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Research Paper

The Relationship Between Attachment and Responsibility; The Mediating Role of Emotion Regulation

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ABSTRACT

Objective: This study examines the relationships between attachment styles and responsibility in male and female adolescents while considering the mediating role of emotion regulation.

Methods: This study employed a descriptive-correlational research design using path analysis. Our statistical population comprised all high school students (second level) in Tehran City, Iran. Following Kline's (2016) recommendations, 353 students were selected through random sampling of the multi-stage cluster. Assessment tools included the revised adult attachment scale, the emotion regulation questionnaire for children and adolescents, and the personal responsibility assessment. The data were analyzed using the AMOS software, version 24.0, with maximum likelihood estimations.

Results: The findings revealed a positive and significant indirect path coefficient between secure attachment style and responsibility through reappraisal strategies (β=0.105, P=0.001) and suppression (β=0.091, P=0.001). The indirect path coefficient between avoidant attachment style and responsibility through reappraisal strategies (β=-0.099, P=0.001) and suppression (β=-0.068, P=0.007) showed negative and significant associations. Similarly, the indirect path coefficient between ambivalent attachment style and responsibility through reappraisal strategies (β=-0.105, P=0.001) and suppression (β=-0.065, P=0.012) demonstrated negative and significant relationships.

Conclusion: The structural model exhibited an equivalent fit for both male and female groups. Attachment style significantly influences adolescents' responsibility, and emotion regulation and management contribute to increased responsibility in adolescents.

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Highlights

- Responsibility represents a crucial trait for adolescents that fosters their growth and development across various domains.
- Attachment styles and emotion regulation function as family and individual factors that influence adolescents' responsibility.
- The results demonstrate a relationship between attachment styles and responsibility in adolescents.
- Attachment styles correlate with adolescents' emotion regulation.
- There is a relationship between emotion regulation and adolescents' responsibility.
- Emotion regulation mediates the relationship between attachment styles and responsibility.

Plain Language Summary

Adolescence constitutes a sensitive period during which young people experience numerous cognitive, emotional, and physiological changes that can sometimes lead to distress and impulsive behaviors. However, adolescents' emotional responses to challenges vary significantly depending on their interactions with parents and their developed attachment styles. These emotional patterns can either facilitate management and responsibility in daily tasks or hinder these capacities.

Introduction

Adolescence represents a period of emotional intensity and crises, characterized by extensive physical, cognitive, emotional, and social changes, including transformations in how individuals interact with their environment (Afshari et al., 2021; Keshavarz Afshar et al., 2022; Leung & Fung, 2021; Pendar et al., 2023). This developmental stage marks a transition from childhood to adulthood, during which individuals experience profound changes in nearly all aspects of life while lacking emotional stability. Consequently, adolescents face the highest incidence of behavioral problems during this period (Zuhri, 2023; Heller & Casey, 2016; Sharif Mousavi et al., 2022). Simultaneously, this critical period offers opportunities to develop desirable personality traits, such as responsibility, autonomy, and self-management, which contribute to personal growth and preparation for adult responsibilities (Keshavarz Afshar et al., 2022).

Responsibility constitutes a critical indicator for measuring adolescent development (Ayres & Pontes, 2018), which researchers define as a sense of mastery, internal self-control, effort to learn, and conscious use of coping skills (Khan et al., 2020). One key factor in adolescents' flourishing within family and society involves entrusting them with responsibilities, which yields favorable outcomes in adulthood (Mameli et al., 2019; Khakpour, 2024). Individuals with low responsibility demonstrate limited flexibility, weak perceptions of environmental controllability, and a lack of ability to evaluate various situations (Ghiyasabadi Farahani & Jafari Harandi, 2020). Conversely, responsible individuals typically engage less in high-risk behaviors due to characteristics, such as impulse control ability, goal-oriented planning, caution and precision, flexibility, and punctuality (Abdollahi & Ghodsi, 2018). These same characteristics promote academic achievement, socialization, and individual adjustment (Kaya et al., 2023; Everett, 2020).

