

The Mediating Role of Early Maladaptive Schemas in Explaining the Causal Relationships Between Childhood Maltreatment, Attachment Styles, and Forgiveness in Betrayal Victims

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ABSTRACT

Objective: The primary goal of this study was to present a forgiveness model based on childhood maltreatment and attachment styles, with the mediating role of early maladaptive schemas in betrayal victims.

Methods: This descriptive correlational study involved betrayal victims who had sought counseling in Tehran in 2022, with a sample of 653 individuals selected through convenience sampling. The instruments used included Bernstein et al.'s (2003) Childhood Trauma Questionnaire, Hazan and Shaver's (1987) Attachment Style Questionnaire, Young's (1999) Early Maladaptive Schema Questionnaire, and the Forgiveness Questionnaire by Ray et al. (2001). Data were analyzed using SPSS version 25 and AMOS version 24.

Findings: The results indicated a negative relationship between childhood maltreatment, insecure attachment styles, and early maladaptive schemas with forgiveness, while secure attachment showed a positive relationship with forgiveness. Furthermore, the results suggested that early maladaptive schemas mediated the relationship between childhood maltreatment, attachment styles, and forgiveness in betrayal victims.

Conclusion: Overall, the results indicated that the evaluated structural model was well-fitted, and the findings could assist therapists and counselors in better understanding the forgiveness process in betrayal victims.

Keywords: Betrayal, Forgiveness, Childhood Maltreatment, Attachment Style, Early Maladaptive Schema.

1. Introduction

Betrayal is theoretically complex to define, and achieving a universally accepted definition that is highly recognized across all cultures or societies is

somewhat challenging (Wróblewska-Skrzek, 2021). Betrayal is not merely a sexual relationship with someone other than a spouse or emotional partner; any secretive emotional and sexual relationship with another person is considered betrayal (Rezapour Mir Saleh et al., 2021). The

consequences of betrayal include disruption of daily functioning, interpersonal problems, loneliness, post-traumatic stress disorder, cessation of pleasurable activities, increased aggression, cognitive changes, damaged self-esteem, feelings of shame, embarrassment, anger, humiliation, jealousy, disgust, insecurity, dysfunctional behaviors, disruption of normal life routines, hasty decision-making for separation, depression, and particularly feelings of liberation for those who had a tense relationship with the betrayer (Záhorcová et al., 2023; Zolfaghari et al., 2021). The repercussions of betrayal can also involve the children of the family, severely affecting their mental and physical health. Betrayal leads to anxiety, depression, distress, low self-esteem, self-blame, and anger in the family (Kleine, 2021; Záhorcová et al., 2023).

Despite all these damages, there are still individuals who commit such acts. Approximately 40% of people who have divorced in America report that they have been involved in extramarital relationships at least once during their married life (London & Hoy, 2021). Despite gender differences and varying beliefs in different societies, the global prevalence rates of betrayal among men and women fluctuate between 12 to 75% (Wróblewska-Skrzek, 2021). Any form of betrayal causes serious conflicts in the relationship, where forgiveness serves as a crucial element aiding in resolving these conflicts and enhancing commitment to the relationship (Cornish et al., 2020).

Forgiveness is a generous gift that heals the rifts created (Russell, 2023) and prevents the occurrence of negative communication cycles (Rathgeber et al., 2019), enabling the continuation of the relationship and transforming threats into intimacy (Zhang & Li, 2015). Understanding how individuals decide to repair or end their damaged relationships is crucial, considering the importance of forgiveness (Kleine, 2021).

