



Journal Website

**Article history:**

Received 09 December 2025

Revised 18 April 2026

Accepted 24 April 2026

Initial Publication 13 May 2026

Final Publication 01 July 2026

# Iranian Journal of Neurodevelopmental Disorders

Volume 5, Issue 3, pp 1-10



E-ISSN: 2980-9681

## Structural Model of Identity Instability Based on Object Relations and Childhood Trauma with the Mediating Role of Difficulties in Emotion Regulation in Adolescents with Self-Harming Behaviors

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### Article Info

#### Article type:

Original Research

#### How to cite this article:

Zhinous Malekzadeh, F., Mohammadipour, M., & Jajarmi, M. (2026). Structural Model of Identity Instability Based on Object Relations and Childhood Trauma with the Mediating Role of Difficulties in Emotion Regulation in Adolescents with Self-Harming Behaviors. *Iranian Journal of Neurodevelopmental Disorders*, 5(3), 1-10.

<https://doi.org/10.61838/kman.jndd.762>



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### ABSTRACT

**Purpose:** This study aimed to determine the fit of a structural model of identity instability based on object relations and childhood trauma, with the mediating role of difficulties in emotion regulation in adolescents with self-harming behaviors.

**Methods and Materials:** The research method was descriptive and correlational. The statistical population in this study consisted of all male and female high school students with self-harming behaviors from public schools in Gonbad-e Kavus during the 2024-25 academic year. A non-random, purposive sampling method was used, and 310 students were selected as the sample size. Data were collected using the Identity Instability Scale (Lechner, 2023), the Object Relations Inventory (Bell et al., 1986), the Childhood Trauma Questionnaire (Bernstein et al., 2003), and the Difficulties in Emotion Regulation Scale (Bjureberg et al., 2016). Data were analyzed using SPSS version 26 and AMOS version 18, with Pearson's correlation test and structural equation modeling using partial least squares. The mediating role was tested using the bootstrap method.

**Findings:** The results showed that the experimental model had an acceptable and good fit, and the overall model was confirmed ( $p < 0.05$ ). Object relations had a direct effect on identity instability in adolescents with self-harming behaviors at 0.152 ( $p < 0.05$ ). Childhood trauma had a direct effect on psychological pain in adolescents with self-harming behaviors at 0.263 ( $p < 0.05$ ). Object relations had a direct effect on difficulties in emotion regulation in adolescents with self-harming behaviors at 0.543 ( $p < 0.05$ ). Childhood trauma had a direct effect on difficulties in emotion regulation in adolescents with self-harming behaviors at 0.210 ( $p < 0.05$ ). Object relations influenced identity instability with the mediating role of difficulties in emotion regulation in adolescents with self-harming behaviors in an indirect manner ( $p < 0.05$ ). Childhood trauma influenced identity instability with the mediating role of difficulties in emotion regulation in adolescents with self-harming behaviors in an indirect manner ( $p < 0.05$ ).

**Conclusion:** Overall, the findings indicate that identity instability in adolescents with self-harming behaviors is the result of a multilayered interaction between early experiences and the characteristics of object relations.

**Keywords:** Identity instability, object relations, childhood trauma, difficulties in emotion regulation, self-harming behaviors.



## 1. Introduction

Adolescence is widely recognized as a critical developmental period characterized by profound biological, cognitive, and psychosocial transformations that can significantly shape long-term mental health trajectories. During this stage, individuals encounter heightened emotional reactivity, identity exploration, and social pressures, which collectively increase vulnerability to maladaptive coping strategies, including self-harming behaviors (Orben et al., 2020; Veloso-Besio et al., 2023). The complexity of adolescent development is further intensified by environmental stressors and interpersonal challenges, often resulting in increased psychological distress and risk-taking behaviors. Empirical evidence suggests that self-harm has become a growing public health concern globally, with a substantial proportion of adolescents reporting engagement in non-suicidal self-injury (NSSI) at least once during their lifetime (Aggarwal et al., 2021; Glenn et al., 2020). This alarming prevalence underscores the urgent need to understand the psychological mechanisms underlying such behaviors.

Self-harming behaviors are multifaceted phenomena that are often conceptualized as maladaptive strategies for regulating intense emotional states or coping with psychological pain. The concept of psychological pain, defined as an unbearable subjective experience of distress and suffering, has been identified as a central factor in self-injurious behaviors (Cassell, 1999; Orbach et al., 2003). Adolescents who engage in self-harm frequently report difficulties in articulating their emotions and managing internal distress, leading them to rely on physical harm as a means of emotional relief. In this context, recent studies have highlighted the increasing role of modern lifestyle factors, such as excessive screen time and digital engagement, in exacerbating emotional dysregulation and self-harming tendencies (Alves et al., 2025). Furthermore, meta-analytic evidence indicates that behavioral patterns, including substance use, social withdrawal, and risk-taking, are closely associated with NSSI in adolescents (Gonzalez-Arrimada et al., 2025).