Research demonstrates that the foundations of responsibility in adolescents lie in the relationship between adolescents and their parents (Mirzakhanloo et al., 2024). In other words, attachment style plays a significant role in predicting responsibility (Shaver & Mikulincer, 2023; Gohari Danapour & Nayiri, 2022). Bowlby (1988) defines attachment as the tendency to seek proximity to another person and feel secure in their presence, encompassing three attachment patterns, namely secure, anxious-ambivalent, insecure, and avoidant insecure. These styles can influence the expression of various emotions when confronting different conditions (Craparo et al.,

2014; Láng, 2010). Additionally, individuals with secure and insecure attachment styles exhibit different sensitivities to environmental changes during task performance; specifically, those with secure attachment styles demonstrate the greatest flexibility in responding to the environment (Bussone et al., 2020).

Emotion regulation enhances responsibility in individuals (Jarfi, 2024; Moradi & Parandin, 2020) and refers to the strategies individuals employ when experiencing emotions, which can be either adaptive or maladaptive (Binesh & Akbari, 2024). Emotion regulation allows individuals to display appropriate reactions in conflictual situations and achieve social acceptance, while the lack of emotion regulation skills in adolescents can lead to impulsive behaviors, peer rejection, and irresponsible behaviors, such as antisocial conduct (Pourkhormshahi & Teymouri, 2021; Shafieitabar et al., 2020). Adolescents who demonstrate a greater ability to manage their emotions likely achieve more success in fulfilling tasks and responsibilities. This advantage stems from their capacity to better manage negative feelings, such as anxiety and tension, approaching problems through logical thinking rather than emotional reactions (Roberts et al., 2019; Gross, 2021).

Moreover, early childhood attachment experiences influence the development of cognitive skills essential for emotion and affect regulation, with effective emotion regulation skills and other mental abilities emerging within the framework of secure attachment relationships (Bowlby, 1988; Klaber, 2020; Fonagy & Target, 1997; Mikulincer & Shaver, 2020). Specifically, individuals with secure attachment possess the ability to control their emotions, whereas insecurely attached individuals struggle to control their behaviors and feelings and become depressed more easily (Refahi & Taheri, 2019; Alidoosti & Moafian, 2023). Furthermore, research demonstrates that securely attached individuals develop skills that foster responsible behaviors (Jarfi, 2024).

Based on the preceding discussion, responsibility appears to constitute a critical variable in the optimal development of adolescents; therefore, identifying mediating factors that facilitate its application for adolescents seems essential. Additionally, understanding the social and psychological factors affecting adolescent responsibility will promote their psychological well-being across various life stages in society. Moreover, a review of the research literature revealed few studies employing structural equation modelling to clarify the causal relationship among the aforementioned variables. Consequently, this study asks whether emotion regulation mediates the causal relationship between attachment styles and responsibility in adolescents.

Materials and Methods

This research employs a descriptive-correlational design. The statistical population comprised male and female high school students (second level) in Tehran City, Iran. Following Kline's (2016) recommendations regarding appropriate sample size in structural equation modelling, which suggests multiplying each latent variable in the model by a minimum of 10 and a maximum of 20 cases and accounting for potential attrition, we selected 353 participants through multi-stage cluster sampling.

Inclusion and exclusion criteria

The inclusion criteria for this study included enrollment in a secondary high school and consent to participate in the research. Meanwhile, the exclusion criterion was the unwillingness to cooperate.

