

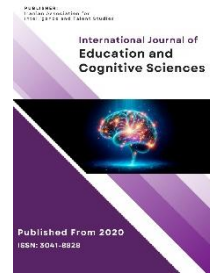


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Structural Relationship Model of Insecure Attachment Styles and Suicidal Ideation: The Mediating Role of Mentalization Deficits and Emotion Regulation Deficits

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ABSTRACT

Purpose: The present study aimed to determine the structural relationship model between insecure attachment styles and suicidal ideation among university students, with the mediating roles of mentalization deficits and emotion regulation deficits.

Methods and Materials: In terms of purpose, this study was applied research, and in terms of methodology, it employed a descriptive-correlational design based on structural equation modeling. The statistical population consisted of all students of the University of Tabriz during the 2024–2025 academic year. From this population, 378 participants were selected using cluster random sampling. Data were collected using the Attachment Styles Questionnaire (Hazan & Shaver, 1987), the Emotion Regulation Questionnaire (Gross & John, 2003), the Beck Scale for Suicide Ideation (Beck, 1991), and the Mentalization Questionnaire (Dimitrijević et al., 2017). Data were analyzed using Pearson's correlation coefficient and structural equation modeling through SPSS-18 and AMOS-22 software.

Findings: The results indicated that insecure attachment styles, emotion regulation deficits, and mentalization deficits were significant positive predictors of suicidal ideation ($p < .05$). Furthermore, the structural model demonstrated a satisfactory fit, and the study variables collectively explained 69% of the variance in suicidal ideation. Emotion regulation deficits and mentalization deficits also played significant mediating roles in the relationship between insecure attachment styles and suicidal ideation ($p < .05$).

Conclusion: The findings suggest that insecure attachment styles increase students' vulnerability to suicidal thoughts by weakening mentalization capacities and disrupting emotion regulation mechanisms.

Keywords: *Insecure attachment, suicidal ideation, mentalization, emotion regulation.*

1. Introduction

Suicidal ideation is recognized as one of the most critical stages within the continuum of suicidal behavior and represents a major public health concern worldwide. It encompasses thoughts, wishes, and cognitive preoccupations related to ending one's life and is considered one of the strongest predictors of future suicide attempts and completed suicide (Deshpande, 2020; Sher & Oquendo, 2023). Contemporary models of suicidality emphasize that suicidal ideation is not merely a transient emotional reaction but rather the outcome of a complex interaction among psychological, interpersonal, developmental, and neurocognitive factors. Understanding the mechanisms that contribute to the emergence and persistence of suicidal thoughts is therefore essential for developing effective prevention and intervention programs (Bayliss et al., 2022; Park et al., 2020). Among university students, suicidal ideation has become an increasingly important issue due to the unique developmental challenges associated with emerging adulthood, including identity formation, academic pressures, interpersonal difficulties, and heightened vulnerability to emotional distress. These challenges can increase the likelihood of maladaptive psychological processes that contribute to suicidal thinking (Granieri et al., 2022; Moshtaqi & Hashemipour, 2024).

Recent theoretical perspectives have highlighted the significance of attachment processes in understanding vulnerability to suicidal ideation. Attachment theory proposes that early interactions with caregivers shape internal working models of the self and others, influencing emotional functioning, interpersonal relationships, and coping strategies across the lifespan (Atkinson et al., 2024; Johnson & Levy, 2024). Individuals who develop secure attachment styles generally perceive themselves as worthy of love and others as trustworthy and available. In contrast, insecure attachment styles emerge when caregiving experiences are inconsistent, rejecting, or emotionally unavailable, leading to negative self-representations and maladaptive interpersonal expectations (Forslund et al., 2022; Johnson & Levy, 2024). These insecure attachment patterns often persist into adulthood and have been associated with numerous forms of psychological distress, including depression, anxiety, emotional dysregulation, self-injurious behavior, and suicidality (Forslund et al., 2022; Pandey & Gupta, 2025).

The relationship between insecure attachment and suicidal ideation has received growing empirical support in

recent years. Individuals with insecure attachment styles frequently experience difficulties in seeking support during times of stress, perceive interpersonal relationships as unstable or threatening, and exhibit greater sensitivity to rejection and abandonment. These characteristics may increase feelings of hopelessness, loneliness, and psychological pain, all of which are established correlates of suicidal thinking (Granieri et al., 2022; Zortea et al., 2021). A systematic review conducted by Zortea et al. demonstrated that insecure attachment is consistently associated with suicidal thoughts and behaviors across diverse populations (Zortea et al., 2021). Similarly, studies among student populations have shown that insecure attachment styles significantly predict suicidal ideation and related psychological vulnerabilities (Moshtaqi & Hashemipour, 2024; Taklavi & Ghodrati, 2019). Yeganeh et al. further reported that insecure attachment contributes to suicidal ideation both directly and indirectly through maladaptive emotional processes (Yeganeh et al., 2024).

Although the direct relationship between insecure attachment and suicidal ideation has been well documented, researchers increasingly emphasize the importance of identifying the mediating mechanisms through which attachment influences suicidality. One such mechanism is emotion regulation. Emotion regulation refers to the processes through which individuals monitor, evaluate, modify, and manage emotional experiences and expressions in order to achieve adaptive functioning (Atkinson et al., 2024; Pruessner et al., 2020). Effective emotion regulation enables individuals to respond flexibly to stressful situations, whereas deficits in emotion regulation are associated with heightened emotional reactivity, impulsive behavior, and persistent psychological distress (Agako et al., 2022; Pruessner et al., 2020). Contemporary models of suicide suggest that difficulties in regulating intense negative emotions can contribute substantially to the emergence of suicidal ideation by increasing feelings of entrapment, hopelessness, and emotional pain (Bayliss et al., 2022; Sher & Oquendo, 2023).