The ability to forgive is linked to mental health in individuals (Cornish et al., 2020). Forgiveness is closely associated with mental health in betrayal victims (Li et al., 2023). Research also indicates that childhood maltreatment is related to mental health. Childhood maltreatment reduces physical and psychological energy and increases life difficulties (Warrier et al., 2021) and is also a predictor of lower mental health in adulthood (Goulter et al., 2019); however, the most significant impact of childhood maltreatment is interpersonal problems in adulthood. Individuals who experienced maltreatment in childhood display adjustment disorders, basic social and emotional problems, and a lack of resilience in adulthood (Rezakhaniha

& Ashkan, 2022; Zeynel & Uzer, 2020). Research indicates that forgiveness is associated with individuals who have experienced maltreatment in childhood (Peets et al., 2013).

Additionally, when an individual harms their emotional partner, the victim's reaction is often influenced by their attachment style (Davison, 2023). Attachment theory helps us understand interpersonal responses of individuals with different attachment styles. Feelings of insecurity cause disruptions in relationships and also lead to emotional disorders and psychological harm (Parsakia et al., 2023). Hazan and Shaver (1987) who presented the theory of adult attachment, indicate that attachment styles cause individual differences in psychological and social dimensions and also in a person's expectations of emotional relationships (Hazan & Shaver, 1987). According to Bowlby, communication patterns derived from early experiences transfer ways of emotional regulation, expectations, beliefs, and fundamental attitudes to later life stages. Individuals with insecure attachments enter non-supportive relationships. Those with avoidant insecure attachment do not consider themselves deserving of care and do not see themselves as capable of establishing intimacy, and in response to harms and difficulties, they adopt isolation and avoidance behaviors. Those with anxious attachment instead of building or repairing relationships, more often disrupt them (Parsakia et al., 2023; Shadanloo et al., 2023). Some research on the relationship between forgiveness and attachment styles (Stern et al., 2018) also indicates that attachment styles are related to forgiveness.

Furthermore, the forgiveness process is a multi-stage model that includes the disclosure of betrayal, initial reactions, and later stabilization and revival of the relationship. This process involves assessing the inflicted harm and accountability, establishing deep and renewed communication, and moving from initial forgiveness to profound forgiveness (Monika et al., 2023; Peets et al., 2013). Therefore, another factor influencing forgiveness and the victim's reaction to betrayal is early maladaptive schemas, which affect the individual's cognition and assessment of betrayal. Schemas, due to maltreatments in childhood and as a result of failure to adequately meet essential emotional needs such as the need for secure attachment, lead to misunderstandings, distorted attitudes, incorrect assumptions, unrealistic goals and expectations, or generally, cognitive biases in individuals (Rezapour Mir Saleh et al., 2021).

In simpler terms, early maladaptive schemas are self-damaging emotional and cognitive patterns that form in the

mind early in development and repeat throughout life (Zeynel & Uzer, 2020). Results from some research also indicate that maladaptive schemas can influence forgiveness (Ammari et al., 2023; Barzegaran et al., 2021; Najari et al., 2023; Zulfiquari, 2021).

Reviewing the literature on research related to forgiveness in betrayal victims indicates that most previous studies have either focused on examining the impact of therapeutic interventions on increasing forgiveness in betrayal victims (Ebrahimi et al., 2023; Heydari et al., 2022) or on the impact of therapeutic interventions on reducing psychological damage resulting from betrayal (Fife et al., 2023; Gholizadeh et al., 2020; Hertlein & Piercy, 2012; Marín et al., 2014; Regas, 2019). Some research (Cornish et al., 2020; Ebrahimi et al., 2023; Heydari et al., 2022; Li et al., 2023; Monika et al., 2023; Peets et al., 2013; Rezapour Mir Saleh et al., 2021; Russell, 2023; Záhorcová et al., 2023; Zolfaghari et al., 2021) has examined individual, relational, social, cultural, and religious factors influencing forgiveness in betrayal victims and has attempted to investigate these factors either separately or simultaneously, presenting models. Among these, some research has specifically and separately examined the role of variables such as childhood maltreatment, attachment styles, and early maladaptive schemas in relation to forgiveness.