Study instruments

Revised adult attachment scale

Collins and Reid developed the revised adult attachment scale in 1990, consisting of 18 items rated based on a 5-point Likert scale ranging from 1 ("does not match my characteristics at all") to 5 ("Completely matches my characteristics") (Feeney & Noller, 1996; Pakdaman, 2001). The scoring assigns values from 0 to 4 for response options 1 through 5. This instrument contains three subscales, each comprising six items: 1) Dependency (D; the extent to which individuals trust and rely on others), 2) Closeness (C; the individual's comfort level with intimacy and emotional closeness in relationships), and 3) Anxiety (A; fear of having relationships) (Mallinckrodt et al., 2006; Pakdaman, 2001). The anxiety (A) subscale corresponds to anxious-ambivalent attachment, while the closeness (C) subscale represents a bipolar dimension, essentially contrasting secure and avoidant descriptions. Therefore, closeness (C) aligns with secure attachment, and the dependency (D) subscale approximates the inverse of avoidant attachment (Feeney & Noller, 1996; Pakdaman, 2001). Collins and Reid reported the Cronbach α coefficients of 0.82 for secure attachment, 0.80 for avoidant attachment, and 0.83 for anxious attachment. In Iran, Pakdaman's (2001) research reported a reliability coefficient of 0.95 using the test, re-test method, and construct validity assessment through factor analysis yielded fit indices (goodness of fit index=0.95, root mean square error of approxima-

tion=0.041, normed fit index=0.94, comparative fit index=0.95) indicating adequate questionnaire validity. In the present study, the Cronbach α coefficients were 0.66 for secure attachment, 0.63 for avoidant attachment, and 0.71 for anxious or ambivalent attachment.

Emotion regulation questionnaire for children and adolescents

Gross and John (2003) developed the emotion regulation questionnaire for children and adolescents questionnaire, which consists of 10 items measuring two strategies, namely reappraisal (6 items) and suppression (4 items). Respondents rate items on a 7-point Likert scale (1=strongly disagree to 7=strongly agree). Thus, the minimum score for reappraisal is 6, and the maximum is 42, while for emotion suppression, the minimum score is 4, and the maximum is 28. In John and Gross's (2003) research, the Cronbach α reliability coefficients were 0.79 for reappraisal and 0.73 for suppression, with test, re-test reliability of 0.69 for both strategies (Lotfi et al., 2011). In Iran, researchers established the questionnaire's validity through the correlation between the two subscales (r=0.13) and reported favorable reliability based on internal consistency (with Cronbach α ranging from 0.60 to 0.81) (Ghasempour et al., 2012). In the present study, we obtained the Cronbach α coefficients of 0.82 for reappraisal and 0.75 for suppression.

Personal responsibility assessment for adolescents

Mergler and Shield (2016) designed the self-report personal responsibility assessment for adolescents to measure personal responsibility in adolescents. This questionnaire contains 15 questions and three subscales as follows: personal accountability (items 1-7), behavioral control (items 8-11), and cognitive control (items 12-15). The instrument uses a 4-point Likert scale with items, such as "I treat others with respect because I want them to treat me the same way," to assess personal responsibility in adolescents. Items 8-11, which relate to emotional/behavioral control, require reverse scoring. The scoring range for this questionnaire spans from 15 to 60. Higher scores indicate greater personal responsibility in adolescents and vice versa. Mergler and Shield (2016) established reliability using Cronbach α coefficients of 0.81, 0.81, and 0.71 for the personal accountability, behavioral/emotional control, and cognitive control subscales, respectively. Jokar et al. (2019) reported the Cronbach α coefficients of 0.92 for personal accountability, 0.93 for behavioral control, and 0.70 for cognitive control. In the present study, we obtained the Cronbach α coefficients of 0.84 for personal accountability, 0.63 for behavioral control, and 0.69 for cognitive control.

To implement this research, we first obtained permission from the General Department of Education in Tehran Province, Iran, then selected five districts and approached four high schools in each district. After coordinating with school officials, we randomly selected three classes from each school and provided questionnaires to students who volunteered to participate in the study. Before completing the questionnaires, we adhered to ethical research principles (honesty, confidentiality, participant anonymity, and deletion of information after data processing) and obtained written consent. After collecting the completed questionnaires, we analyzed the data using the maximum likelihood method and the AMOS software, version 24.