A growing body of empirical evidence supports the association between emotion regulation deficits and suicidal ideation. A systematic review by Colmenero-Navarrete et al. found consistent links between difficulties in emotion regulation and both suicidal ideation and suicide attempts among adolescents and adults (Colmenero-Navarrete et al., 2022). Similarly, Sajjadpour et al. demonstrated that various dimensions of emotion regulation difficulties significantly predict suicidal thoughts among clinical populations

(Sajjadpour et al., 2021). Nikfallah and Barakat reported that emotion regulation difficulties mediate the relationship between underlying psychological vulnerabilities and suicidal ideation in adolescents (Nikfallah & Barakat, 2022). Furthermore, Yeganeh et al. found that emotion dysregulation acts as a key pathway through which insecure attachment influences suicidal ideation among individuals experiencing depressive symptoms (Yeganeh et al., 2024). These findings suggest that individuals with insecure attachment styles may be particularly vulnerable to suicidal thoughts because they lack effective strategies for managing distressing emotional experiences.

Theoretical and empirical research indicates that attachment experiences play a central role in the development of emotion regulation capacities. Early interactions with caregivers provide children with opportunities to learn how emotions are identified, interpreted, and regulated. Secure attachment relationships facilitate the development of adaptive regulatory strategies, whereas insecure attachment patterns are associated with emotional instability, avoidance, suppression, and maladaptive coping responses (Akhoundzadeh & Ataei Akbar, 2021; Johnson & Levy, 2024). Research has consistently demonstrated that individuals with insecure attachment styles exhibit greater difficulties in emotion regulation and are more likely to experience persistent emotional distress (Akhoundzadeh & Ataei Akbar, 2021; Yeganeh et al., 2024). Consequently, emotion regulation deficits may represent an important mechanism linking attachment insecurity to suicidal ideation.

Another psychological construct that has recently attracted considerable attention in suicide research is mentalization. Mentalization refers to the capacity to understand and interpret one's own behavior and the behavior of others in terms of underlying mental states such as thoughts, feelings, desires, intentions, and beliefs (Monticelli et al., 2021; Safari Mousavi et al., 2021). This capacity enables individuals to make sense of interpersonal experiences, regulate emotions effectively, and maintain coherent representations of themselves and others. Mentalization is considered a fundamental component of psychological functioning and social adaptation (Monticelli et al., 2021).

Mentalization develops primarily within attachment relationships and is strongly influenced by the quality of early caregiving experiences. Caregivers who respond sensitively to a child's emotional needs facilitate the development of mentalization capacities, whereas

inconsistent, neglectful, or rejecting caregiving environments may impair this developmental process (Johnson & Levy, 2024; Monticelli et al., 2021). As a result, individuals with insecure attachment styles often demonstrate deficits in mentalization, making it difficult for them to understand emotional experiences accurately, interpret interpersonal situations adaptively, and regulate psychological distress (Abbasi et al., 2024; Moshtaqi & Hashemipour, 2024).

Mentalization deficits have been increasingly recognized as important contributors to self-destructive thoughts and behaviors. Individuals with impaired mentalization may misinterpret social interactions, experience difficulties understanding their own emotional states, and struggle to cope with interpersonal stressors. These difficulties can intensify psychological suffering and increase vulnerability to suicidal ideation (Hefazi Torghabeh & Najafi, 2024; Levi-Belz & Lev-Ari, 2023). Levi-Belz and Lev-Ari demonstrated that mentalization deficits significantly exacerbate suicidal ideation among individuals experiencing complicated grief (Levi-Belz & Lev-Ari, 2023). Likewise, Hefazi Torghabeh and Najafi found that mentalization serves as a significant mediator in the relationship between childhood trauma and suicidal ideation among students (Hefazi Torghabeh & Najafi, 2024). Nooraei et al. also reported that mentalization plays a mediating role in explaining the association between childhood trauma and suicidal ideation (Nooraei et al., 2024).

Recent studies have highlighted the interconnected nature of attachment, mentalization, and emotion regulation. Mentalization contributes substantially to adaptive emotion regulation because understanding emotional experiences is a prerequisite for effectively managing them. Deficits in mentalization may therefore impair emotional self-regulation and increase susceptibility to maladaptive coping strategies during stressful situations (Monticelli et al., 2021; Safari Mousavi et al., 2021). Research suggests that individuals with insecure attachment frequently exhibit both reduced mentalization capacities and greater emotion regulation difficulties, creating a pathway toward psychological maladjustment and suicidality (Abbasi et al., 2024; Moshtaqi & Hashemipour, 2024). Nooraei et al. proposed that both mentalization and emotional self-regulation function as important mediators in the development of suicidal ideation among individuals exposed to adverse experiences (Nooraei et al., 2024).

Despite the growing literature on attachment, mentalization, emotion regulation, and suicidality, several

important gaps remain. First, although many studies have investigated the independent effects of insecure attachment, emotion regulation difficulties, or mentalization deficits on suicidal ideation, relatively few studies have examined these variables simultaneously within a comprehensive structural model. Second, existing findings suggest that mentalization and emotion regulation may function as parallel mechanisms through which attachment insecurity contributes to suicidal thoughts, yet empirical evidence evaluating both mediators concurrently remains limited. Third, the majority of available studies have focused on clinical populations or individuals with specific psychological disorders, while fewer investigations have explored these relationships among university students, a population that faces unique developmental and psychosocial challenges (Granieri et al., 2022; Moshtaqi & Hashemipour, 2024). Finally, although previous studies conducted in Iran have provided valuable evidence regarding the roles of attachment, mentalization, and emotion regulation in suicidal ideation, further research is needed to clarify the structural relationships among these constructs and to identify potential pathways for prevention and intervention (Hefazi Torghabeh & Najafi, 2024; Moshtaqi & Hashemipour, 2024; Nooraei et al., 2024).