A critical psychological construct closely associated with self-harming behaviors is identity instability. Identity formation is a central developmental task during adolescence, involving the integration of personal values, beliefs, and social roles into a coherent sense of self. However, disruptions in this process can lead to identity instability, characterized by confusion, inconsistency, and a

fragmented self-concept. Individuals experiencing identity instability often struggle with decision-making, interpersonal relationships, and emotional regulation, which may increase susceptibility to self-harm (Garcia-Iglesias et al., 2022; Waterman, 2020). Empirical findings suggest that adolescents with higher levels of identity instability are more likely to exhibit maladaptive coping strategies, including self-injurious behaviors and suicidal ideation (Sun et al., 2024; Valladares-Garrido et al., 2023). These findings highlight the importance of examining identity-related processes in understanding self-harm.

The development of identity instability is influenced by multiple interacting factors, among which early relational experiences and childhood trauma play a pivotal role. Childhood trauma, encompassing emotional, physical, and sexual abuse, as well as neglect and family dysfunction, has been consistently linked to adverse psychological outcomes across the lifespan (Bernstein et al., 2003; Jiaa & Lubetkin, 2020). Exposure to such experiences during formative years can disrupt normative developmental processes, impair emotional regulation capacities, and hinder the formation of a stable identity. Longitudinal and cross-sectional studies indicate that individuals with histories of childhood trauma are at significantly higher risk for self-harming behaviors and psychopathology (Klifton et al., 2020; Pompili et al., 2018). Moreover, adverse childhood experiences have been shown to reduce overall quality of life and psychological well-being, further emphasizing their long-term impact (Jiaa & Lubetkin, 2020).

From a theoretical perspective, object relations theory provides a valuable framework for understanding how early interpersonal experiences shape psychological functioning. Object relations refer to internalized representations of self and others, formed through early interactions with caregivers. These internal representations influence emotional responses, interpersonal relationships, and identity development throughout life (Wheeler & Bechler, 2021). Dysfunctional object relations, characterized by insecure attachment, inconsistency, or emotional neglect, can lead to maladaptive schemas and emotional dysregulation. Research indicates that individuals with impaired object relations are more likely to experience identity disturbances and engage in self-harming behaviors as a means of coping with unresolved emotional conflicts (Nikoo Sefat & Gharabaghi, 2020; Timpano & Port, 2021). These findings suggest that object relations play a foundational role in shaping both emotional and identity-related outcomes.

In addition to childhood trauma and object relations, difficulties in emotion regulation have emerged as a key mechanism underlying self-harming behaviors and identity instability. Emotion regulation refers to the ability to monitor, evaluate, and modify emotional responses in adaptive ways. Adolescents who struggle with emotion regulation often experience heightened emotional intensity, impulsivity, and difficulty managing distress, which can lead to maladaptive coping strategies such as self-harm (Timpano & Port, 2021). Empirical evidence consistently demonstrates that emotion regulation difficulties are strongly associated with both self-injurious behaviors and identity disturbances (Shahdadian et al., 2024). These individuals may lack the skills necessary to process emotional experiences effectively, resulting in increased vulnerability to psychological distress and maladaptive behaviors.

Recent research has further highlighted the mediating role of emotion regulation in the relationship between early adverse experiences and psychological outcomes. For instance, adolescents exposed to bullying, social rejection, or interpersonal stressors are more likely to develop suicidal ideation when they exhibit poor emotion regulation skills (Sun et al., 2024). Similarly, experiences such as romantic relationship dissolution have been linked to increased suicidal thoughts, particularly among individuals with limited coping resources (Valladares-Garrido et al., 2023). The COVID-19 pandemic has also exacerbated these dynamics, with increased social isolation and psychological distress contributing to higher rates of self-harm and suicidal ideation across populations (Garcia-Iglesias et al., 2022). These findings underscore the importance of emotion regulation as a central mechanism in the pathway from stress and trauma to maladaptive outcomes.

Moreover, the role of social and environmental factors in shaping adolescent mental health cannot be overlooked. Social deprivation, lack of supportive relationships, and exposure to stressful environments can significantly impair emotional development and increase the risk of psychological disorders (Orben et al., 2020). Adolescents who experience social isolation or disrupted relationships may struggle to develop effective coping strategies, leading to increased reliance on maladaptive behaviors such as self-harm. Additionally, stigma surrounding mental health issues often prevents individuals from seeking help, further exacerbating psychological distress (Aggarwal et al., 2021). Addressing these systemic and societal factors is therefore essential for developing comprehensive interventions.