Results

This study included 353 adolescents (186 girls and 167 boys). Of these participants, 103 students (29.2%) were in the tenth grade, 169 students (47.9%) were in the 10th and 11th grades, and 76 students (21.5%) were in the 12th grade. Regarding academic tracks, 79 participants (22.4%) studied humanities, 158 participants (44.8%) studied experimental sciences, and 112 participants (31.7%) studied mathematics-physics. Table 1 presents the Mean±SD, and correlation coefficients among the research variables.

Matrix of correlations between variables

Table 1 demonstrates that the correlations among variables align with theoretical expectations and research domain theories. To evaluate univariate data distribution normality, we examined the variables' kurtosis and skewness. To assess multicollinearity, we analyzed the variance inflation factor and tolerance values of predictor variables. After confirming these assumptions among the data, we examined the model fit with the collected data, as shown in Table 2.

Initial model fit assessment

According to the results shown in Table 2, except for two fit indices (comparative fit index and goodness of fit index), the other fit indices did not support an acceptable fit of the initial model with the data. In addition, Figure 1 shows the initial model of the research variables.

Table 1. Mean±SD, and correlation coefficients between variables

Variables	1	2	3	4	5	6
1. Secure attachment style	-					
2. Avoidant attachment style	-0.20	-				
3. Ambivalent attachment style	-0.35	-0.42	-			
4. Emotion regulation - reappraisal	0.48	-0.36	-0.39	-		
5. Emotion regulation - suppression	-0.40	0.33	0.47	-0.61	-	
6. Responsibility	0.45	-0.43	-0.39	-0.52	-0.48	-
Mean±SD	13.39±3.38	12.94±3.25	14.03±4.12	23.83±6.51	15.90±4.98	17.10±4.82

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P<0.01 and P<0.05.

Model analysis

Model specifications

Initial analysis results indicated that the original model did not achieve an acceptable fit with the collected data. Therefore, we evaluated and considered modification indices, which led us to create a covariance between the errors of reappraisal and suppression variables, resulting in an improved model with acceptable fit indices. As Figure 1 illustrates, the research model contained six observed variables. The known parameters (Equation 1):

1. (v[v+1]/2)=21

While unknown parameters totaled 20. By creating covariance between the errors of two observed variables (reappraisal and suppression), the degrees of freedom decreased to zero, thus identifying the model (Weston & Gore, 2006). Further parameter evaluation revealed that the direct path coefficient between the ambivalent attachment style and responsibility lacked significance. Consequently, we removed this path, increasing the degrees of freedom to 1.

Modified model fit measurements

Table 3 shows the fit indices of the model after modification.

Table 2. Model fit indices

Fit Indices	Initial Model	Cut-Off Point[1]
Chi-Square	39.06	-
Model degrees of freedom	1	-
χ^2/df^2	39.06	<3
GFI[3]	0.966	<0.90
AGFI[4]	0.290	<0.850
CFI5	0.950	<0.90
RMSEA[6]	0.329	>0.08

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Abbreviations: GFI, goodness of fit index; AGFI, adjusted goodness of fit index; CFI, comparative fit index; RMSEA, root mean square error of approximation.

[1]Cut-off points based on Kline (2016), [2]Normed chi-square, [3]Goodness of fit index, [4]Adjusted goodness of fit index, [5]Comparative fit index, [6]Root Mean Square Error of Approximation.

Table 3. Model fit indices

Fit Indices	Modified Model	Cut-Off Point
Chi-Square	1.96	-
Model degrees of freedom	1	-
χ^2/df	1.96	<3
GFI	0.993	<0.90
AGFI	0.981	<0.850
CFI	1.00	<0.90
RMSEA	0.052	>0.08

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Abbreviations: GFI: Goodness of fit index; AGFI: Adjusted goodness of fit index; CFI: Comparative fit index; RMSEA: Root mean square error of approximation.

Model analysis

Model specifications

According to Table 3 and the implemented modifications, the model achieved acceptable fit indices. These results indicate that the research model demonstrates an acceptable fit with the collected data. Table 4 presents the modified path coefficients in the structural model.

