

The Relationship Between Childhood Trauma, Social Adjustment, and Self-Compassion Based on the Mediating Role of Emotional Schemas in Adolescents with Risky Behaviors

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ABSTRACT

Purpose: The aim of this study was to investigate the relationship between childhood trauma and social adjustment and self-compassion based on the mediating role of emotional schemas in adolescents with risky behaviors.

Materials and Methods: This research employed a descriptive-analytical correlational design. The statistical population included all adolescents with risky behaviors who had referred to welfare-affiliated counseling centers, psychological counseling centers, and neighborhood centers in Tehran during 2024–2025. A total of 324 individuals were selected through convenience sampling based on the minimum sample size calculation for structural equation modeling. Data collection instruments included the Social Adjustment Scale (Bell, 1962), the Self-Compassion Scale (Neff et al., 2003), the Childhood Trauma Questionnaire (Bernstein et al., 2003), and the Emotional Schema Scale (Leahy, 2007). The validity of the questionnaires was confirmed through content and construct validity (convergent and divergent), and reliability was assessed via Cronbach's alpha, composite reliability, and McDonald's omega coefficients. Data analysis was conducted using descriptive statistics (demographic and variable descriptions) and inferential statistics (structural equation modeling) with SPSS-v27 and Smart PLS-v3 software.

Findings: The results indicated that childhood trauma had a significant and negative indirect effect on social adjustment through emotional schemas ($\beta = -0.481, p < .001$). Likewise, childhood trauma had a significant and negative indirect effect on self-compassion through emotional schemas ($\beta = -0.377, p < .001$).

Conclusion: The study demonstrated that both childhood trauma and emotional schemas directly influence social adjustment and self-compassion in adolescents with risky behaviors. Furthermore, childhood trauma indirectly affects these variables through emotional schemas. The overall conclusion suggests that managing emotions, addressing childhood trauma, and strengthening self-compassion may help reduce risky behaviors and improve adolescents' mental health. The findings highlight the necessity of psychological and social interventions to support at-risk adolescents.

Keywords: Childhood trauma, social adjustment, self-compassion, emotional schemas in adolescents, risky behaviors

1. Introduction

Childhood trauma remains one of the most profound determinants of adolescents' psychosocial and emotional development. A growing body of literature suggests that traumatic experiences during early developmental stages—ranging from emotional neglect and physical abuse to sexual victimization—can deeply impair one's emotional regulation capacities, cognitive schemas, and overall mental health, potentially increasing the likelihood of maladaptive behaviors during adolescence (Melamed et al., 2024; Tariq & Anjum, 2024). In particular, adolescents who have been exposed to chronic adversity often struggle with internalized shame, emotional dysregulation, and reduced social adaptability, which can subsequently contribute to risky behaviors such as substance use, violence, and self-harm (Damavandian et al., 2021; Zhang et al., 2023).

One theoretical lens through which to understand this trajectory is the schema theory, which posits that early traumatic events contribute to the formation of rigid, negative patterns of thinking known as early maladaptive schemas (EMS) (Cardoso et al., 2024; Pilkington et al., 2024). These schemas, often rooted in unmet core emotional needs during childhood, influence the individual's interpretation of current events and interpersonal relationships. For instance, adolescents who experience rejection or abandonment may internalize beliefs of worthlessness or mistrust, which shape their social behavior and emotional responses (Costa et al., 2022). Research has shown that such schemas not only mediate the relationship between early trauma and later psychopathology but also significantly impact emotional functioning and social integration during adolescence (Ebrahimi et al., 2023; Vatani & Namdar Pour, 2022).

Adolescents with risky behaviors are particularly vulnerable to the compounding effects of trauma and maladaptive schemas, as they often lack the emotional tools and relational resources necessary for adaptive coping. These adolescents may exhibit emotional avoidance, impulsivity, and disrupted self-concept, which are frequently maintained by dysfunctional emotional schemas (Leahy et al., 2021; Mirzaalian Dastjerdi, 2022). Emotional schemas—cognitive-emotional frameworks about one's own emotions—play a central role in the regulation of affective states. Negative emotional schemas such as rumination, suppression, or emotional rejection can exacerbate psychological distress and reduce resilience

against stressors (Nguyen et al., 2024). In this context, the mediation of emotional schemas between childhood trauma and adolescent outcomes such as social adjustment and self-compassion has garnered empirical attention.

Social adjustment, as a critical developmental task in adolescence, entails the capacity to interact appropriately with peers, conform to social norms, and participate constructively in community and academic life. Multiple studies have documented that early adverse experiences can undermine adolescents' social competencies and peer relationships, often through the mediating role of dysfunctional schemas or maladaptive emotional responses (Baumert et al., 2024; Juang et al., 2024). Adolescents who internalize trauma may perceive social interactions as threatening or isolating, thereby avoiding supportive networks and perpetuating cycles of marginalization and behavioral risk-taking (Golrokh et al., 2024). Furthermore, adolescents with immigration backgrounds or sociocultural vulnerability may face compounded difficulties in developing a cohesive cultural identity and navigating complex social environments, further intensifying maladjustment (Baumert et al., 2024).