Accordingly, the present study aimed to determine the structural relationship between insecure attachment styles and suicidal ideation among university students, with the mediating roles of mentalization deficits and emotion regulation deficits.

2. Methods and Materials

2.1. Study Design and Participants

This study was applied in terms of purpose, descriptive-correlational based on structural equation modeling in terms of methodology and nature, and cross-sectional in terms of time frame. The statistical population consisted of all students enrolled at the University of Tabriz during the 2024–2025 academic year, totaling 23,000 individuals. The sample size was determined using Cochran's formula. With a sampling error of 5% and a confidence level of 95%, the required sample size was calculated to be 378 participants.

Cluster random sampling was employed. Each faculty was considered a cluster, and five clusters (faculties) were randomly selected from the available faculties. Subsequently, two classes were selected from each cluster, and all students present in those classes were included as the final sample.

To collect the required data, after obtaining the necessary permissions and adhering to ethical principles while explaining the objectives of the study, the researchers visited the selected classes and obtained participants' informed consent. Four questionnaires were administered to the selected students. The completed questionnaires were then collected and used for data analysis.

2.2. Measures

Hazan and Shaver Adult Attachment Styles Questionnaire (1987): Participants responded to the items using a 5-point Likert scale ranging from 1 (Very Low) to 5 (Very High). The questionnaire consists of 15 items. Five items assess the secure attachment style (Items 6–10), five assess the insecure-avoidant attachment style (Items 1–5), and five assess the insecure-ambivalent attachment style (Items 11–15). Respondents select the options that best describe their style in close interpersonal relationships. Hazan and Shaver (1987) reported a test–retest reliability coefficient of .81 and a Cronbach's alpha coefficient of .87 for the overall questionnaire. Collins and Read also reported a Cronbach's alpha coefficient of .79. In addition, Khaledian (2010) administered the questionnaire to a sample of 60 participants and obtained a Cronbach's alpha coefficient of .82, indicating acceptable reliability. Furthermore, in Pakdaman's (2008) study, test–retest reliability over a one-month interval was assessed in a sample of 100 participants (50 females and 50 males), yielding coefficients of .72, .56, and .37 for insecure-ambivalent, insecure-avoidant, and secure attachment styles, respectively. Factor analysis of the Hazan and Shaver (1987) questionnaire conducted by Collins and Read resulted in the extraction of three major factors, which researchers interpreted as reflecting the capacity to establish intimate and close relationships. Hazan and Shaver reported satisfactory content and criterion validity and highly desirable construct validity. In addition, Rahmian (2004) reported concurrent validity coefficients with Main's Adult Attachment Interview of .79 for secure attachment, .84 for insecure-avoidant attachment, and .87 for insecure-ambivalent attachment.

Emotion Regulation Questionnaire (Gross & John, 2003): This questionnaire consists of 10 items and was developed by Gross and John (2003) to assess emotion regulation. The instrument includes two dimensions: cognitive reappraisal (Items 1, 3, 5, 7, 8, and 10) and expressive suppression (Items 2, 4, 6, and 9). Participants respond on a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7

(Strongly Agree). Scores are obtained by summing responses across all items, yielding a possible range from 10 to 70. Higher scores indicate better emotion regulation, whereas lower scores indicate poorer emotion regulation. Gross and John reported internal consistency coefficients of .79 for cognitive reappraisal and .73 for expressive suppression. Karevold and Vingerhoets reported internal consistency coefficients of .83 and .79 for cognitive reappraisal and expressive suppression, respectively. In Iran, Hosseini reported a Cronbach's alpha coefficient of .79 for the cognitive reappraisal subscale.

Beck Scale for Suicide Ideation (Beck et al., 1988): The Beck Scale for Suicide Ideation is a 19-item self-report instrument designed to identify and measure the severity of attitudes, behaviors, and plans related to suicide during the previous week. The scale uses a 3-point response format ranging from 0 to 2. The total score is calculated by summing item scores, resulting in a range from 0 to 38. Beck's validation samples included both adolescents and adults and comprised inpatient and outpatient populations. The scale demonstrated high correlations with standardized clinical measures of depression and suicidality, with correlation coefficients ranging from .90 among inpatients to .94 among outpatients. It also showed correlations ranging from .58 to .69 with the suicide item of the Beck Depression Inventory and correlations ranging from .64 to .75 with the Beck Hopelessness Scale and the Beck Depression Inventory. The Beck Scale for Suicide Ideation has demonstrated high reliability. Cronbach's alpha coefficients ranging from .87 to .97 have been reported, while test-retest reliability was reported as .54. Anisi et al. (2004) evaluated the reliability and validity of the scale in a sample of 100 male participants aged 19 to 28 years selected through convenience sampling. Their findings showed a correlation of .76 between the Beck Scale for Suicide Ideation and the Goldberg Depression Scale. In addition, reliability coefficients of .95 using Cronbach's alpha and .75 using the split-half method were obtained. Therefore, evidence supports the scale's internal consistency, reliability, and concurrent validity. The items of the scale are consistent with established definitions of

suicidality, and findings indicate that it is a valid self-report measure for assessing suicidal ideation.

Mentalization Questionnaire (Dimitrijević et al., 2018): The Mentalization Questionnaire was developed by Dimitrijević and colleagues in 2018 and consists of 28 items. Responses are rated on a 5-point Likert scale ranging from 1 (Completely Incorrect) to 5 (Completely Correct). The questionnaire includes three subscales: self-related mentalization, other-related mentalization, and motivation for mentalization, as well as a total mentalization score. The instrument was standardized in Iran by Safari Mousavi et al. (2021). A Cronbach's alpha coefficient of .86 was reported, and both convergent and divergent validity were found to be satisfactory.

2.3. Data Analysis

The collected data were analyzed using SPSS version 18 and AMOS version 22. Pearson's correlation coefficient and structural equation modeling were employed to analyze the data. The Sobel test was used to examine the significance of the mediating effects.