Structural model

Table 4 reveals the direct path coefficients between attachment styles and responsibility. The secure attachment style shows a positive and significant relationship with responsibility (β=0.140, P=0.004), while the avoidant attachment style demonstrates a negative and significant relationship (β=-0.129, P=0.002). The emotion regulation reappraisal strategy exhibits a positive

Table 4. Direct and indirect path coefficients between research variables in the model*

Variables	Path	B	SE	β	P
Avoidant attachment→suppression	Direct	0.237	0.042	0.256	0.001
Ambivalent attachment→suppression	Direct	0.252	0.051	0.249	0.001
Secure attachment→suppression	Direct	-0.322	0.043	-0.347	0.001
Avoidant attachment→reappraisal	Direct	-0.400	0.064	-0.287	0.001
Ambivalent attachment→reappraisal	Direct	-0.471	0.074	-0.308	0.001
Secure attachment→reappraisal	Direct	0.437	0.062	0.313	0.001
Suppression→responsibility	Direct	-0.391	0.087	-0.256	0.001
Reappraisal→responsibility	Direct	0.340	0.053	0.337	0.001
Avoidant attachment→responsibility	Direct	-0.182	0.061	-0.129	0.002
Secure attachment→responsibility	Direct	0.198	0.067	0.140	0.004
Avoidant attachment→responsibility	Indirect	-0.229	0.039	-0.162	0.001
Ambivalent attachment→responsibility	Indirect	-0.259	0.049	-0.168	0.001
Secure attachment→responsibility	Indirect	0.274	0.040	0.194	0.001

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* The direct path coefficient between ambivalent attachment and responsibility was removed during model modification due to non-significance.

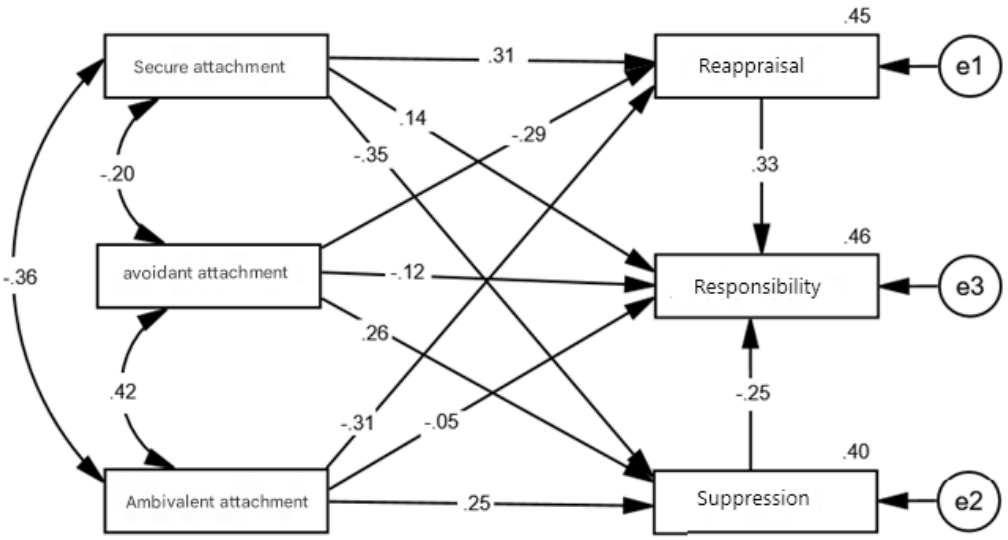

Figure 1. Initial research model variables

and significant relationship with responsibility (β=0.337, P=0.001), whereas the suppression strategy shows a negative and significant relationship (β=-0.256, P=0.001).

Table 4 also indicates the indirect path coefficients. The secure attachment style demonstrates a positive and significant relationship with responsibility (β=0.194, P=0.001), while both avoidant (β=-0.162, P=0.001) and ambivalent (β=-0.168, P=0.001) attachment styles show negative and significant relationships.