Despite the extensive body of research on self-harm, identity instability, childhood trauma, and emotion regulation, there remains a gap in understanding how these variables interact within an integrated structural framework. While previous studies have examined these constructs independently, few have explored their combined effects and the underlying mechanisms linking them. Specifically, the mediating role of emotion regulation in the relationship between object relations, childhood trauma, and identity instability has not been sufficiently investigated. Understanding these complex interactions is crucial for developing targeted interventions aimed at reducing self-harming behaviors and promoting psychological resilience among adolescents.

The present study builds upon existing literature by proposing a comprehensive structural model that integrates object relations and childhood trauma as predictor variables, identity instability as the outcome variable, and difficulties in emotion regulation as a mediating mechanism. This approach allows for a more nuanced understanding of the pathways through which early experiences influence psychological functioning in adolescents with self-harming behaviors. By examining these relationships within a single model, the study seeks to contribute to the growing body of research on adolescent mental health and provide insights for clinical practice and intervention development.

Therefore, the aim of this study was to evaluate the fit of a structural model of identity instability based on object relations and childhood trauma, with the mediating role of difficulties in emotion regulation among adolescents engaging in self-harming behaviors.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present study was applied in terms of purpose and, regarding data collection and nature, was a quantitative descriptive–correlational study. The research model was tested using Structural Equation Modeling (SEM). The statistical population consisted of all male and female high school students (second level of secondary education) with self-harming behaviors in public schools of Gonbad-e Kavus during the 2024–2025 academic year. A total of 315 participants (200 females and 115 males) were selected through non-random purposive sampling. Data were collected using the Identity Instability Scale (Lechner, 2022), the Bell Object Relations Inventory (Bell et al., 1986), the Childhood Trauma Questionnaire (Bernstein et

al., 2003), and the Difficulties in Emotion Regulation Scale (Auerbach et al., 2003). Data collection was conducted online using a field method via the Porsline platform, and questionnaires were distributed through Bale, Shad, and Eitaa applications.

## 2.2. Measures

1. Self-Injurious Behaviors Questionnaire (ISAS; Klonsky & Glenn, 2009): This self-report instrument assesses the frequency and functions of non-suicidal self-injurious behaviors. It includes 12 types of deliberate self-harming behaviors (without suicidal intent), such as hitting, biting, burning, tattooing, cutting, wound manipulation, pinching, hair pulling, rubbing skin against rough surfaces, severe scratching, inserting needles into the body, and ingesting harmful chemicals. Test–retest reliability over a 1–4 week interval was reported as 0.85, and internal consistency (Cronbach’s alpha) was 0.84. Responses are rated on a 3-point Likert scale (from “not at all relevant” to “completely relevant”), with subscale scores ranging from 0 to 6. The total score is calculated by averaging subscale scores. In Iran, the questionnaire demonstrated a Cronbach’s alpha of 0.76 (Saffarinia et al., 2014), and in the present study, reliability was 0.86.

2. Identity Instability Scale (IIS; Lechner, 2023): Developed by Claudia Andrea Lechner, this 21-item questionnaire uses a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). It includes two subscales: self-discontinuity (items 1–14) and dependence on others (items 15–21). Higher scores indicate greater identity instability and disconnection from self. Cronbach’s alpha coefficients were reported as 0.73, 0.80, and 0.88 for the two subscales and total score, respectively. Convergent validity was assessed using the Spann-Fischer Codependency Scale ( $r = 0.38$ ), and divergent validity was examined with the Santa Clara Brief Compassion Scale ( $r = 0.50$ ), both indicating acceptable validity. In the present study, reliability was 0.88. Notably, this questionnaire was standardized for the first time among Iranian students in this study.

3. Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003): This 28-item questionnaire assesses childhood trauma, with 25 items measuring five domains: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Three items assess denial of childhood problems. Responses are rated on a Likert scale, and some items (5, 7, 13, 19, 28, 2, and 26) are reverse-scored. Scores

range from 25 to 125, with higher scores indicating greater trauma. Items 10, 16, and 22 assess response validity; scores above 12 suggest unreliable responses. Previous studies in Iran have reported Cronbach’s alpha coefficients ranging from 0.81 to 0.98. In the present study, reliability was 0.83.