3. Findings and Results

Of the 378 participants included in the study, 177 (46.8%) were male and 201 (53.2%) were female. Regarding marital status, 266 participants (70.4%) were single and 112 (29.6%) were married. In terms of educational level, 201 participants (53.2%) were undergraduate students, 135 (35.7%) were master's students, and 42 (11.1%) were doctoral students. Regarding age distribution, 70 participants (18.5%) were aged 20 years or younger, 107 (28.3%) were between 21 and 25 years, 99 (26.2%) were between 26 and 30 years, 44 (11.6%) were between 31 and 35 years, 35 (9.3%) were between 36 and 40 years, and 23 (6.1%) were older than 40 years. Regarding field of study, 144 participants (38.1%) were enrolled in the humanities, 108 (28.6%) in basic sciences, and 126 (33.3%) in engineering and technical disciplines.

Table 1

Descriptive Statistics of the Study Variables

| Variables | Mean | SD | Skewness | Kurtosis | Minimum | Maximum |
|----------------------------|-------|-------|----------|----------|---------|---------|
| Suicidal Ideation | 19.17 | 8.39 | 0.12 | -0.81 | 0 | 38 |
| Emotion Regulation Deficit | 34.28 | 14.43 | 0.33 | -0.82 | 10 | 70 |
| Mentalization Deficit | 77.43 | 16.73 | 0.51 | 0.61 | 37 | 136 |
| Insecure Attachment Styles | 26.30 | 6.96 | -0.01 | -0.63 | 10 | 42 |

To examine the normality of the distribution of the variables, the Kolmogorov–Smirnov test was performed. The results confirmed the normal distribution of all variables ($p > .05$).

Pearson’s correlation coefficient was used to analyze the relationships among the study variables. As shown in Table 2, the results indicated significant positive relationships between insecure attachment styles ($r = .39, p = .001$),

emotion regulation deficit ($r = .70, p = .001$), and mentalization deficit ($r = .40, p = .001$) with students’ suicidal ideation. Furthermore, insecure attachment styles were significantly and positively associated with emotion regulation deficit ($r = .29, p = .001$) and mentalization deficit ($r = .37, p = .001$). In addition, a significant positive relationship was observed between mentalization deficit and emotion regulation deficit ($r = .29, p = .001$).

Table 2

Pearson Correlation Matrix Among the Study Variables

| Variables | Suicidal Ideation | Insecure Attachment Styles | Emotion Regulation Deficit | Mentalization Deficit |
|----------------------------|-------------------|----------------------------|----------------------------|-----------------------|
| Suicidal Ideation | 1 | | | |
| Insecure Attachment Styles | .388** | 1 | | |
| Emotion Regulation Deficit | .695** | .289** | 1 | |
| Mentalization Deficit | .395** | .374** | .292** | 1 |

Structural equation modeling was employed to test the structural relationships among the variables. If a structural model demonstrates adequate fit, it can be concluded that the model possesses sufficient validity and explanatory power.

The model fit indices are presented in Table 3. Given that all fit indices were within acceptable ranges, the proposed structural model demonstrated a satisfactory level of fit.

Table 3

Fit Indices of the Structural Model Examining the Relationship Between Insecure Attachment Styles and Suicidal Ideation Through the Mediating Roles of Mentalization Deficit and Emotion Regulation Deficit

| Fit Category | Fit Index | Value | Criterion | Interpretation |
|------------------|---|-------|-----------|----------------|
| Absolute Fit | CMIN/DF | 1.77 | < 5 | Good Fit |
| | χ^2 p-value | .001 | > .05 | Poor Fit |
| | Goodness-of-Fit Index (GFI) | .92 | > .90 | Good Fit |
| Incremental Fit | Tucker–Lewis Index (TLI) | .92 | > .90 | Good Fit |
| | Comparative Fit Index (CFI) | .85 | > .90 | Acceptable |
| | Root Mean Square Error of Approximation (RMSEA) | .045 | < .08 | Good Fit |
| Parsimonious Fit | Parsimony Normed Fit Index (PNFI) | .70 | > .50 | Good Fit |

The results of the structural model analysis are presented in Table 4 and Figure 1. The findings showed that insecure attachment styles ($\beta = .37, p = .001$), emotion regulation deficit ($\beta = .54, p = .001$), and mentalization deficit ($\beta = .11, p = .013$) had significant positive effects on suicidal ideation among students. In addition, insecure attachment styles significantly and positively predicted emotion regulation deficit ($\beta = .49, p = .001$) and mentalization deficit ($\beta = .44, p = .001$).

To examine the mediating effects of emotion regulation deficit and mentalization deficit, the Sobel test was employed. The results indicated that the indirect effect of insecure attachment styles on suicidal ideation through emotion regulation deficit was statistically significant at the 95% confidence level ($p < .05$). Therefore, emotion

regulation deficit was found to play a significant mediating role in the relationship between insecure attachment styles and suicidal ideation. Similarly, the indirect effect of insecure attachment styles on suicidal ideation through mentalization deficit was statistically significant at the 95% confidence level ($p < .05$), indicating a significant mediating role for mentalization deficit in this relationship.

Overall, the structural model analysis demonstrated that 69% of the variance in students’ suicidal ideation was explained by insecure attachment styles, emotion regulation deficit, and mentalization deficit. The strongest direct effect on suicidal ideation was associated with emotion regulation deficit ($\beta = .54$). Furthermore, the strongest indirect effect of insecure attachment styles on suicidal ideation occurred through emotion regulation deficit ($\beta = .27$).

Figure 1

Structural model of the relationship between early childhood experiences and suicidal ideation with the mediating roles of emotion regulation deficits and alexithymia.