Given the presence of two mediating variables (reappraisal and suppression strategies) in the research model, we employed Baron and Kenny's formula (1986), (Mallinckrodt et al., 2006) to evaluate their mediating roles. According to the results, the indirect path coefficient between secure attachment style and responsibility through reappraisal strategies (β=0.105, P=0.001) and suppression (β=0.091, P=0.001) is positive and significant. The indirect path coefficient between avoidant attachment style and responsibility through reappraisal strategies (β=-0.099, P=0.001) and suppression (β=-0.068, P=0.007) confirms a negative and significant relationship. Finally, the indirect path coefficient between the ambivalent attachment style and responsibility through reappraisal strategies (β=-0.105, P=0.001) and suppression (β=-0.065, P=0.012) shows a negative and significant.

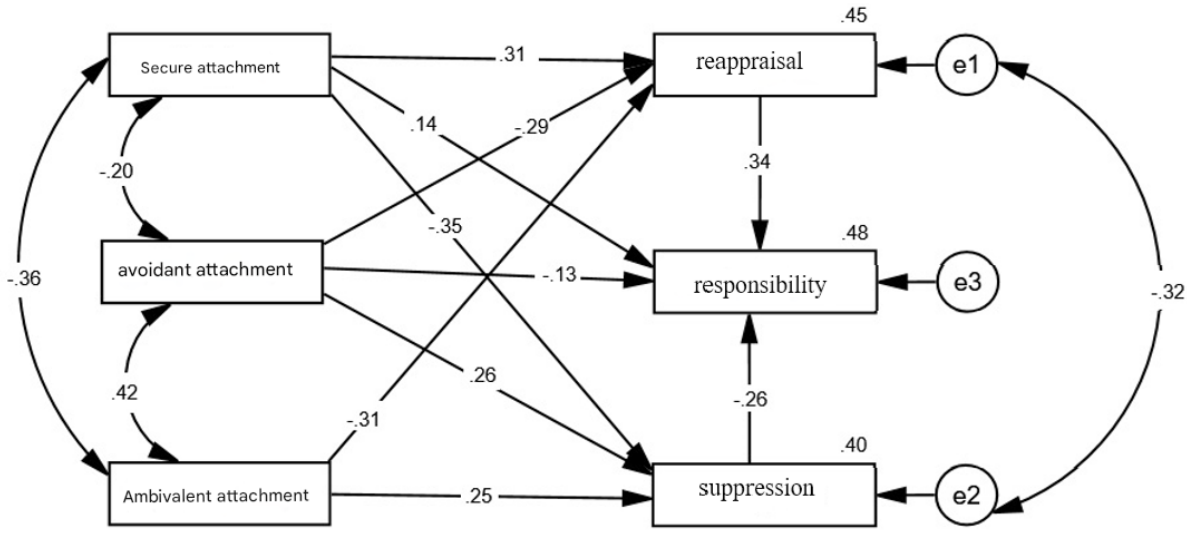

Figure 2. Standardized parameters in the research model

Emotion regulation strategies (reappraisal and suppression) mediate the relationship between attachment styles and responsibility in adolescents. They positively mediate the relationship between secure attachment and responsibility, while negatively mediating the relationships between avoidant and ambivalent attachment styles and responsibility. Figure 2 presents the standardized parameters in the research model.

The Figure 2 shows that the total multiple correlations squared (R^2=0.48) for responsibility, indicating that attachment styles and emotion regulation strategies together explain 48% of the variance in adolescent responsibility.

Discussion

This research examined the mediating role of emotion regulation in the relationship between attachment styles and adolescent responsibility. The findings revealed a positive and significant relationship between secure attachment style and responsibility, indicating that individuals with more secure attachment styles demonstrate greater responsibility. This finding aligns with research by Gohari Danapour and Nayiri (2022) and Bussone et al. (2020), which established a positive relationship between secure attachment style and responsibility. According to Keshavarz et al. (2022), close family relationships and secure bonds between primary caregivers and children influence the development of responsibility through secure attachment styles. Adolescents with secure attachment styles typically experience greater security and self-confidence. This sense of security can enhance their responsibility as they effectively confront challenges and tasks. They can face life's challenges with reasonable anxiety and, without avoiding them, evaluate themselves as competent in resolving tasks.