Considering the review conducted, examining theoretical foundations and previous research shows a connection between variables such as childhood maltreatment, attachment styles with forgiveness, and also that early maladaptive schemas, which are themselves influenced by these variables, can also influence forgiveness; however, despite the researcher's review, no research that has simultaneously examined the relationship between these individual variables with forgiveness in betrayal victims has been found. Therefore, the primary research question of the present study was whether the initial hypothetical conceptual model, which indicates the mediating role of early maladaptive schemas in the relationship between childhood maltreatment and attachment styles with forgiveness in betrayal victims, fits the empirically developed model?

2. Methods

2.1. Study design and Participant

The method of this research was descriptive-correlational and utilized structural equation modeling. The population of this study included all individuals who had faced real or virtual betrayal (sexual or emotional) by a spouse, fiancé, or

friend, and had visited counseling centers under the supervision of the Psychology Organization and Social Welfare Organization of Tehran or participated in an online research call in 2022. The use of virtual questionnaires was implemented due to the COVID-19 pandemic and to facilitate anonymous participation, allowing individuals to participate in the research without fear of judgment or identity disclosure. The criterion for inclusion in the study was the participant's perception of the partner's behavior as betrayal; thus, even if the spouse or partner denied or did not accept the occurrence of betrayal, the individual could still participate in the study. The exclusion criterion was the incomplete filling out of questionnaires, and individuals who did not respond to all questionnaires were removed from the sample. Sampling continued until the sample size reached a sufficient and desirable level. The sampling method was convenience sampling. Determining the sample size in structural equations is not possible using Cochran's formula or Morgan's table and is very sensitive and important in this method. Given the importance of sample size in the results of structural equations, several methods have been suggested for determining sample size. Generally, there is no uniform agreement on how to determine sample size in structural equations. Some believe that the sample size should be based on the number of latent variables for confirmatory factor analysis and manifest variables for exploratory factor analysis. Some also suggest a minimum sample size of 200 based on expert opinion.

In collaboration with counseling centers, after emphasizing confidentiality and obtaining the consent of participants, questionnaires were distributed among visitors who had recently or previously visited counseling centers due to issues of betrayal. Additionally, a significant portion of the data collection process occurred online through a research call, emphasizing the confidentiality of information due to the sensitive nature of betrayal and existing restrictions caused by the COVID-19 pandemic, which was well-received by participants. To ensure confidentiality, the questionnaires emphasized that there was no need to provide personal information such as identity, and individuals could complete the questionnaires using a pseudonym. Furthermore, to encourage participation in the research and complete the required sample volume, participants were promised that if desired, the research results would be sent to them confidentially. Thus, after scoring and interpreting the questionnaires, a general interpretation of each person's questionnaires was sent to about 200 participants in audio and written form, a task that was difficult and very time-

consuming, conducted in line with the ethical commitment and fulfillment of obligations to participants. Also, as part of fulfilling commitments made to participants, individuals who wished to receive individual or couple counseling were offered these services at a special discount. A total of 1523 individuals participated in the research, of whom 653 responded to all questions and questionnaires, and the rest were excluded from the sample due to incomplete responses.

2.2. Measures

2.2.1. Attachment Styles

This scale, constructed using items from Hazan and Shaver's (1987) attachment test and standardized by Besharat (2000) for students at the University of Tehran, is a 21-item test measuring three attachment styles (secure, avoidant, and anxious) on a 5-point Likert scale ranging from none to very high. Scores for each dimension are calculated by summing the scores of the related questions and then calculating the percentage score for each dimension. Higher percentage scores in each dimension indicate the corresponding attachment style of the individual. Cronbach's alpha coefficients for the secure, avoidant, and anxious subscales on a student sample ($n=240$; Besharat, 2000) were .74, .72, and .72, respectively. The correlation coefficient between scores of male and female participants was .85 and .87, respectively. The test-retest reliability of the Adult Attachment Scale for a 30-person sample over two sessions two weeks apart was .92 (Hazan & Shaver, 1987; Parsakia et al., 2023).