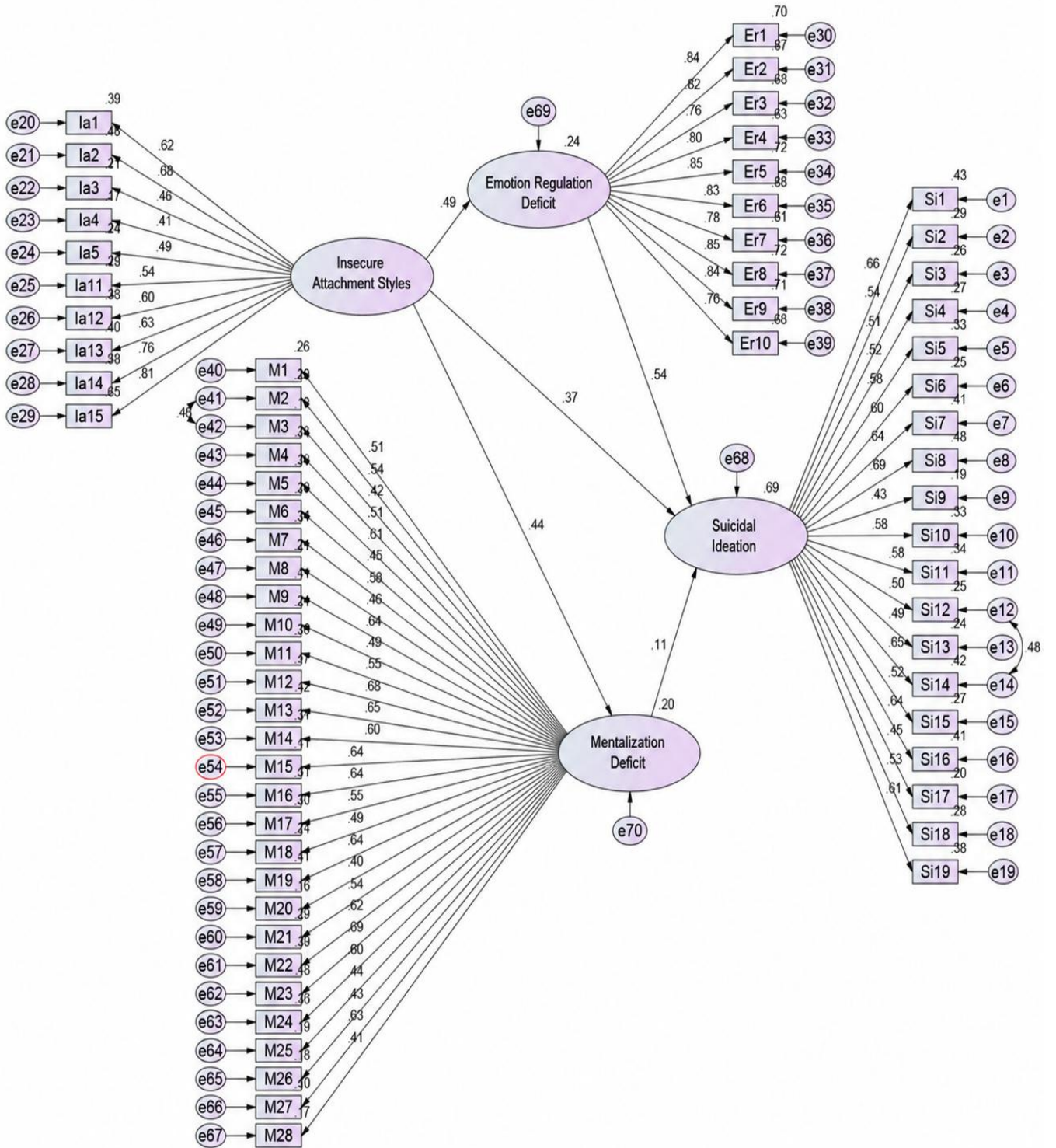


Table 4

Estimated Path Coefficients of the Structural Model Examining the Relationship Between Insecure Attachment Styles and Suicidal Ideation Through the Mediating Roles of Mentalization Deficit and Emotion Regulation Deficit

| Independent Variable | Mediator | Dependent Variable | Estimate | SE | CR | p | Standardized Estimate (β) |
|----------------------------|----------------------------|----------------------------|----------|-------|-------|------|-----------------------------------|
| Insecure Attachment Styles | — | Suicidal Ideation | 0.24 | 0.038 | 6.295 | .001 | .367 |
| Emotion Regulation Deficit | — | Suicidal Ideation | 0.169 | 0.017 | 9.759 | .001 | .544 |
| Mentalization Deficit | — | Suicidal Ideation | 0.091 | 0.037 | 2.479 | .013 | .105 |
| Insecure Attachment Styles | — | Emotion Regulation Deficit | 1.027 | 0.130 | 7.869 | .001 | .488 |
| Insecure Attachment Styles | — | Mentalization Deficit | 0.337 | 0.055 | 6.180 | .001 | .443 |
| Insecure Attachment Styles | Emotion Regulation Deficit | Suicidal Ideation | — | 0.028 | 6.190 | .001 | .265 |
| Insecure Attachment Styles | Mentalization Deficit | Suicidal Ideation | — | 0.013 | 2.280 | .022 | .048 |

4. Discussion and Conclusion

The present study aimed to examine the structural relationship between insecure attachment styles and suicidal ideation among university students, with the mediating roles of mentalization deficits and emotion regulation deficits. The findings indicated that insecure attachment styles had a significant positive direct effect on suicidal ideation. Furthermore, insecure attachment styles significantly predicted both emotion regulation deficits and mentalization deficits. The results also demonstrated that emotion regulation deficits and mentalization deficits were significant positive predictors of suicidal ideation. In addition, both variables played significant mediating roles in the relationship between insecure attachment styles and suicidal ideation. Overall, the proposed structural model exhibited satisfactory fit and explained 69% of the variance in suicidal ideation, suggesting that the selected variables constitute important psychological determinants of suicidal thoughts among university students.