4. Bell Object Relations and Reality Testing Inventory (BORRTI; Bell et al., 1986): This inventory assesses ego functioning, particularly object relations and reality testing. The full version includes 90 items with yes/no responses, covering object relations dimensions (alienation, insecure attachment, egocentricity, social incompetence) and reality testing dimensions (reality distortion, perceptual uncertainty, hallucinations/delusions). The 45-item form B assesses only object relations. Test–retest reliability coefficients ranged from 0.58 to 0.90 (4-week interval) and 0.65 to 0.81 (13-week interval). Validity has been supported through correlations with instruments such as PANSS, SCL-90-R, MMPI, and MCMI. In the present study, Cronbach’s alpha was 0.81.

5. Difficulties in Emotion Regulation Scale (DERS-16; Bjureberg et al., 2016): This scale includes 16 items across five subscales: lack of emotional clarity, difficulties engaging in goal-directed behavior, impulse control difficulties, limited access to emotion regulation strategies, and non-acceptance of emotional responses. Items are rated on a 5-point Likert scale (1 = almost never to 5 = almost always), with total scores ranging from 16 to 96. Higher scores indicate greater difficulties in emotion regulation. Previous studies have reported Cronbach’s alpha coefficients ranging from 0.78 to 0.94 for subscales and total scale. In the present study, reliability was 0.82. Evidence also supports the scale’s structural validity, convergent validity, and acceptable divergent validity.

## 2.3. Data Analysis

Data analysis was performed using mean, standard deviation, confirmatory factor analysis, convergent validity, and reliability indices through SPSS version 28 and AMOS version 18.

## 3. Findings and Results

The demographic findings showed that the majority of respondents (61.9%) were female, while 38.1% were male. The ages of the respondents ranged from 16 to 19 years, with the most common age being 18 years (35.5%) and the least common being 19 years (9.4%). Table 1 describes the main variables (Object Relations, Childhood Trauma, Difficulties

in Emotion Regulation, and Identity Instability) using descriptive statistics such as mean, standard deviation, and minimum and maximum scores.

**Table 1**

*Descriptive Statistics of the Variables*

Variables	Mean	Standard Deviation	Minimum	Maximum
Object Relations	33.84	5.50	17	43
Childhood Trauma	57.01	15.04	27	92
Difficulties in Emotion Regulation	46.80	13.13	26	78
Identity Instability	57.19	14.03	32	85

The results from Table 1 indicated that the mean score for the Object Relations scale was 33.84, with a minimum score of 17 and a maximum score of 43. The mean score for Childhood Trauma was 57.01, with scores ranging from 27 to 92. The mean score for Difficulties in Emotion Regulation was 46.80, with scores ranging from 26 to 78. The mean

score for Identity Instability was 57.19, with a minimum score of 32 and a maximum score of 85. The mean for the subscale of Self-Discontinuity was 34.37, and for the subscale of Other-Dependence, it was 19.85. In Table 2, Pearson's correlation test was used to examine the correlation between the main variables.

**Table 2**

*Pearson Correlation Matrix*

Variables	Object Relations	Childhood Trauma	Difficulties in Emotion Regulation	Identity Instability
Object Relations	1			
Childhood Trauma	0.547	1		
Difficulties in Emotion Regulation	0.525	0.496	1	
Identity Instability	0.474	0.419	0.649	1

The results from Table 2 showed that there was a statistically significant relationship between Object Relations, Childhood Trauma, Difficulties in Emotion Regulation, and Identity Instability ( $p < 0.05$ ). The relationships between the three predictor variables (Object Relations, Childhood Trauma, Difficulties in Emotion Regulation) and the dependent variable (Identity Instability) were positive, indicating that an increase in each of these variables was associated with an increase in Identity Instability.

According to Table 1, the skewness and kurtosis values for none of the variables fell outside the range of (-2, 2), indicating that they can be considered normal or approximately normal. Prior to path analysis, the normality of the dependent variable (Identity Instability), error independence, and multicollinearity of the predictor variables were examined. The Kolmogorov-Smirnov test for the normality of Identity Instability showed that the variable was normal (statistic = 0.29,  $p < 0.05$ ). Additionally, the Durbin-Watson statistic for the predictor variables in predicting Identity Instability was 1.59, indicating error

independence. Variance Inflation Factors (VIF) for all variables were below 10, confirming the absence of multicollinearity. Missing data were identified and corrected using SPSS, and boxplots were used to detect univariate outliers, while the Mahalanobis distance index was used for multivariate outliers. To test the proposed model and examine the mediating role of difficulties in emotion regulation, path analysis was employed. The measurement parameters of the direct relationships are presented in Table 2.