Closely related to social adjustment is the construct of self-compassion, which refers to an individual's capacity for kindness, understanding, and non-judgment toward oneself during times of suffering or perceived inadequacy (Egan et al., 2022; Marsh et al., 2018). Self-compassion has emerged as a protective factor against anxiety, depression, and trauma-related symptoms, particularly during adolescence when identity and emotional stability are still forming. High levels of self-compassion have been linked to improved emotional regulation, resilience, and adaptive coping in adolescents with trauma histories (Maya et al., 2024; Zhang et al., 2023). It functions not only as a buffer against internalized self-blame and shame but also as a facilitator of healthier relationships and social behaviors (Golestani Bakht et al., 2022). In light of these findings, examining self-compassion as an outcome of both trauma and emotional schema processing is theoretically and clinically significant.

Empirical studies have provided mixed evidence regarding the pathways from childhood trauma to adolescent outcomes, suggesting the need for more nuanced models that incorporate mediators such as emotional schemas and moderators like cultural or interpersonal factors (Nguyen et al., 2024; Xu et al., 2023). Some research suggests that the mere presence of childhood adversity does not fully predict maladjustment unless it is filtered through maladaptive cognitive and emotional processes (Fan et al., 2024). The

sense of coherence, or one's belief that life is comprehensible and manageable, may act as a resilience factor against trauma's detrimental effects, yet such buffers are often absent or underdeveloped in high-risk youth populations (Álvarez & Szűcs, 2023; Fan et al., 2024).

This is particularly relevant in contexts where structural factors—such as poverty, family instability, and cultural dislocation—intersect with personal trauma to deepen adolescents' psychosocial vulnerabilities (Costa et al., 2022; M. T. Wang et al., 2023). Research from residential care settings, for instance, underscores how trauma-informed care and interventions targeting emotional processing can mitigate long-term emotional and social damage (Costa et al., 2022). Likewise, studies examining immigrant adolescents' identity and adjustment trajectories stress the importance of emotion regulation and schema flexibility in managing cross-cultural challenges and peer integration (Juang et al., 2024).

In Iranian and broader Middle Eastern contexts, childhood trauma and its psychological consequences are often underreported and culturally stigmatized, complicating assessment and intervention efforts. However, recent Iranian studies have emphasized the critical role of early maladaptive schemas in mediating the relationship between trauma and high-risk behaviors, including substance use, aggression, and sexual risk-taking (Ghavam & Behzadpour, 2024; Zare Davijani et al., 2023). Additionally, emotion-focused interventions such as compassion-based therapy and dialectical behavior therapy have shown promise in reducing aggression and promoting emotional self-regulation in delinquent adolescents (Damavandian et al., 2021).

Moreover, the emergence of research integrating self-compassion as a mechanism of change in clinical and educational settings highlights its relevance for trauma-affected youth. Adolescents who cultivate self-compassion are more likely to exhibit emotional resilience, moral reasoning, and adaptive peer relationships, making it a valuable target for therapeutic interventions (Egan et al., 2022; Marsh et al., 2018). Meta-analyses suggest that self-compassion not only reduces psychological distress but also mediates the negative impact of early trauma, particularly when emotional schemas are modified to support healthier emotional narratives (Melamed et al., 2024; Pilkington et al., 2024).

Understanding how emotional schemas mediate the pathway from childhood trauma to self-compassion and social adjustment can offer critical insights for designing integrative interventions. This conceptualization is

supported by schema-focused and emotion regulation theories, which argue that restructuring maladaptive emotional beliefs is key to alleviating the long-term consequences of trauma (Dart & Ciccio, 2024; Leahy et al., 2021). For adolescents engaged in high-risk behaviors, targeting emotional schemas through early identification and psychotherapeutic strategies could alter their developmental trajectory and reduce psychosocial impairment (Tariq & Anjum, 2024; X. Wang et al., 2023).

In conclusion, this study seeks to examine the mediating role of emotional schemas in the relationship between childhood trauma and two critical psychological outcomes in adolescents with risky behaviors: social adjustment and self-compassion.