One of the major findings of the study was the significant positive relationship between insecure attachment styles and suicidal ideation. This finding is consistent with previous studies showing that individuals characterized by insecure attachment are more vulnerable to suicidal thoughts and behaviors (Granieri et al., 2022; Moshtaqi & Hashemipour, 2024; Taklavi & Ghodrati, 2019; Zortea et al., 2021). The result also aligns with the findings of Yeganeh et al., who reported that attachment insecurity contributes significantly to suicidal ideation among individuals experiencing depressive symptoms (Yeganeh et al., 2024). From the

perspective of attachment theory, early relationships with caregivers create internal working models that shape individuals' expectations about themselves and others throughout life (Atkinson et al., 2024; Johnson & Levy, 2024). Individuals with insecure attachment often perceive themselves as unworthy of support and others as unreliable or rejecting. Consequently, they experience heightened sensitivity to interpersonal loss, rejection, and abandonment. Such perceptions increase feelings of loneliness, helplessness, and hopelessness, which are recognized antecedents of suicidal ideation (Park et al., 2020; Sher & Oquendo, 2023). Therefore, attachment insecurity may create a cognitive-emotional environment that facilitates the emergence of suicidal thoughts when individuals encounter stressful life circumstances.

The findings also revealed that insecure attachment styles significantly predicted emotion regulation deficits. This result is consistent with theoretical assumptions and empirical evidence suggesting that attachment relationships play a fundamental role in the development of emotional regulation capacities (Akhoundzadeh & Ataei Akbar, 2021; Johnson & Levy, 2024). Early interactions with caregivers provide children with opportunities to learn how to identify, understand, and manage emotional experiences. When caregivers respond consistently and sensitively, children develop adaptive regulatory strategies. In contrast, inconsistent or rejecting caregiving environments may interfere with the development of these capacities, resulting in long-term difficulties regulating emotions (Akhoundzadeh & Ataei Akbar, 2021; Pandey & Gupta, 2025). Individuals with insecure attachment styles

frequently rely on maladaptive strategies such as emotional suppression, avoidance, rumination, or emotional overactivation. These patterns increase vulnerability to emotional instability and psychological distress. The present findings therefore support the notion that attachment insecurity represents an important developmental antecedent of emotion regulation difficulties.

Another important finding was the significant positive association between insecure attachment styles and mentalization deficits. This result is consistent with previous research emphasizing that mentalization develops primarily within attachment relationships (Johnson & Levy, 2024; Monticelli et al., 2021). Mentalization refers to the ability to understand behavior in terms of underlying mental states and is strongly influenced by caregivers' capacity to reflect and respond appropriately to children's emotional experiences. Secure attachment relationships foster curiosity about mental states and facilitate the development of reflective functioning. Conversely, insecure attachment experiences may limit opportunities for developing these capacities, resulting in impaired mentalization (Abbasi et al., 2024; Moshtaqi & Hashemipour, 2024). Individuals with insecure attachment often struggle to interpret their own emotions accurately, understand the intentions of others, and maintain coherent representations of interpersonal experiences. Consequently, they may experience greater confusion and distress during challenging situations. The present findings provide additional support for developmental models proposing that attachment security serves as a foundation for mentalization abilities.

The study further demonstrated that emotion regulation deficits significantly predicted suicidal ideation and represented the strongest direct predictor within the structural model. This finding is highly consistent with previous literature identifying emotion dysregulation as a central risk factor for suicidality (Colmenero-Navarrete et al., 2022; Nikfallah & Barakat, 2022; Sajjadpour et al., 2021). Emotion regulation difficulties increase vulnerability to intense negative affect, impulsive reactions, and persistent psychological suffering. When individuals lack effective strategies for managing distress, suicidal ideation may emerge as a perceived escape from overwhelming emotional pain (Bayliss et al., 2022; Sher & Oquendo, 2023). According to contemporary theories of suicide, difficulties in regulating emotions contribute to feelings of entrapment and hopelessness that facilitate suicidal thinking (Bayliss et al., 2022; Park et al., 2020). The strong predictive role of emotion regulation deficits observed in the current study

highlights the importance of emotional processes in understanding suicidality among university students.

This finding may also be interpreted within the framework of cognitive control theories of emotion regulation. Effective regulation requires the capacity to monitor emotional states, evaluate situational demands, and flexibly implement adaptive coping strategies (Pruessner et al., 2020). Individuals with deficits in these capacities may become trapped in cycles of rumination, emotional avoidance, or emotional overwhelm. Such patterns not only intensify emotional distress but also reduce problem-solving abilities and perceived coping efficacy. Consequently, suicidal ideation may become increasingly salient as individuals seek relief from persistent emotional discomfort. The present results therefore support theoretical perspectives emphasizing the central role of emotional self-regulation in suicide prevention.

The results also indicated that mentalization deficits significantly predicted suicidal ideation. This finding is consistent with previous studies highlighting the importance of reflective functioning in protecting against self-destructive thoughts and behaviors (Hefazi Torghabeh & Najafi, 2024; Levi-Belz & Lev-Ari, 2023; Nooraei et al., 2024). Mentalization enables individuals to understand their emotional experiences, recognize alternative perspectives, and make sense of interpersonal interactions. When this capacity is impaired, individuals may struggle to interpret stressful experiences accurately and may become overwhelmed by negative emotions. They may also experience difficulties distinguishing temporary emotional states from enduring realities, thereby increasing vulnerability to suicidal thinking. Levi-Belz and Lev-Ari found that mentalization deficits intensified suicidal ideation among suicide-loss survivors, suggesting that reduced reflective functioning compromises psychological resilience (Levi-Belz & Lev-Ari, 2023). The current findings extend this evidence by demonstrating a similar relationship among university students.