The experimental model with standardized coefficients shows the strength of influence among variables. The examination of the experimental model revealed that all relationships between latent constructs were statistically significant ( $p < 0.05$ ). The direct impact of the variables—Object Relations, Childhood Trauma, and Difficulties in Emotion Regulation—on Identity Instability was significant ( $p < 0.05$ ). The results indicated that the strongest influence on Identity Instability was from Difficulties in Emotion Regulation with a standardized coefficient of 0.50. The coefficient of determination for Identity Instability was 0.51,

suggesting that Object Relations, Childhood Trauma, and Difficulties in Emotion Regulation explained 51% of the

variance in Identity Instability, indicating an acceptable explanatory power of the model.

**Table 3**

*Model Fit Indices*

Result	Acceptable Value	Indices
GFI (Goodness of Fit Index)	> 0.90	0.92
RMSEA (Root Mean Square Error of Approximation)	< 0.08	0.069
CFI (Comparative Fit Index)	> 0.90	0.88
NFI (Normed Fit Index)	> 0.90	0.92
IFI (Incremental Fit Index)	> 0.90	0.92
AGFI (Adjusted Goodness of Fit Index)	> 0.90	0.93
PGFI (Parsimony Goodness of Fit Index)	> 0.70	0.67
/df (Chi-Square/df ratio)	1 to 5	2.84

Based on the results presented in Table 3, there were significant differences between the two groups across the studied variables ( $p < 0.05$ ). Given the estimated means, these differences favored the experimental group. Therefore, cognitive-behavioral therapy was effective in reducing death anxiety and trauma avoidance in women with breast cancer.

Overall, based on the evaluation of all the fit indices, it can be concluded that none of the fit indices were poor or unacceptable. The CFI and PGFI indices showed moderate values, while the other indices showed acceptable values. Therefore, it can be concluded that the experimental model

had an adequate and acceptable fit, and the overall model was validated. Additionally, the coefficient of determination for the model was 0.51, indicating an acceptable explanatory power of the model. The predictor variables, including Object Relations, Childhood Trauma, and Difficulties in Emotion Regulation, explained 51% of the variance in the dependent variable, Identity Instability.

Significant direct and indirect paths between the research variables and Identity Instability are shown in Tables 4 and 5.

**Table 4**

*Direct Path Coefficients and Significance of Estimated Parameters*

Predictor Variable	Criterion Variable	Standardized Coefficients	Standard Error (S.E.)	t-Statistic (C.R.)	p-value
Childhood Trauma	Identity Instability	0.37	0.07	3.74	0.001
Object Relations	Identity Instability	0.35	0.05	5.86	0.001
Difficulties in Emotion Regulation	Identity Instability	0.18	0.25	2.58	0.010

As shown in Table 4, all the direct paths to the criterion variable with t-values larger than  $\pm 1.96$  were significant ( $p < 0.001$ ), and non-significant paths were removed from the model. The results indicated that Childhood Trauma and

Difficulties in Emotion Regulation had a positive and significant direct relationship with Identity Instability ( $p < 0.01$ ).

**Table 5**

*Indirect Path Coefficients and Significance of Estimated Parameters*

Predictor Variable	Mediator Variable	Criterion Variable	Standardized Coefficients	Standard Error (S.E.)	t-Statistic (C.R.)	p-value
Object Relations	Difficulties in Emotion Regulation	Identity Instability	0.187	0.054	3.46	0.001
Childhood Trauma	Difficulties in Emotion Regulation	Identity Instability	0.213	0.052	4.10	0.001

According to Table 5, all indirect paths with  $t$ -values greater than  $\pm 1.96$  were significant ( $p < 0.001$ ), indicating that both Object Relations and Childhood Trauma indirectly influenced Identity Instability through Difficulties in Emotion Regulation ( $p < 0.01$ ).

#### 4. Discussion and Conclusion

The present study aimed to evaluate the structural model of identity instability based on object relations and childhood trauma, with the mediating role of difficulties in emotion regulation among adolescents with self-harming behaviors. The findings demonstrated that object relations, childhood trauma, and difficulties in emotion regulation all had significant direct effects on identity instability, and additionally, object relations and childhood trauma exerted indirect effects through difficulties in emotion regulation. These results indicate that identity instability in adolescents with self-harming behaviors is not a unidimensional construct but rather the outcome of a complex interplay between early relational experiences, traumatic exposure, and deficits in emotional processing. The significant positive relationships observed between these variables suggest that as maladaptive object relations, childhood trauma, and emotion regulation difficulties increase, identity instability correspondingly intensifies.