2.2.2. Childhood Trauma

Developed by Bernstein, Stein, Newcomb, Walker, Pogge, and colleagues (2003) to assess traumas and injuries of childhood, this questionnaire is a screening tool for identifying individuals with experiences of abuse and neglect during childhood, applicable to both adults and adolescents. It assesses five types of childhood maltreatment: sexual abuse, physical abuse, emotional abuse, emotional neglect, and physical neglect. The questionnaire consists of 28 questions, 25 of which are used to assess the main components of the questionnaire, and 3 questions are used to identify individuals who deny their childhood problems. If the sum of responses to these questions exceeds 12, the individual's responses are likely invalid. In Bernstein et al.'s (2003) study, the Cronbach's alpha coefficient for the questionnaire on a group of

adolescents for the dimensions of emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect were respectively .87, .86, .95, .89, and .78. Concurrent validity with therapists' ratings of childhood traumas ranged from .59 to .78. In Iran, Ebrahimi, Dezhkam, and Thaghe Al-Salam reported Cronbach's alpha for the five components of this questionnaire ranging from .81 to .98. Before scoring the components of the questionnaire, the scoring of questions 5, 7, 13, 19, 28, 2, and 26 must be reversed. Higher scores on the questionnaire indicate greater trauma or damage, and lower scores indicate less childhood trauma or damage. The score range for each subscale is 5 to 25, and for the entire questionnaire, it is 25 to 125 (Ammari et al., 2023; Heydari et al., 2022; Zeynel & Uzer, 2020).

2.2.3. Early Maladaptive Schemas

Young's Schema Questionnaire: This questionnaire was developed by Young (1999) based on clinical observations to identify early maladaptive schemas. The initial version of the questionnaire was translated into Persian by Sahebi and Hamidpour (2005). The short form of the questionnaire consists of 75 questions answered on a six-point Likert scale from completely false (score 1) to completely true (score 6). This instrument identifies 15 early maladaptive schemas across five domains: (rejection and disconnection), (impaired autonomy and performance), (impaired limits), (other-directedness), and (over-vigilance and inhibition). In the original version, Cronbach's alpha in the non-clinical population for the subscales ranged from .50 to .82. The questionnaire correlates highly with measures of psychological distress and personality disorders, thus possessing satisfactory validity. In Iran, it was translated and made operational by Ahi, and the internal consistency was reported as .97 for females and .98 for males (Zeynel & Uzer, 2020; Zolfaghari et al., 2021).

2.2.4. Forgiveness

Developed by Ray and colleagues (2001), this questionnaire consists of 15 items and 2 subscales: absence of negative feelings (10 questions) and presence of positive feelings (5 questions), used to assess forgiveness in individuals. The questionnaire is scored on a 5-point Likert scale with responses ranging from "strongly disagree" to "strongly agree," scored from 1 to 5, respectively. Items 1, 3, 4, 5, 7, 9, and 10 are scored in reverse. Higher scores indicate greater forgiveness among couples. Ray and colleagues (2001) found the reliability of this scale using

Cronbach's alpha to be .87 for the entire scale, .86 for the subscale of absence of negative feelings, and .85 for the subscale of presence of positive feelings, indicating satisfactory reliability. Zandi Pour, Azadi, and Nahid Pour (2011) also reported the reliability of this scale using Cronbach's alpha as .79 and using the split-half method as .81 (Ebrahimi et al., 2023).

2.3. Data Analysis

In this study, descriptive statistics such as demographic information, mean, standard deviation, and Cronbach's alpha, as well as assumptions of univariate normality, were analyzed, and ultimately the method of structural equation modeling was used with SPSS-25 and AMOS-24 software.