The relationship between mentalization deficits and suicidal ideation may also be explained through interpersonal mechanisms. Individuals with impaired mentalization often misinterpret social cues, misunderstand the intentions of others, and experience difficulties maintaining satisfying interpersonal relationships (Monticelli et al., 2021; Safari Mousavi et al., 2021). These challenges may increase feelings of isolation, rejection, and social disconnection. Given that interpersonal difficulties constitute significant risk factors for suicidal ideation,

reduced mentalization may indirectly amplify suicide risk through its negative effects on social functioning. Therefore, interventions designed to strengthen mentalization capacities may contribute to reducing suicidal vulnerability.

Perhaps the most important contribution of the present study lies in demonstrating the mediating roles of emotion regulation deficits and mentalization deficits in the relationship between insecure attachment styles and suicidal ideation. The findings indicated that attachment insecurity affects suicidal ideation not only directly but also indirectly through these psychological mechanisms. This result is consistent with previous studies showing that emotional and reflective processes mediate the effects of developmental adversities on suicidal thoughts (Hefazi Torghabeh & Najafi, 2024; Nooraei et al., 2024; Yeganeh et al., 2024). Specifically, insecure attachment appears to impair individuals' capacities for understanding mental states and regulating emotional experiences, which subsequently increases vulnerability to suicidal ideation.

The mediating role of emotion regulation deficits is particularly noteworthy because it exhibited the strongest indirect effect within the model. This finding suggests that attachment insecurity contributes to suicidal ideation largely through its disruptive impact on emotional functioning. Individuals who have not developed adaptive emotion regulation strategies may experience chronic emotional instability and greater difficulty coping with stress. Consequently, they become more susceptible to suicidal thoughts during periods of emotional distress. This result aligns with previous evidence emphasizing emotion regulation as a central mechanism linking attachment insecurity and psychological maladjustment (Akhoundzadeh & Ataei Akbar, 2021; Yeganeh et al., 2024).

Similarly, the mediating role of mentalization deficits highlights the importance of reflective functioning as a psychological pathway connecting attachment experiences and suicidality. Individuals with insecure attachment may struggle to understand themselves and others in terms of mental states, making it difficult to process emotional experiences adaptively. These difficulties may reduce resilience and increase susceptibility to suicidal ideation. The present findings support recent studies demonstrating that mentalization serves as an important protective factor against psychological distress and suicidality (Abbasi et al., 2024; Levi-Belz & Lev-Ari, 2023). Together, the findings suggest that interventions targeting both mentalization and emotion regulation capacities may be particularly effective

in reducing suicidal ideation among individuals with insecure attachment patterns.

Overall, the structural model explained a substantial proportion of variance in suicidal ideation, indicating that attachment insecurity, emotion regulation deficits, and mentalization deficits collectively provide a meaningful framework for understanding suicidal thoughts among university students. The findings support developmental and interpersonal theories of suicide by demonstrating how early relational experiences influence later psychological functioning and suicide risk. Moreover, the results underscore the importance of considering multiple psychological mechanisms simultaneously when investigating the etiology of suicidal ideation.

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional design precludes causal inferences regarding the relationships among the variables. Second, all measures relied on self-report questionnaires, which may be influenced by response biases such as social desirability and inaccurate self-perceptions. Third, the sample consisted exclusively of students from a single university, limiting the generalizability of the findings to other populations and cultural contexts. Finally, other potentially influential variables, such as depression, anxiety, social support, and personality characteristics, were not included in the proposed model.

Future studies should employ longitudinal and prospective designs to clarify the causal pathways linking attachment insecurity, mentalization deficits, emotion regulation difficulties, and suicidal ideation. Researchers are also encouraged to examine these relationships in more diverse populations, including clinical groups, adolescents, and community samples. Investigating additional mediating and moderating variables such as resilience, mindfulness, interpersonal trust, social connectedness, and psychological well-being may further enhance understanding of suicide risk processes. Moreover, future studies may benefit from integrating self-report measures with behavioral, clinical, and neuropsychological assessments.

The findings suggest that suicide prevention programs for university students should place greater emphasis on improving emotion regulation skills and strengthening mentalization capacities. Counseling centers and mental health professionals may benefit from incorporating attachment-informed interventions that address maladaptive interpersonal patterns and emotional vulnerabilities. Psychoeducational workshops focused on emotional

awareness, adaptive coping strategies, reflective functioning, and interpersonal effectiveness may help reduce suicidal ideation among at-risk students. In addition, routine screening for attachment insecurity, emotion regulation difficulties, and mentalization deficits could facilitate the early identification of individuals who may be vulnerable to suicidal thoughts and enable timely preventive interventions.

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

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References

- Abbasi, H., Zamani Samani, F., Daraei, A., & Sayadi, A. (2024). Modeling Non-Suicidal Self-Injury Based on Impulsivity and Dissociative Experiences with the Mediating Role of Mentalization in Adults. *Journal of psychiatric nursing*, 12(5), 12-24.
- Agako, A., Ballester, P., Stead, V., McCabe, R. E., & Green, S. M. (2022). Measures of Emotion Dysregulation: A Narrative Review. *Canadian Psychology/Psychologie Canadienne*, 63(3), 376. <https://doi.org/10.1037/cap0000307>