2. Methods and Materials

2.1. Study Design and Participants

This research is applied in terms of its objective and follows a descriptive-correlational design using structural equation modeling (SEM). The statistical population consisted of all adolescents with risky behaviors who referred to psychological counseling centers and were introduced by the Welfare Organization in Tehran between late 2023 and mid-November 2024. A convenience sampling method was employed. Research samples were selected from centers in districts (2, 3, 5, 6, 16, 18, 19, 20, 22) that agreed to participate. The inclusion criteria were as follows: (1) age range between 15 and 18 years, (2) high-risk behaviors based on scores one standard deviation above the mean on the Risk-Taking Scale, (3) absence of severe physical or psychological disorders, (4) no substance or medication abuse, and (5) willingness to participate in the study. The exclusion criterion was failure to fully complete the questionnaires.

Although there is no consensus on sample size in SEM, many scholars suggest a minimum of 200 participants. In this study, the total sample size was set at 332 individuals. Of these, 5 questionnaires were not returned, and 3 were incompletely filled out, resulting in 324 valid cases for final analysis. Data collection lasted for approximately 8 months, beginning on March 4, 2024, and ending in mid-November 2024.

The research topic was selected based on several months of investigation, the researcher's academic interest, operational needs, and research gaps. Initially, the problem statement was articulated with reference to the relevant literature. After reviewing theoretical foundations and

previous studies (journals, lectures, interviews, etc.), relevant empirical works were analyzed. Subsequently, standardized data collection tools were selected and refined. Questionnaires were distributed to the target population at designated locations. After data collection, the validity of the responses was assessed, and data were analyzed in line with the research objectives. Upon interpreting and drawing conclusions from the results, a comprehensive report was written, including practical and research recommendations.

After receiving approval for the proposal and coordinating with the supervising professor, the researcher proceeded to access the sample group. Through coordination with welfare centers, neighborhood houses, and counseling centers in Tehran, adolescents with risky behaviors were identified and invited to participate if they met the inclusion criteria and expressed interest. After selection, the researcher introduced the study and, upon participant consent, distributed the assessment tools along with a consent form. Questionnaires were administered either online or via paper-and-pencil format depending on the center. Participants were informed that they were not required to write their names and that the data would be analyzed in aggregate form. If they wished to receive individual results, they could provide their names voluntarily. The full data collection process took 8 months, with invalid responses excluded from analysis.

2.2. Measures

Childhood Trauma Questionnaire (CTQ): The CTQ was developed by Bernstein, Ahluvalia, Newcomb, Walker, Pogge, and colleagues (2003) to assess childhood trauma. It is a screening tool for identifying individuals with histories of abuse and neglect and is suitable for both adolescents and adults. It assesses five types of maltreatment: sexual abuse, physical abuse, emotional abuse, emotional neglect, and physical neglect. The 28-item questionnaire includes 25 items for the main components and 3 items for detecting denial of trauma. Items 2, 5, 7, 13, 19, 26, and 28 are reverse-scored. Higher scores indicate greater trauma. Subscale scores range from 5 to 25, and the total score ranges from 25 to 125. Items 10, 16, and 22 are used to assess denial; a total score above 12 on these suggests potential invalidity. Bernstein et al. (2003) reported Cronbach's alpha coefficients of .87 (emotional abuse), .86 (physical abuse), .95 (sexual abuse), .89 (emotional neglect), and .78 (physical neglect). In Iran, Ebrahimi, Dezhkam, and Saghaei reported alphas ranging from .81 to .98. In this study, the Cronbach's alpha was reported as .76.

Bell Adjustment Inventory (BSAQ): Developed by Bell in 1962, the BSAQ includes five dimensions: home adjustment, occupational adjustment, health adjustment, emotional adjustment, and social adjustment. It contains 32 items with binary (yes/no) responses, scored as 1 and 0, respectively. Total scores range from 0 to 32. Bell (1962) reported reliability of 88% for the social adjustment scale, and construct validity was confirmed via a five-factor model. After translation into Persian and administration to a sample of 200 individuals, Cronbach's alpha was calculated at .89. Convergent and divergent validity were confirmed. The test-retest reliability after two months was .58. In this study, Cronbach's alpha was .83.

Self-Compassion Scale (SCS): This 26-item instrument was developed by Neff et al. in 2003 to measure six subscales: self-kindness, self-judgment (reverse), mindfulness, over-identification (reverse), common humanity, and isolation (reverse), rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Reverse-scored items include 1, 2, 4, 6, 8, 11, 13, 16, 18, 20, 21, 24, and 25. Total scores range from 26 to 130. Subscale scores range from 4 to 25 for the five-item subscales and 4 to 20 for the four-item subscales. Neff et al. (2023) reported a total Cronbach's alpha of .92. In this study, Cronbach's alpha was reported as .79.

