and Emotion Regulation Strategy Use in Adolescents. *Applied Neuropsychology: Child*, *5*(1), 50–55. https://doi.org/10.1080/21622965.2014.960567

Lavoie, J., & Talwar, V. (2020). Care to Share? Children's Cognitive Skills and Concealing Responses to a Parent. *Topics in Cognitive Science*, *12*(2), 485–503. https://doi.org/10.1111/tops.12390

Letkiewicz, A. M., Funkhouser, C. J., & Shankman, S. A. (2021). Childhood maltreatment predicts poorer executive functioning in adulthood beyond symptoms of internalizing psychopathology. *Child Abuse & Neglect*, *118*, 105140. https://doi.org/10.1016/j.chiabu.2021.105140

Lu, S., Pan, F., Gao, W., Wei, Z., Wang, D., Hu, S., Huang, M., Xu, Y., & Li, L. (2017). Neural correlates of childhood trauma with executive function in young healthy adults. *Oncotarget*, *8*(45), 79843–79853. https://doi.org/10.18632/oncotarget.20051

Lu, S., Xu, Y., Cui, D., Hu, S., Huang, M., Li, L., & Zhang, L. (2024). Exploring the association between childhood trauma and limbic system subregion volumes in healthy individuals: a neuroimaging study. *BMC Psychiatry*, *24*(1), 843. https://doi.org/10.1186/s12888-024-06306-w

Mahmoud Alilou, M., Hashemi, T., Bairami, M., Bakhshipour, A., & Sharifi, M. amin. (2014). Investigation the Relationship between Childhood Maltreatment, Early losses and Separations and Emotion Dysregulation with Borderline Personality Disorder.

Psychological Achievements, *21*(2).

McLaughlin, K. A., Colich, N. L., Rodman, A. M., & Weissman, D. G. (2020). Mechanisms linking childhood trauma exposure and psychopathology: a transdiagnostic model of risk and resilience. *BMC Medicine*, *18*(1), 96. https://doi.org/10.1186/s12916-020-01561-6

Meyers, L. S., Gamst, G., & Guarino, A. J. (2017). *Applied Multivariate Research: Design and Interpretation*. SAGE Publications, Inc. https://doi.org/10.4135/9781071802687

Miu, A. C., Szentágotai-Tătar, A., Balázsi, R., Nechita, D., Bunea, I., & Pollak, S. D. (2022). Emotion regulation as mediator between childhood adversity and psychopathology: A meta-analysis. *Clinical Psychology Review*, *93*, 102141. https://doi.org/10.1016/j.cpr.2022.102141

Mohammed, A., Kosonogov, V., & Lyusin, D. (2022). Is emotion regulation impacted by executive functions? An experimental study. *Scandinavian Journal of Psychology*, *63*(3), 182–190. https://doi.org/10.1111/sjop.12804

Nagulendran, A., & Jobson, L. (2020). Exploring cultural differences in the use of emotion regulation strategies in posttraumatic stress disorder. *European Journal of Psychotraumatology*, *11*(1). https://doi.org/10.1080/20008198.2020.1729033

Nejati, V. (2013). Cognitive Abilities Questionnaire: Development andEvaluation of .Psychometric Properties. *Advances in Cognitive Science*, *15*(2), 11–19

Orozco-Vargas, A. E., Venebra-Muñoz, A., Aguilera-Reyes, U., & García-López, G. I. (2021). The mediating role of emotion regulation strategies in the relationship between family of origin violence and intimate partner violence. *Psicologia: Reflexao e Critica*, *34*(1). https://doi.org/10.1186/s41155-021-00187-8

Palmier-Claus, J., Golby, R., Stokes, L., Saville, C. W. N., Velemis, K., Varese, F., Marwaha, S., Tyler, E., & Taylor, P. (2025). The relationship between childhood adversity and affective instability across psychiatric disorders: A meta-analysis. *Acta Psychiatrica Scandinavica*, *151*(1), 33–45. https://doi.org/10.1111/acps.13745

Perry, B. D., Pollard, R. A., Blakley, T. L., Baker, W. L., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation, and "use-dependent" development of the brain: How "states" become "traits." *Infant Mental Health Journal*, *16*(4), 271–291. https://doi.org/10.1002/1097-0355(199524)16:4<271::AID-IMHJ2280160404>3.0.CO;2-B

Peverill, M., Rosen, M. L., Lurie, L. A., Sambrook, K. A., Sheridan, M. A., & McLaughlin, K. A. (2023). Childhood trauma and brain structure in children and adolescents. *Developmental Cognitive Neuroscience*, *59*, 101180. https://doi.org/10.1016/j.dcn.2022.101180

Rahapsari, S., & Levita, L. (2024). The Impact of Adverse Childhood Experiences on Cognitive Control Across the Lifespan: A Systematic Review and Meta-analysis of Prospective Studies. *Trauma, Violence, & Abuse*. https://doi.org/10.1177/15248380241286812

Ramzan, N., & Amjad, N. (2017). Cross Cultural Variation in Emotion Regulation: A Systematic Review. *Annals of King Edward Medical University*, *23*(1). https://doi.org/10.21649/akemu.v23i1.1512