The direct effect of object relations on identity instability confirms the theoretical propositions of object relations theory, which emphasize that internalized representations of self and others, formed through early interactions with caregivers, play a fundamental role in shaping identity structure (Wheeler & Bechler, 2021). Adolescents who internalize inconsistent, neglectful, or conflictual relational patterns may develop fragmented or unstable self-concepts, leading to confusion in identity formation. This finding is consistent with prior research indicating that dysfunctional object relations are associated with emotional dysregulation and identity disturbances across developmental stages (Nikoo Sefat & Gharabaghi, 2020; Timpano & Port, 2021). Moreover, the observed relationship aligns with empirical evidence suggesting that individuals with insecure attachment patterns often struggle with coherence in self-perception and interpersonal functioning, thereby increasing vulnerability to maladaptive coping mechanisms such as self-harm.

The results also revealed that childhood trauma had a significant direct effect on identity instability, supporting the extensive literature highlighting the long-term psychological

consequences of adverse childhood experiences. Exposure to abuse, neglect, and family dysfunction disrupts normative developmental processes and impairs the formation of a stable identity (Bernstein et al., 2003; Jiaa & Lubetkin, 2020). Traumatic experiences during formative years can lead to persistent feelings of insecurity, helplessness, and confusion, which manifest as identity instability during adolescence. This finding is consistent with studies demonstrating that individuals with histories of childhood trauma exhibit higher levels of psychological distress and are more prone to self-harming behaviors (Klifton et al., 2020; Pompili et al., 2018). Additionally, the relationship between trauma and identity instability can be understood through the lens of psychological pain, as trauma often generates intense internal suffering that disrupts self-coherence (Cassell, 1999; Orbach et al., 2003).

Another key finding of the study was the significant direct effect of difficulties in emotion regulation on identity instability. This result underscores the central role of emotional processes in identity formation and maintenance. Adolescents who experience difficulties in identifying, understanding, and regulating their emotions are more likely to develop unstable self-concepts, as they lack the capacity to integrate emotional experiences into a coherent identity. This finding is in line with previous research indicating that emotion regulation deficits are strongly associated with both identity disturbances and self-harming behaviors (Shahdadian et al., 2024; Timpano & Port, 2021). The inability to manage emotional distress effectively may lead adolescents to rely on maladaptive coping strategies, such as self-injury, which further reinforces identity instability.

Importantly, the study confirmed the mediating role of difficulties in emotion regulation in the relationship between object relations and identity instability. This finding suggests that the impact of early relational experiences on identity is partially transmitted through emotional processes. Adolescents with dysfunctional object relations may develop maladaptive emotional regulation patterns due to inconsistent or inadequate caregiving, which in turn contributes to identity instability. This mechanism aligns with theoretical and empirical evidence emphasizing the role of early attachment and relational experiences in shaping emotional competencies (Timpano & Port, 2021; Wheeler & Bechler, 2021). The mediating role of emotion regulation highlights the importance of considering indirect pathways in understanding the development of identity disturbances, rather than focusing solely on direct effects.

Similarly, the mediating role of difficulties in emotion regulation in the relationship between childhood trauma and identity instability was supported. This finding indicates that trauma influences identity not only directly but also indirectly through its impact on emotional functioning. Adolescents who experience trauma may develop heightened emotional sensitivity, impulsivity, and difficulties in managing distress, which contribute to identity instability. This result is consistent with studies demonstrating that emotion regulation deficits serve as a key mechanism linking trauma to various psychological outcomes, including self-harm and suicidal ideation (Gonzalez-Arrimada et al., 2025; Sun et al., 2024). Furthermore, the findings align with research highlighting that adverse experiences disrupt neurobiological and psychological systems involved in emotion regulation, thereby increasing vulnerability to maladaptive behaviors.

The broader context of these findings also reflects the influence of contemporary environmental and social factors on adolescent mental health. For instance, increased screen time and digital engagement have been associated with higher levels of emotional distress and self-harming behaviors, suggesting that modern lifestyle factors may exacerbate existing vulnerabilities (Alves et al., 2025). Additionally, social deprivation and reduced interpersonal interactions, particularly during periods such as the COVID-19 pandemic, have been shown to negatively impact emotional development and increase the risk of psychological disorders (Orben et al., 2020). These factors may interact with individual vulnerabilities, such as trauma and maladaptive object relations, to further intensify identity instability and self-harming behaviors.

The findings of the present study are also consistent with epidemiological evidence indicating high rates of self-harm and suicidal behaviors among adolescents worldwide. The association between identity instability and self-harming behaviors is particularly concerning, as it suggests that interventions targeting identity development may play a crucial role in prevention efforts (Aggarwal et al., 2021; Glenn et al., 2020). Moreover, the relationship between interpersonal stressors, such as bullying and romantic relationship dissolution, and suicidal ideation highlights the importance of addressing social and relational factors in intervention programs (Valladares-Garrido et al., 2023; Veloso-Besio et al., 2023). These findings emphasize the need for a holistic approach to adolescent mental health that considers both individual and environmental influences.