Emotional Schema Scale (ESS-P): Developed by Leahy in 2007, this 37-item scale assesses how individuals deal with emotions over the past month using a 5-point Likert scale from 0 (strongly disagree) to 4 (strongly agree), yielding scores from 0 to 148. Subscales include rumination, emotional self-awareness, guilt, expression of feelings, uncontrollability, need for approval, comprehensibility, blame, rationalization, simplification of emotions, higher values, emotional acceptance, and agreement. Items 1, 4, 8, 12, 18, 20, 23, 25, 32, 34, and 37 are reverse-scored. Leahy (2007) reported a Cronbach's alpha of .86 and split-half reliability of .70. In Iran, Sheikh Hosseini et al. (2018) confirmed construct validity and test-retest reliability (.78) with Cronbach's alpha at .81. In this study, Cronbach's alpha was .74.

Iranian Adolescent Risk-Taking Scale (IARS): Developed by Zadeh Mohammadi et al. (2011), the IARS consists of 38 items measuring seven domains: dangerous driving, violence, smoking, drug use, alcohol consumption, opposite-sex interactions, and sexual behavior. Items are rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), with total scores ranging from 38 to 190. Higher scores indicate greater risk-taking. Cronbach's alpha

was reported as .74 for dangerous driving, .93 for smoking, .90 for drug use, .78 for violence, .89 for alcohol use, .77 for opposite-sex interaction, and .87 for sexual behavior. The overall reliability using Cronbach's alpha was .93, and construct validity was confirmed via exploratory factor analysis. In this study, Cronbach's alpha was .73.

2.3. Intervention

In the present study, Sue Johnson's (2004) Emotion-Focused Therapy protocol was implemented over nine weekly sessions, each lasting 90 minutes. The intervention followed a structured three-phase model. In the first phase (identification), the initial sessions focused on building therapeutic rapport, assessing the nature of the participant's difficulties, introducing the rationale of EFT, identifying negative interaction cycles, and uncovering attachment insecurities and emotional patterns. In sessions three and four, the focus shifted to exploring and reconstructing emotional experiences, highlighting key emotional responses, and facilitating client insight into maladaptive cycles. The second phase (change) involved deepening emotional engagement through the recognition of unmet attachment needs, fostering personal emotional experiences, and enhancing internal and interpersonal functioning. Sessions five and six aimed to increase emotional responsiveness, facilitate new patterns of interaction, and help clients articulate desires and needs more clearly. The third phase (consolidation) emphasized the development of new solutions to recurring problems, transforming maladaptive interaction cycles into positive ones, and reinforcing a coherent sense of self and relational security.

Table 1

Description of the Demographic Variables

Variable	Groups	Frequency	Percent	Sample Size
Gender	Female	168	52%	324
	Male	156	48%	
Age	15–16 years	133	41%	324
	17–18 years	191	59%	
Education	Mathematics–Physics	113	35%	324
	Experimental Sciences	94	29%	
	Humanities	117	36%	

This table outlines the descriptive data for each variable, including sample size (N), mean (M), standard deviation (SD), skewness, kurtosis, Shapiro–Wilk test statistic, and significance levels. For example, the variable Childhood trauma had a mean of 70.58 (SD = 21.43), skewness of -

The final sessions (seven to nine) focused on applying therapeutic gains to daily life, strengthening the emotional bond with the therapist, reviewing changes made during therapy, comparing past and present interaction patterns, and administering the post-test to evaluate treatment effectiveness.

2.4. Data Analysis

Descriptive statistics and Spearman correlation were performed using SPSS version 27, while SmartPLS version 4 was used for path analysis among variables. The Shapiro–Wilk test indicated that the variables did not follow a normal distribution (significant results), so the partial least squares (PLS) method was applied using SmartPLS. The significance level was set at 0.05. The bootstrap method was employed to test the mediating role in the model.

3. Findings and Results

Table 1 examined the descriptive statistics of the study's demographic variables. Regarding gender, out of 324 adolescents, 168 (52%) were female and 156 (48%) were male. In terms of age, adolescents were divided into two groups: the 15–16 age group included 133 participants (41%), and the 17–18 age group included 191 participants (59%). Regarding educational background, adolescents were categorized into three main academic disciplines. The Mathematics–Physics group included 113 participants (35%), and the Humanities group included 117 participants (36%), both showing similar representation. However, the Experimental Sciences group had the lowest frequency, with 94 participants (29%).

0.220, kurtosis of -0.697, and a Shapiro–Wilk p-value of < .001, indicating non-normal distribution. Similarly, Self-Compassion had a mean of 90.50 (SD = 18.05) and Social Adjustment a mean of 60.07 (SD = 12.23). All variables

violated normality assumptions, justifying the use of non-parametric statistical methods and PLS modeling.