3. Findings and Results

In the current study, 541 women and 112 men who had experienced betrayal participated, of which 8 individuals (1.2%) were under 18 years old, 173 individuals (26.5%) were aged 19 to 28 years, 298 individuals (45.7%) were aged 29 to 38 years, and 174 individuals (26.6%) were 38 years old and above. Regarding educational levels, 33 participants

(5.1%) had below high school education, 143 participants (21.9%) had high school diplomas, 52 participants (8%) had associate degrees, 270 participants (41.3%) had bachelor's degrees, 127 participants (19.4%) had master's degrees, and 28 participants (4.3%) had doctoral degrees. Among the participants, 317 individuals (48.5%) were betrayed by a spouse, 33 individuals (5.1%) by a fiancé/spousal partner, and 303 individuals (46.4%) by a friend or lover. Additionally, 108 participants (16.5%) had been in a relationship with the betrayer for less than 6 months, 73 participants (12.2%) for 6 months to 1 year, 158 participants (24.2%) for 1 to 3 years, 75 participants (11.5%) for 3 to 5 years, and 239 participants (36.6%) for more than 5 years before the betrayal. The types of betrayal experienced were sexual and emotional for 123 individuals (18.8%), emotional for 219 individuals (33.5%), and through virtual space for 311 individuals (47.6%). At the time of answering the questionnaires, 54 participants (8.3%) had been aware of the betrayal for less than 1 month, 107 participants (16.4%) for 1 to 6 months, 83 participants (12.7%) for 6 to 12 months, and 409 participants (62.6%) for more than one year.

Table 1 displays the means, standard deviations, and correlation coefficients among the study variables.

Table 1

Means, Standard Deviations, and Correlation Coefficients Among Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Emotional Abuse	-														
2. Physical Abuse	.66**	-													
3. Sexual Abuse	.37**	.39**	-												
4. Emotional Neglect	.74**	.48**	.31**	-											
5. Physical Neglect	.65**	.54**	.45**	.70**	-										
6. Secure Attachment	-.11*	-.15*	-.17*	-.03	-.14*	-									
7. Avoidant Attachment	.43**	.41**	.34**	.36**	.43**	-.26*	-								
8. Anxious Attachment	.32**	.23**	.20**	.25**	.31**	-.31*	.56**	-							
9. Rejection/Separation	.42**	.37**	.31**	.44**	.45**	-.33*	.61**	.55**	-						
10. Dysfunctional Behavior	.30**	.26**	.22**	.28**	.35**	-.28*	.53**	.49**	.65**	-					
11. Other-directedness	.24**	.29**	.25**	.32**	.26**	-.24*	.57**	.41**	.58**	.61**	-				
12. Hyper-vigilance	.29**	.31**	.34**	.19**	.27**	-.25*	.43**	.44**	.60**	.52**	.58**	-			
13. Impaired Limits	.35**	.28**	.21**	.25**	.34**	-.23*	.56**	.45**	.57**	.59**	.54**	.55**	-		
14. Absence of Negative Emotions	-.29*	-.23*	-.17*	-.28*	-.30*	.21	-.39*	-.36*	-.41*	-.36*	-.29*	-.35*	-.37*	-	
15. Presence of Positive Emotions	-.13*	-.21*	-.06	-.11*	-.13*	.08	-.21*	-.15*	-.18*	-.23*	-.17*	-.18*	-.23*	.36**	-
Mean	12.03	9.42	11.67	12.78	10.50	25.49	18.79	20.26	76.69	44.87	34.10	35.22	33.35	26.19	16.85
Standard Deviation	4.20	4.05	5.45	5.25	4.48	6.00	5.36	4.02	14.62	9.05	8.72	9.17	7.13	6.05	4.21
Skewness	0.48	1.05	0.66	0.18	0.64	-1.25	0.10	-0.33	0.48	0.29	0.90	0.16	-0.08	0.21	0.37
Kurtosis	-0.69	0.04	-0.85	-0.91	-0.43	1.67	0.04	0.49	-0.69	-0.70	-0.01	-0.63	-0.69	-0.41	-0.49
Tolerance	0.31	0.49	0.71	0.33	0.39	0.79	0.44	0.53	0.31	0.37	0.40	0.44	0.52	0.51	0.37
Variance Inflation Factor (VIF)	3.19	2.06	1.41	3.04	2.60	1.27	2.28	1.90	3.19	2.73	2.49	2.28	1.91	1.95	2.73