Overall, the results of this study contribute to the existing literature by providing a comprehensive understanding of the mechanisms underlying identity instability in adolescents with self-harming behaviors. The integration of object relations, childhood trauma, and emotion regulation within a structural model offers valuable insights into the complex pathways leading to maladaptive outcomes. By highlighting the mediating role of emotion regulation, the study underscores the importance of targeting emotional competencies in interventions aimed at reducing identity instability and self-harm. These findings have significant implications for clinical practice, suggesting that therapeutic approaches should focus on improving emotion regulation skills, addressing unresolved trauma, and fostering healthy relational patterns.

The limitations of this study should be acknowledged when interpreting the findings. One of the primary limitations is the use of a non-random, purposive sampling method, which may limit the generalizability of the results to broader populations. Additionally, the reliance on self-report measures introduces the possibility of response bias, as participants may underreport or overreport their experiences. The cross-sectional design of the study also restricts the ability to draw causal inferences about the relationships among variables. Furthermore, the study was conducted within a specific cultural and geographical context, which may influence the generalizability of the findings to other settings.

Future research should address these limitations by employing longitudinal designs to examine causal relationships and developmental trajectories over time. Researchers are encouraged to use larger and more diverse samples to enhance the generalizability of findings across different populations and cultural contexts. Additionally, incorporating multi-method approaches, such as clinical interviews and behavioral assessments, could provide a more comprehensive understanding of the constructs under investigation. Further studies may also explore additional mediating and moderating variables, such as social support, resilience, and personality traits, to better understand the complexity of identity instability and self-harming behaviors.

From a practical perspective, the findings of this study highlight the importance of developing targeted interventions that address the underlying mechanisms of identity instability and self-harm. Mental health professionals should focus on enhancing emotion regulation skills through evidence-based approaches such as cognitive-

behavioral therapy and emotion-focused interventions. Programs aimed at preventing childhood trauma and promoting healthy family relationships are also essential for reducing long-term psychological risks. Schools and community organizations can play a crucial role in providing supportive environments that foster emotional development and resilience among adolescents. Additionally, raising awareness about mental health and reducing stigma can encourage individuals to seek help and access appropriate resources.

### 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.

### Acknowledgments

We hereby thank all individuals for participating and cooperating us in this study.

### Declaration of Interest

The authors report no conflict of interest.

### Funding

According to the authors, this article has no financial support.

### 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 study and participated in the research with informed consent.

### References

Aggarwal, S., Borschmann, R., & Patton, G. C. (2021). Tackling Stigma in Self-Harm and Suicide in the Young. *The Lancet Public Health*, 6(1), e6-e7. [https://doi.org/10.1016/S2468-2667\(20\)30259-0](https://doi.org/10.1016/S2468-2667(20)30259-0)