Table 2

Description of the Main Research Variables

Variable	N	Mean	SD	Skewness	Kurtosis	Shapiro-Wilk	p-value	Min	Max
Sexual abuse	324	13.040	3.979	-0.531	-0.288	0.924	< .001	5	19
Physical abuse	324	13.327	5.187	0.500	-0.941	0.919	< .001	6	24
Emotional abuse	324	13.904	5.039	-0.043	-0.793	0.954	< .001	5	23
Emotional neglect	324	15.179	5.019	-0.015	-0.893	0.962	< .001	6	24
Physical neglect	324	15.127	4.979	-0.620	-0.204	0.898	< .001	5	22
Home Adjustment	324	13.105	2.711	0.245	-0.866	0.952	< .001	8	18
Career Adjustment	324	11.877	3.097	0.507	-0.675	0.934	< .001	7	18
Health Adjustment	324	10.154	2.212	0.194	-1.053	0.938	< .001	6	14
Emotional Adjustment	324	11.790	3.367	0.475	-0.776	0.926	< .001	7	18
Social adjustment dimension	324	13.139	3.664	0.473	-0.749	0.933	< .001	7	20
Self-Kindness	324	17.559	4.351	-0.360	-0.684	0.964	< .001	8	25
Self-Judgment	324	16.917	4.055	-0.163	-0.813	0.969	< .001	9	24
Human Commonalities	323	14.344	3.184	-0.414	-0.790	0.947	< .001	7	19
Isolation	324	13.978	4.001	-0.606	-0.495	0.940	< .001	5	20
Mindfulness	324	13.858	3.546	0.049	-0.758	0.964	< .001	7	20
Extreme Identification	324	13.852	3.529	-0.275	-0.839	0.960	< .001	6	20
Rumination	324	6.580	3.359	0.388	-0.459	0.963	< .001	1	14
Emotional self-awareness	324	6.244	2.133	-0.134	-0.839	0.954	< .001	2	10
Guilt	324	7.475	2.768	0.210	-0.579	0.968	< .001	2	13
Expressing emotions	324	4.688	1.523	-0.187	-0.952	0.923	< .001	2	7
Uncontrollability	324	7.667	2.251	-0.273	-0.915	0.945	< .001	3	11
Seeking approval	324	3.238	2.327	0.076	-1.228	0.918	< .001	0	7
Understandability	324	7.898	2.825	-0.333	-0.712	0.942	< .001	2	12
Blame	324	4.355	2.058	0.114	-0.868	0.945	< .001	1	8
Trying to be rational	324	10.667	2.564	0.068	-0.079	0.973	< .001	4	16
Simplistic view of emotions	324	4.750	2.252	0.038	-1.103	0.915	< .001	1	8
Higher values	324	8.685	2.643	-0.929	0.582	0.913	< .001	1	12
Acceptance of emotions	324	6.938	2.373	-0.116	-0.715	0.955	< .001	2	11
General agreement	324	7.444	2.838	0.083	-1.230	0.931	< .001	3	12
Childhood trauma	324	70.577	21.426	-0.220	-0.697	0.945	< .001	27	112
Social adjustment	324	60.065	12.226	0.620	-0.351	0.937	< .001	37	87
Self-Compassion	324	90.502	18.050	-0.428	-0.137	0.970	< .001	43	126
Emotional schemas	324	86.630	18.763	0.199	-0.123	0.989	< .001	24	

As shown in Table 2, multivariate tests such as Wilks' Lambda and others indicated a statistically significant difference between the experimental and control groups across the combined dependent variables ($p < 0.001$). These

results suggest that the emotion-focused therapy intervention had a significant multivariate effect on at least one of the outcome variables.

Table 3

Spearman's Correlations Between Research Variables

Variable	1	2	3	4
1. Childhood trauma	—			
p-value	—			
2. Social adjustment	-0.525	—		
p-value	< .001	—		
3. Self-Compassion	-0.685	0.614	—	
p-value	< .001	< .001	—	

4. Emotional schemas	-0.625	0.673	0.697	—
p-value	< .001	< .001	< .001	—

According to Table 3, Childhood trauma had a significant negative correlation with Social adjustment ($r = -0.525$, $p < .001$), Self-Compassion ($r = -0.685$, $p < .001$), and Emotional schemas ($r = -0.625$, $p < .001$). In contrast, Emotional schemas showed a significant positive correlation with

Social adjustment ($r = 0.673$, $p < .001$) and Self-Compassion ($r = 0.697$, $p < .001$). These results highlight the mediating potential of emotional schemas between trauma and both outcomes.