Ruby, E., Rothman, K., Corcoran, C., Goetz, R. R., & Malaspina, D. (2017). Influence of early trauma on features of schizophrenia. *Early Intervention in Psychiatry*, *11*(4), 322–333. https://doi.org/10.1111/eip.12239

Rungsattatharm, L., Tasingha, P., Trairatvorakul, P., & Chonchaiya, W. (2025). Longitudinal associations between executive function and positive parenting during early childhood and resilience, self-regulation, and behavioral problems in school-age children. *Child and Adolescent Psychiatry and Mental Health*, *19*(1), 19. https://doi.org/10.1186/s13034-

025-00875-8

Saedi, Z., Taheri, E., & Azmoude, E. (2025). The relationship between childhood trauma and psychological security: the mediating role of self-disclosure and perceived social support in Iranian medical students. *BMC Psychology*, *13*(1), 1161. https://doi.org/10.1186/s40359-025-03480-8

Sætren, S. S., Bjørnestad, J. R., Ottesen, A. A., Fisher, H. L., Olsen, D. A. S., Hølland, K., & Hegelstad, W. ten V. (2024). Unraveling the Concept of Childhood Adversity in Psychosis Research: A Systematic Review. *Schizophrenia Bulletin*, *50*(5), 1055–1066. https://doi.org/10.1093/schbul/sbae085

Schaefer, J. D., Cheng, T. W., & Dunn, E. C. (2022). Sensitive periods in development and risk for psychiatric disorders and related endpoints: a systematic review of child maltreatment findings. *The Lancet Psychiatry*, *9*(12), 978–991. https://doi.org/10.1016/S2215-0366(22)00362-5

Schäfer, J., Reuter, T., Leuchter, M., & Karbach, J. (2024). Executive functions and problem-solving—The contribution of inhibition, working memory, and cognitive flexibility to science problem-solving performance in elementary school students. *Journal of Experimental Child Psychology*, *244*, 105962. https://doi.org/10.1016/j.jecp.2024.105962

Schlechter, P., Hoppen, T. H., & Morina, N. (2023). Counterfactual comparisons and affective styles in the aftermath of traumatic events. In *Current Psychology*. https://doi.org/10.1007/s12144-022-04193-6

Su, X., Li, W., Hu, C., Liu, H., & Lian, R. (2024). The longitudinal relationship between executive dysfunction and reactive and proactive aggression in adolescents: impulsivity as a mediator and sex differences. *Frontiers in Psychiatry*, *15*. https://doi.org/10.3389/fpsyt.2024.1484340

Tahmouresi, N., Bender, C., Schmitz, J., Baleshzar, A., & Tuschen-Caffier, B. (2014). Similarities and Differences in Emotion Regulation and Psychopathology in Iranian and German School-children: A Cross-cultural Study. *International Journal of Preventive Medicine*, *5*(1), 52–60. https://doi.org/24554992

Talwar, V., Crossman, A., & Wyman, J. (2017). The role of executive functioning and theory of mind in children's lies for another and for themselves. *Early Childhood Research Quarterly*, *41*, 126–135. https://doi.org/10.1016/j.ecresq.2017.07.003

Thompson, A., & Steinbeis, N. (2020). Sensitive periods in executive function development. *Current Opinion in Behavioral Sciences*, *36*, 98–105. https://doi.org/10.1016/j.cobeha.2020.08.001

Tzouvara, V., Kupdere, P., Wilson, K., Matthews, L., Simpson, A., & Foye, U. (2023). Adverse childhood experiences, mental health, and social functioning: A scoping review of the literature. *Child Abuse & Neglect*, *139*, 106092. https://doi.org/10.1016/j.chiabu.2023.106092

Vatandoost, S., Baetens, I., Erjaee, Z., Azadfar, Z., Van Heel, M., & Van Hove, L. (2024). A Comparative Analysis of Emotional Regulation and Maladaptive Symptoms in Adolescents: Insights from Iran and Belgium. *Healthcare*, *12*(3), 341. https://doi.org/10.3390/healthcare12030341

Vatankhah, M., Kafi, seyed musa, Abolqasemi, A., & Shakerinia, I. (2020). The effectiveness of self-regulation training with body mass index interaction on weight control, executive functioning, and emotion regulation of overweight and obese adolescent. *Psychological Achievements*, *27*(2). https://doi.org/https://doi.org/10.22055/psy.2020.32231.2480

Zhang, L., Xu, Y., Funkhouser, C. J., Monteleone, A. M., & Yu, X. (2024). Childhood trauma,

emotion regulation, peer attachment, and family functioning: A longitudinal network analysis. *Children and Youth Services Review*, *166*, 107900. https://doi.org/10.1016/j.childyouth.2024.107900

Zhu, J., Anderson, C. M., Ohashi, K., Khan, A., & Teicher, M. H. (2023). Potential sensitive period effects of maltreatment on amygdala, hippocampal and cortical response to threat. *Molecular Psychiatry*, *28*(12), 5128–5139. https://doi.org/10.1038/s41380-023-02002-5