- Alves, M. I., Dias Junior, S. A., Martins, T., Felipe, A. O. B., Freitas, P. S., & Moreira, D. S. (2025). The Relationship Between Excessive Screen Time, Self-Harm, and Suicidal Behavior in Adolescents During the COVID-19 Pandemic: An Integrative Literature Review. *Journal of Child and Adolescent Psychiatric Nursing*, 38(2), e70015. <https://doi.org/10.1111/jcap.70015>
- Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., & Zule, W. (2003). Development and Validation of a Brief Screening Version of the Childhood Trauma Questionnaire. *Child Abuse and Neglect*, 27(2), 169-190. [https://doi.org/10.1016/S0145-2134\(02\)00541-0](https://doi.org/10.1016/S0145-2134(02)00541-0)
- Cassell, E. J. (1999). Diagnosing Suffering: A Perspective. *Annals of Internal Medicine*, 131(7), 531-534. <https://doi.org/10.7326/0003-4819-131-7-199910050-00009>
- Garcia-Iglesias, J. J., Gomez-Salgado, J., Fernandez-Carrasco, F. J., Rodriguez-Diaz, L., Vazquez-Lara, J. M., Prieto-Callejero, B., & Allande-Cusso, R. (2022). Suicidal Ideation and Suicide Attempts in Healthcare Professionals During the COVID-19 Pandemic: A Systematic Review. *Frontiers in Public Health*, 10, 1043216. <https://doi.org/10.3389/fpubh.2022.1043216>
- Glenn, C. R., Kleiman, E. M., Kellerman, J., Pollak, O., Cha, C. B., Esposito, E. C., Porter, A. C., Wyman, P. A., & Boatman, A. E. (2020). Annual Research Review: A Meta-Analytic Review of Worldwide Suicide Rates in Adolescents. *Journal of Child Psychology and Psychiatry*, 61(3), 294-308. <https://doi.org/10.1111/jcpp.13106>
- Gonzalez-Arrimada, A., Martinez, R., & Lopez, M. (2025). Lifestyle Habits, Problem Behaviors, and Non-Suicidal Self-Injury in Adolescents: A Systematic Review and Meta-Analysis. *Child and Adolescent Social Work Journal*, 42(1), 257-273.
- Jiaa, H., & Lubetkin, E. I. (2020). Impact of Adverse Childhood Experiences on Quality-Adjusted Life Expectancy in the U.S. Population. *Child Abuse and Neglect*, 102, 104418. <https://doi.org/10.1016/j.chiabu.2020.104418>
- Klifto, C. S., Lavery, J. A., Gold, H. T., Milone, M. T., Karia, R., Palusci, V., & Chu, A. (2020). Pediatric Fingertip Injuries: Association With Child Abuse. *Journal of Hand Surgery Global Online*, 2, 31-34. <https://doi.org/10.1016/j.jhsg.2019.09.001>
- Nikoo Sefat, Z., & Gharabaghi, F. (2020). The Moderating and Mediating Role of Ego Strength in the Relationship Between Object Relations and Identity States in Students. *Clinical Psychology and Personality*, 18(2), 109-118.
- Orbach, I., Mikulincer, M., Sirota, P., & Gilboa-Schechtman, E. (2003). Mental Pain: A Multidimensional Operationalization and Definition. *Suicide and Life-Threatening Behavior*, 33(3), 219-230. <https://doi.org/10.1521/suli.33.3.219.23219>
- Orben, A., Tomova, L., & Blakemore, S. J. (2020). The Effects of Social Deprivation on Adolescent Development and Mental Health. *The Lancet Child and Adolescent Health*, 4(8), 634-640. [https://doi.org/10.1016/S2352-4642\(20\)30186-3](https://doi.org/10.1016/S2352-4642(20)30186-3)
- Pompili, M., Girardi, P., Ruberto, A., & Tatarelli, R. (2018). Suicide in Borderline Personality Disorder: A Meta-Analysis. *Nordic journal of psychiatry*, 62(4), 319-324. <https://doi.org/10.1080/08039480500320025>
- Shahdadian, V., Golshani, F., & Baghdasarian, A. (2024). The Mediating Role of Psychological Pain in the Relationship Between Cohesive Self-Awareness and Self-Harming Behaviors in Adolescents. *Psychological Growth Journal*, 13(7), 101-110.
- Sun, J., Ban, Y., & Liu, J. (2024). Relationship Between Bullying Victimization and Suicide Ideation Among Chinese Adolescents: A Moderated Chain Mediation Model. *Children*



- and Youth Services Review*, 156, 107304.  
<https://doi.org/10.1016/j.chilyouth.2023.107304>
- Timpano, K. R., & Port, J. H. (2021). Object Attachment and Emotion Dysregulation Across Development and Clinical Populations. *Current opinion in psychology*, 39, 109-114.  
<https://doi.org/10.1016/j.copsyc.2020.08.013>
- Valladares-Garrido, D., Zila-Velasque, J. P., Santander-Hernandez, F. M., Guevara-Morales, M. A., Morocho-Alburqueque, N., Failoc-Rojas, V. E., Pereira-Victorio, C. J., Vera-Ponce, V. J., Leon-Figueroa, D. A., & Valladares-Garrido, M. J. (2023). Association Between Love Breakup and Suicidal Ideation in Peruvian Medical Students: A Cross-Sectional Study During the COVID-19 Pandemic. *Research Square*, 3, 3085268.  
<https://doi.org/10.21203/rs.3.rs-3085268/v1>
- Veloso-Besio, C., Cuadra-Peralta, A., Gallardo-Peralta, L., Cuadra-Fernandez, P., Quiroz, P. T., & Troncoso, N. V. (2023). The Prevalence of Suicide Attempt and Suicidal Ideation and Its Relationship With Aggression and Bullying in Chilean Adolescents. *Frontiers in psychology*, 14, 1133916.  
<https://doi.org/10.3389/fpsyg.2023.1133916>
- Waterman, A. S. (2020). Now What Do I Do?: Toward a Conceptual Understanding of the Effects of Traumatic Events on Identity Functioning. *Journal of adolescence*, 79, 59-69.  
<https://doi.org/10.1016/j.adolescence.2019.11.005>
- Wheeler, S. C., & Bechler, C. J. (2021). Objects and Self-Identity. *Current opinion in psychology*, 39, 6-11.  
<https://doi.org/10.1016/j.copsyc.2020.07.013>