Table 4

Direct and Indirect Effects of the Model

Path	Estimate	STDEV	t-value	p	2.5%	97.5%
Childhood trauma → Emotional schemas	-0.750	0.027	27.951	< .001	-0.800	-0.695
Childhood trauma → Self-Compassion	-0.392	0.044	8.884	< .001	-0.478	-0.304
Childhood trauma → Social adjustment	-0.192	0.056	3.404	0.001	-0.301	-0.082
Emotional schemas → Self-Compassion	0.503	0.045	11.183	< .001	0.414	0.588
Emotional schemas → Social adjustment	0.641	0.052	12.234	< .001	0.537	0.742
Childhood trauma → ES → Social adjustment	-0.481	0.043	11.106	< .001	-0.571	-0.401
Childhood trauma → ES → Self-Compassion	-0.377	0.037	10.275	< .001	-0.449	-0.307

This table summarizes the direct and indirect path coefficients between study variables using PLS modeling and 5000 bootstrap resamples. Based on the data:

Childhood trauma had a significant negative direct effect on Emotional schemas ($\beta = -0.750$, $p < .001$), Self-Compassion ($\beta = -0.392$, $p < .001$), and Social adjustment ($\beta = -0.192$, $p = .001$).

Emotional schemas had a significant positive direct effect on Self-Compassion ($\beta = 0.503$, $p < .001$) and Social adjustment ($\beta = 0.641$, $p < .001$).

Indirect effects showed that Childhood trauma negatively impacted Social adjustment through Emotional schemas ($\beta = -0.481$, $p < .001$) and also negatively impacted Self-Compassion via the same mediator ($\beta = -0.377$, $p < .001$).

Table 5

Reliability and Validity of the Model Constructs

Variable	Cronbach's Alpha	Composite Reliability	AVE
Social adjustment	0.736	0.801	0.61
Self-Compassion	0.838	0.889	0.57
Childhood trauma	0.794	0.836	0.56
Emotional schemas	0.894	0.731	0.57

As shown in Table 5, the reliability and validity indicators for all variables exceed the acceptable thresholds. Cronbach's alpha and composite reliability values are above 0.70, confirming internal consistency. Moreover, the

average variance extracted (AVE) for each construct is above 0.50, indicating acceptable convergent validity. Hence, the measurement model is both reliable and valid.

Table 6

Assessment of Model Fit Statistics

	Saturated Model	Estimated Model
SRMR	0.068	0.069
NFI	0.777	0.776

The researcher also assessed the model fit. All model fit indices were within acceptable ranges. A Standardized Root

Mean Square Residual (SRMR) value below 0.08 indicates a good model fit. The SRMR value for the estimated model

was 0.069, indicating a good fit. The Normed Fit Index (NFI) was 0.776, which, while slightly below the ideal threshold, is considered acceptable in exploratory research. Additionally, the blindfolding method was used to assess the

model's predictive relevance for the endogenous constructs. A Q^2 value greater than zero confirms that the model has sufficient predictive accuracy and reconstructive capability. The results are reported in Table 7.

Table 7

Predictive Relevance (Q^2)

Variable	$Q^2 (= 1 - SSE/SSO)$
Childhood trauma	0.191
Emotional schemas	0.436
Self-Compassion	0.405

The Q^2 values indicate that the model is capable of accurately predicting each construct. Specifically, *Emotional schemas* and *Self-Compassion* demonstrated high

predictive relevance, with Q^2 values of 0.436 and 0.405, respectively. The Q^2 value of 0.191 for *Childhood trauma* also suggests moderate predictive capacity.

Table 8

Coefficient of Determination (R^2)

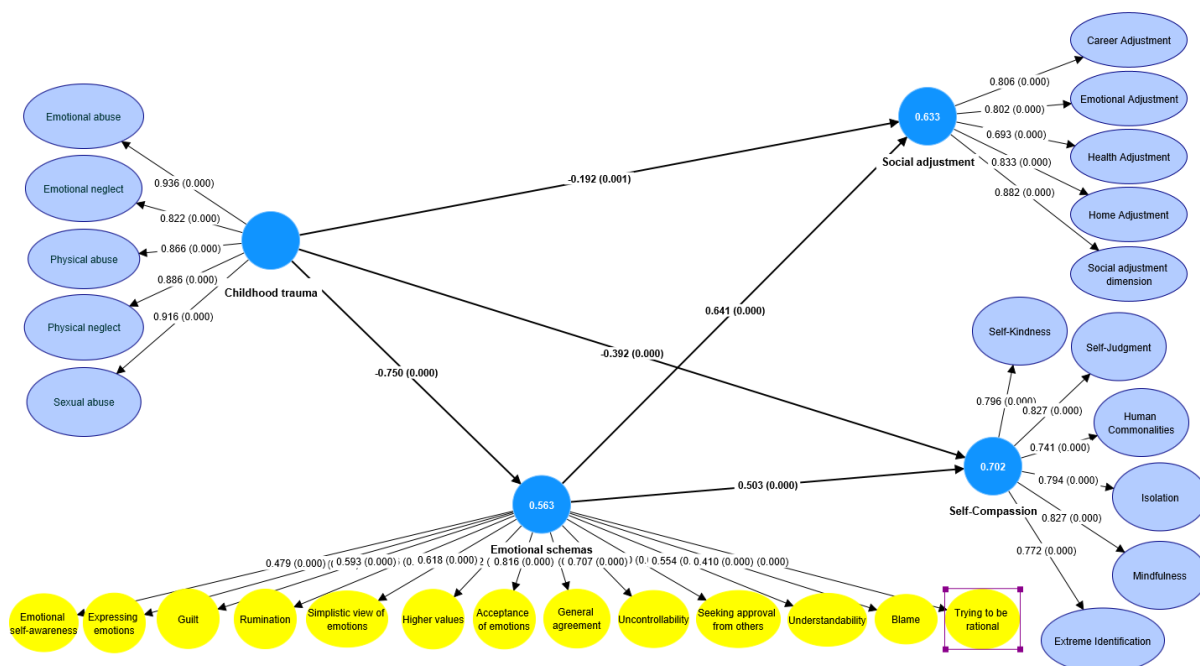
Variable	R-square	R-square Adjusted
Emotional schemas	0.563	0.561
Self-Compassion	0.702	0.700
Social adjustment	0.633	0.631