Conversely, the present research demonstrated a negative and significant relationship between insecure attachment styles (anxious-ambivalent and avoidant) and responsibility. This finding corresponds with Gohari Danapour and Nayiri's (2022) research. According to Shaver and Mikulincer (2023), adolescents with insecure attachment styles may experience anxiety or avoidance when confronting responsibilities. Attachment styles, as emotional and behavioral patterns in close relationships, play a crucial role in shaping personality and social behaviors, particularly during adolescence. These styles typically develop during childhood under the influence of interactions with parents and caregivers and can profoundly impact how individuals interact with others and their sense of responsibility. Adolescents with secure attachment styles experience greater security and self-confidence (Gohari Danapour & Nayiri, 2022). These characteristics help them exhibit more responsible behaviors when facing challenges and responsibilities. In other words, these adolescents can effectively manage life's pressures and challenges due to their strong emotional foundation, regulate their anxiety through adaptive strategies, and complete their tasks through planning rather than avoiding them (Keshavarz Afshar et al., 2022). In contrast, according to Refahi and Taheri (2019) (Alidoosti & Moafian, 2023), adolescents with avoidant or ambivalent attachment styles may flee from expressing emotions and consequently face responsibilities or struggle to manage their emotions. For example, adolescents with avoidant attachment styles tend to avoid establishing relationships for participating in group responsibilities. Their ambivalent feelings confuse managing their emotions, potentially leading to irresponsible, avoidant behaviors (Roberts et al., 2019).

Furthermore, the research demonstrated a positive relationship between secure attachment style and reappraisal and a negative relationship with suppression. Additionally, avoidant and ambivalent attachment styles showed negative relationships with reappraisal and positive relationships with suppression. This finding aligns with Mikulincer and Shaver's (2019) research. According to Craparo et al. (2014) and Láng (2010), secure attachment systems create a foundation for developing emotion regulation strategies; children learn emotional self-regulation through interactions with parents, and the primary caregiver's sensitivity and responsiveness to the child's feelings determine the regulation of distressing emotions and relationships with others. Research by Mikulincer and Shaver (2019) and Tani et al. (2018) demonstrates that attachment influences evolving internal representations of self and others, which subsequently impact future relationships and emotion regulation strategies in adulthood. In other words, a secure and positive family environment fosters healthy emotional strategies through the timely fulfillment of the child's needs. Attachment dimensions include feelings of closeness, trust in others, and the ability to express emotions. Consequently, individuals with secure attachment typically demonstrate less need for social support in stressful situations, although they seek help from others when necessary and employ more effective emotion regulation strategies (Mikulincer & Shaver, 2021). Pourmohseni Kaluri et al. (2015) also found that anxious and avoidant attachment correlate with rumination, and anxious attachment relates to catastrophizing and blaming others, while individuals using maladaptive strategies exhibit less secure attachment. Attachment styles, particularly

during adolescence, establish behavioral and emotional patterns that lead to suppression and reappraisal. Based on attachment theory, these connections indicate that a secure attachment style leads to better emotion regulation functioning, while insecure styles (avoidant and ambivalent) create more challenges in this domain (Sayedmohammadi, 2004).

This finding demonstrated a relationship between emotion regulation and responsibility. This result aligns with Moradi and Parandin's (2020) research. According to Roberts et al. (2019), individuals who strengthen their emotional regulation skills typically perform their responsibilities more effectively. These management abilities translate to improved performance in academic and occupational environments because individuals can respond rationally and purposefully in stressful situations. According to Pourkhormshahi and Teymouri (2010), adolescents with strong emotional regulation skills can manage their feelings, control impulsive behaviors, and establish healthy relationships. This ability helps them act responsibly in challenging situations.