- Akhoundzadeh, M., & Ataei Akbar, M. (2021). Comparison of Cognitive Emotion Regulation, Attachment Styles, and Depression between Soldiers Who Attempted Suicide and Ordinary Soldiers. *Journal of Social Harms of Children and Adolescents*, 9(33), 65-84.
- Atkinson, R., Nolen-Hoeksema, S., Bem, D., Smith, E., & Atkinson, R. (2024). *Hilgard's Introduction to Psychology*. Roshd.
- Bayliss, L. T., Christensen, S., Lamont-Mills, A., & du Plessis, C. (2022). Suicide Capability within the Ideation-to-Action Framework: A Systematic Scoping Review. *PLoS One*, 17(10), e0276070. <https://doi.org/10.1371/journal.pone.0276070>
- Colmenero-Navarrete, L., Garcia-Sancho, E., & Salguero, J. M. (2022). Relationship between Emotion Regulation and Suicide Ideation and Attempt in Adults and Adolescents: A Systematic Review. *Archives of Suicide Research*, 26(4), 1702-1735. <https://doi.org/10.1080/13811118.2021.1999872>
- Deshpande, C. G. (2020). *Suicide and Attempted Suicide*. Geerwanjyoti Prakashan.
- Forslund, T., Granqvist, P., Van Ijzendoorn, M. H., Sagi-Schwartz, A., Glaser, D., Steele, M., & Duschinsky, R. (2022). Attachment Goes to Court: Child Protection and Custody Issues. *Attachment & Human Development*, 24(1), 1-52. <https://doi.org/10.1080/14616734.2020.1840762>
- Granieri, A., Casale, S., Sauta, M. D., & Franzoi, I. G. (2022). Suicidal Ideation among University Students: A Moderated Mediation Model Considering Attachment, Personality, and Sex. *International journal of environmental research and public health*, 19(10), 6167. <https://doi.org/10.3390/ijerph19106167>
- Hefazi Torghabeh, L., & Najafi, M. (2024). The Relationship between Childhood Trauma and Suicidal Ideation in Students: The Mediating Role of Mentalization and Mindfulness. *Journal of Educational Psychology Studies*, 21(56), 27-51.
- Johnson, B. N., & Levy, K. N. (2024). Attachment Theory/Style. In *Encyclopedia of Sexual Psychology and Behavior* (pp. 1-17). Springer International Publishing. https://doi.org/10.1007/978-3-031-08956-5_192-1
- Levi-Belz, Y., & Lev-Ari, L. (2023). Thinking for Healing: The Role of Mentalization Deficits as Moderator in the Link between Complicated Grief and Suicide Ideation among Suicide-Loss Survivors. *Death Studies*, 47(3), 360-369. <https://doi.org/10.1080/07481187.2022.2065707>
- Monticelli, M., Zeppa, P., Mammi, M., Penner, F., Melcarne, A., Zenga, F., & Garbossa, D. (2021). Where We Mentalize: Main Cortical Areas Involved in Mentalization. *Frontiers in Neurology*, 12, 712532. <https://doi.org/10.3389/fneur.2021.712532>
- Moshtaqi, S., & Hashemipour, F. (2024). Modeling Suicidal Ideation Based on Insecure Attachment Style, Mentalization Ability, and Alexithymia in Female Students. *Journal of psychiatric nursing*, 12(2), 98-110.
- Nikfallah, R., & Barakat, A. (2022). The Mediating Role of Emotion Regulation Difficulties and Experiential Avoidance in the Relationship between Defense Mechanisms and Suicidal Ideation in Adolescents. *Applied Psychology Quarterly*, 16(1), 183-202.
- Nooraie, N., Goodarzi, M. A., & Aflakseir, A. (2024). The Mediating Role of Mentalization and Emotional Self-Regulation in the Relationship between Childhood Trauma and Suicidal Ideation. *Clinical Psychology Quarterly*, 16(2), 13-25.
- Pandey, B., & Gupta, C. (2025). The Effect of Trauma and Level of Self-Esteem on the Attachment Style of Individuals.

- Journal of Advance Research in Science and Social Science*, 8(1), 79-113. <https://doi.org/10.46523/jarssc.08.01.05>
- Park, C. H. K., Lee, J. W., Lee, S. Y., Moon, J., Jeon, D. W., Shim, S. H., & Ahn, Y. M. (2020). Suicide Risk Factors across Suicidal Ideators, Single Suicide Attempters, and Multiple Suicide Attempters. *Journal of psychiatric research*, 131, 1-8. <https://doi.org/10.1016/j.jpsychires.2020.08.018>
- Pruessner, L., Barnow, S., Holt, D. V., Joormann, J., & Schulze, K. (2020). A Cognitive Control Framework for Understanding Emotion Regulation Flexibility. *Emotion*, 20(1), 21-29. <https://doi.org/10.1037/emo0000658>
- Safari Mousavi, S. S., Sadeghi, M., & Sepahvandi, M. A. (2021). Factor Structure and Psychometric Properties of the Mentalization Questionnaire: A Self-Report Tool for Assessing Mentalizing Capacity. *Cognitive and Behavioral Sciences Research*, 10(1), 123-134.
- Sajjadpour, S. H., Heydari Nasab, L., Shairi, M. R., & Gholami Fesharaki, M. (2021). Prediction of Suicidal Ideation Based on Components of Difficulties in Emotion Regulation in Patients with Suicidal Ideation. *Journal of Military Medicine*, 10(2).
- Sher, L., & Oquendo, M. A. (2023). Suicide: An Overview for Clinicians. *Medical Clinics*, 107(1), 119-130. <https://doi.org/10.1016/j.mcna.2022.03.008>
- Taklavi, S., & Ghodrati, S. (2019). The Role of Emotional Breakup and Attachment Styles in Predicting Suicidal Ideation among Students. *Journal of Ardabil University of Medical Sciences*, 19(72), 204-215.
- Yeganeh, R., Bagherifard, R., Zamani Samani, F., & Rajaeizadeh, M. S. (2024). The Structural Relationship of Insecure Attachment and Shame with Suicidal Ideation in Individuals with Depressive Symptoms: The Mediating Role of Emotion Dysregulation. *Journal of psychiatric nursing*, 12(5), 25-38.
- Zortea, T. C., Gray, C. M., & O'Connor, R. C. (2021). The Relationship between Adult Attachment and Suicidal Thoughts and Behaviors: A Systematic Review. *Archives of Suicide Research*, 25(1), 38-73. <https://doi.org/10.1080/13811118.2019.1661893>