Table 8 demonstrates the model's explanatory power for the endogenous (dependent) variables. The *Emotional schemas* construct explained 56.1% of its variance. The *Self-Compassion* construct showed the highest explained

variance at 70.0%, while the *Social adjustment* variable was explained by 63.1% of the variance. These R^2 values suggest that the structural model has strong predictive and explanatory capabilities.

Figure 1

Model with Beta Coefficients



4. Discussion and Conclusion

The present study aimed to investigate the relationship between childhood trauma and two critical psychosocial variables in adolescents with risky behaviors—social adjustment and self-compassion—while examining the mediating role of emotional schemas. The results supported the hypothesized model, showing that childhood trauma had both direct and indirect negative effects on social adjustment and self-compassion. Emotional schemas served as a significant mediating variable, linking the negative experiences of early trauma to difficulties in psychosocial functioning. These findings underscore the central role of emotional cognitive frameworks in processing adverse childhood experiences and their translation into maladaptive outcomes during adolescence.

The negative and significant direct relationship found between childhood trauma and self-compassion ($\beta = -0.392$, $p < .001$) aligns with the literature indicating that individuals exposed to early abuse and neglect often internalize negative self-evaluations and develop a harsh inner critic, which impairs the capacity for self-kindness and emotional understanding (Melamed et al., 2024; Zhang et al., 2023). Adolescents with traumatic histories may have disrupted attachments and invalidating environments that limit the development of compassionate internal dialogues. This

finding is consistent with the meta-analytic work of Marsh et al. (2018), which found that lower levels of self-compassion were robustly associated with trauma exposure and emotional dysregulation in adolescents (Marsh et al., 2018). Moreover, self-compassion has been shown to buffer emotional distress and promote adaptive coping in traumatized youth (Egan et al., 2022), further supporting its importance as an outcome and potential intervention target.

Likewise, the negative relationship between childhood trauma and social adjustment ($\beta = -0.192$, $p = .001$) reflects the consistent findings of previous research emphasizing how early adverse experiences erode the psychological foundations necessary for effective peer interactions, trust, and emotional reciprocity (Baumert et al., 2024; M. T. Wang et al., 2023). Adolescents exposed to maltreatment frequently exhibit interpersonal avoidance, reduced empathy, and heightened mistrust—all of which impede their ability to establish and maintain positive social relationships (Fan et al., 2024; Golrokh et al., 2024). A study by Costa et al. (2022) further suggested that such individuals may also develop social withdrawal or externalizing behaviors as a means of coping with perceived relational threats (Costa et al., 2022).

Crucially, this study demonstrated that emotional schemas mediate the relationship between childhood trauma and both self-compassion and social adjustment. The

indirect effect of trauma on self-compassion through emotional schemas ($\beta = -0.377, p < .001$) and on social adjustment through emotional schemas ($\beta = -0.481, p < .001$) indicates that adolescents' cognitive-emotional interpretations of their affective experiences act as a critical pathway linking trauma to psychosocial impairment. These findings corroborate the schema model, which posits that emotional schemas—beliefs about the meaning, value, and manageability of emotions—shape both internal (self-related) and external (social) behavioral responses (Leahy et al., 2021; Pilkington et al., 2024). Maladaptive emotional schemas such as emotional suppression, self-blame, or catastrophizing may prevent adolescents from developing healthy emotion regulation strategies, thereby reducing their self-compassion and hindering peer adjustment (Dart & Ciccio, 2024; Nguyen et al., 2024).