Additionally, the present study revealed a positive relationship between responsibility and reappraisal and a negative relationship with suppression. This finding corresponds with Moradi and Parandin's (2020) research. Based on Abdollahi and Ghodsi's (2018) study, the ability to manage and reappraise emotions enables individuals to avoid impulsive behaviors and spontaneous decisions. This self-mastery allows individuals to manage their internal emotions through reappraisal rather than avoiding responsibilities due to unwillingness to complete their tasks and responsibilities on time (Khan et al., 2020). Conversely, individuals who suppress emotions resulting from their tasks and fail to identify and manage their emotions will not succeed in fulfilling their duties (Roberts et al., 2019).

Finally, this research demonstrated that both reappraisal and suppression emotion regulation strategies positively mediate the relationship between secure attachment style and responsibility, while negatively and significantly mediating the relationship between avoidant and ambivalent attachment styles and responsibility in adolescents. We found no research directly aligned with our current findings. However, these results indirectly correspond with research by Mikulincer and Shaver (2020), Gross (2021), Cassidy and Berlin (2018), Modares Yazdi et al. (2019), and Hosseinian (2021). According to Khakpour (2024), attachment styles as primary emotional frameworks influence emotion regulation and shape responsibility, with both responsibility and emotion regulation significantly influenced by attachment styles. Responsibility represents an individual's commitment to fulfilling duties and performing appropriate behaviors in their personal and social life (Mameli et al., 2019). Shaver and Mikulincer (2023) demonstrated that adolescents with secure attachments typically experience more positive feelings and higher self-confidence in completing tasks, which can increase their responsibility as they feel capable of properly managing their affairs and being effective in their relationships. Furthermore, Shaver and Mikulincer (2021) showed that adolescents who score higher on secure attachment scales also score higher on responsibility measures and exhibit positive behaviors toward social challenges. Securely attached individuals typically employ emotion regulation strategies, such as cognitive restructuring and acceptance, which help them manage anxiety and stress more effectively and better establish effective communication with others, and receive social support, helping them better manage negative emotions.

Conversely, Cassidy and Berlin (2018) demonstrated that individuals with ambivalent attachment styles engage in emotion suppression, while subjects with avoidant attachment employ inappropriate strategies, such as avoiding emotional encounters and suppressing them. This behavior can reinforce avoidant behaviors. Similarly, ambivalent attachment can intensify emotional fluctuations, as these individuals need others' support but experience stress and anxiety due to fear of rejection (Mikulincer & Shaver, 2020), consequently failing to resolve their issues and responsibilities. Cassidy (1994), Klaber (2020) also found that individuals who demonstrate flexibility in accepting and integrating both positive and negative feelings typically exhibit secure attachment. However, if negative emotions become either suppressed or abnormally amplified, the individual is more likely to display an insecure attachment.

Overall, considering the research, we can conclude that secure attachment styles lead to better emotion regulation skills (Klaber, 2020); furthermore, emotion regulation skills enhance responsibility; adolescents with strong emotion regulation skills can manage their feelings, control impulsive behaviors, and establish healthy relationships (Pourkhormshahi & Teymouri, 2010). Additionally, this process helps adolescents perform better in academic and occupational environments because they can respond rationally and purposefully in stressful situations (Roberts et al., 2019).

Conclusion

This research demonstrated that emotion regulation mediates the relationship between attachment style and responsibility. Adolescents with insecure attachment styles may experience anxiety or avoidance when confronting responsibilities and fail to utilize effective emotional strategies to solve their problems. Conversely, adolescents with secure attachment styles typically employ adaptive strategies when facing challenges, facilitating problem-solving and fulfillment of their responsibilities. Consequently, these individuals perform better in academic and social domains and demonstrate greater willingness to assume their responsibilities.

Ethical Considerations

Compliance with ethical guidelines

This research has been approved by the Ethics Committee of Islamic Azad University, North Tehran Branch, Tehran, Iran (Code: IR.IAU.TNB.REC.1403.111).

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Authors' contributions

All authors contributed equally to the conception and design of the study, data collection and analysis, interpretation of the results, and drafting of the manuscript. Each author approved the final version of the manuscript for submission.

Conflict of interest

The authors declare no conflicts of interest.

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