These findings are also congruent with the work of Ebrahimi et al. (2023), who demonstrated that maladaptive schemas mediated the link between childhood trauma and suicidal ideation in adolescents (Ebrahimi et al., 2023). Similarly, Mirzaalian Dastjerdi (2022) highlighted that schema-based cognitive distortions contribute significantly to risk-taking behaviors in Iranian adolescents who have experienced maltreatment (Mirzaalian Dastjerdi, 2022). These studies support the present finding that emotional schemas—whether they focus on guilt, blame, or difficulty accepting emotions—are instrumental in converting trauma into maladaptive behavioral patterns and internal suffering.

The positive and significant relationship found between emotional schemas and self-compassion ($\beta = 0.503, p < .001$) may seem counterintuitive at first. However, this relationship likely reflects the adaptive potential of emotional schemas when they are functional. Adolescents who possess more adaptive emotional schemas (e.g., acceptance of emotion, emotional clarity) may develop greater self-compassion by learning to recognize and respond to their distress without judgment. This aligns with the findings of Maya et al. (2024), who emphasized that emotional awareness and acceptance were positively correlated with higher self-compassion scores among adolescents (Maya et al., 2024). These results are also in line with the broader literature on emotion regulation, which suggests that constructive emotional schemas facilitate psychological resilience and prosocial behavior (Juang et al., 2024; Nguyen et al., 2024).

Furthermore, the strong positive path coefficient between emotional schemas and social adjustment ($\beta = 0.641, p < .001$) underscores the role of emotional intelligence and

clarity in successful social functioning. Adolescents who understand their emotions, believe they are manageable, and can express them constructively are more likely to engage in reciprocal and cooperative peer interactions (Baumert et al., 2024; M. T. Wang et al., 2023). Golestani Bakht et al. (2022) similarly found that self-compassion and social adjustment were intertwined and mediated by cognitive-affective processing of internal experiences (Golestani Bakht et al., 2022). Adolescents with coherent emotional schemas are less prone to emotional overreaction and more likely to interpret others' behaviors accurately, which facilitates social harmony and peer acceptance.

An important cultural consideration in interpreting these findings is the social stigma often associated with emotional vulnerability and mental health discussions in collectivist societies such as Iran. Adolescents may internalize cultural norms that discourage emotional expression, reinforcing maladaptive schemas such as emotional avoidance or self-rejection (Damavandian et al., 2021; Vatani & Namdar Pour, 2022). These cultural constraints can further complicate the development of self-compassion and social adaptation, especially in those with trauma histories. In this context, integrating culturally sensitive emotional regulation interventions becomes vital for promoting healthy adolescent development.

Additionally, the high R^2 values observed in the model (0.70 for self-compassion and 0.63 for social adjustment) suggest that the proposed model explains a substantial proportion of variance in the outcome variables. These results highlight the theoretical robustness and clinical utility of emotional schemas as mediators in trauma research. The model's predictive power is further supported by acceptable SRMR and NFI fit indices and significant Q^2 values, indicating its capacity to reconstruct and predict data accurately. This methodological strength enhances the confidence in the generalizability and reliability of the current findings.

Despite the promising findings, this study has several limitations. First, the cross-sectional design precludes any causal inferences regarding the directionality of relationships. Longitudinal studies are needed to confirm the developmental pathways from trauma through emotional schemas to psychosocial outcomes. Second, reliance on self-report questionnaires may introduce biases related to social desirability or recall inaccuracies, especially when addressing sensitive topics like abuse or neglect. Third, the use of a convenience sample from Tehran-based centers limits the generalizability of the results to broader adolescent

populations across different cultural or socioeconomic contexts. Finally, while emotional schemas were assessed comprehensively, other potential mediators such as emotion dysregulation, attachment style, or executive function were not examined, possibly omitting key explanatory variables.

Future research should employ longitudinal designs to explore how emotional schemas evolve over time and mediate the impact of ongoing or past trauma. Expanding the sample to include diverse ethnic, cultural, and geographic populations would improve the external validity of the findings. It would also be valuable to include additional variables such as parental support, peer attachment, and school climate, which might moderate or buffer the effects of trauma. Comparative studies evaluating the effectiveness of schema-focused versus emotion-focused therapies in improving social adjustment and self-compassion could provide practical insights for intervention programs. Neuroimaging or psychophysiological data could be integrated to deepen the understanding of underlying mechanisms and further validate self-report findings.

Practitioners working with adolescents exposed to trauma should prioritize the identification and restructuring of maladaptive emotional schemas as part of therapeutic interventions. Integrating self-compassion training into school-based and clinical programs may enhance emotional resilience and social connectedness. Interventions should also consider the sociocultural context and normalize emotional expression within collectivist frameworks. Providing psychoeducation for caregivers and educators about the role of early trauma and emotional schemas can foster supportive environments conducive to healing. Finally, early screening in schools and welfare centers can help detect at-risk youth and offer timely, targeted support to prevent the escalation of risky behaviors.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent (Ethics Code: IR.IAU.SHIRAZ.REC.1403.279).

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