*p<0.05; **p<0.01

Means, Standard Deviations, Skewness, Kurtosis, Tolerance, and Variance Inflation Factors are provided for each variable in the dataset. The table indicates that the direction of correlations between variables is consistent with theoretical expectations in the research field. The assumption of normal distribution of univariate data was evaluated using skewness and kurtosis values for each variable as shown in Table 1, with all values falling within the ± 2 range. Based on such a conclusion, it was established that the assumption of normal distribution of univariate data among the data is upheld. The assumption of multicollinearity was assessed through evaluating the variance inflation factor and tolerance indices as provided in Table 1, confirming that the assumption of multicollinearity is also maintained among the data; the tolerance values of predictor variables were greater than 0.1 and variance inflation factor values for each were less than 10.

Table 2

Total and Direct Path Coefficients Between Research Variables in the Structural Model

Path	b	S.E.	β	p
Direct Paths				
Anxious Attachment --> Early Maladaptive Schemas	1.408	0.203	0.277	0.001
Anxious Attachment --> Forgiveness	-0.267	0.111	-0.151	0.016
Avoidant Attachment --> Early Maladaptive Schemas	1.496	0.157	0.394	0.001
Avoidant Attachment --> Forgiveness	-0.072	0.085	-0.054	0.409
Secure Attachment --> Early Maladaptive Schemas	-0.710	0.167	-0.139	0.001
Secure Attachment --> Forgiveness	0.059	0.073	0.033	0.403
Childhood Maltreatment --> Early Maladaptive Schemas	1.144	0.174	0.254	0.001
Childhood Maltreatment --> Forgiveness	-0.173	0.086	-0.110	0.038
Early Maladaptive Schemas --> Forgiveness	-0.121	0.029	-0.348	0.001
Indirect Paths				
Anxious Attachment --> Forgiveness	-0.171	0.047	-0.097	0.001
Avoidant Attachment --> Forgiveness	-0.181	0.046	-0.137	0.001
Secure Attachment --> Forgiveness	0.086	0.030	0.049	0.001
Childhood Maltreatment --> Forgiveness	-0.139	0.042	-0.089	0.001
Total Paths				
Anxious Attachment --> Forgiveness	-0.438	0.101	-0.247	0.001
Avoidant Attachment --> Forgiveness	-0.253	0.084	-0.191	0.001
Secure Attachment --> Forgiveness	0.145	0.069	0.082	0.034
Childhood Maltreatment --> Forgiveness	-0.311	0.073	-0.199	0.001

Table 2 indicates that the total path coefficient between childhood maltreatment and forgiveness ($p = .001$, $\beta = -.199$) is negative and significant. The total path coefficient between secure attachment style and forgiveness ($p = .034$, $\beta = .082$) is positive, and the total path coefficients between both anxious ($p = .001$, $\beta = -.247$) and avoidant attachment styles ($p = .001$, $\beta = -.191$) and forgiveness are negative and significant. Table 2 also shows that the path coefficient between early maladaptive schemas and forgiveness ($p = .001$, $\beta = -.348$) is negative and significant. According to the

For evaluating the establishment/non-establishment of the normal distribution assumption of multivariate data, the Mahalanobis distance analysis was used. The skewness and kurtosis values related to Mahalanobis distance came out to be 1.82 and 4.27 respectively, indicating that the kurtosis value of the said data was outside the ± 2 range. This signifies that the assumption of normal distribution of multivariate data was not upheld. Consequently, a box plot of Mahalanobis distance data was drawn, and it was observed that data related to 8 participants formed multivariate outliers. Subsequently, data related to those participants were removed, and this action reduced the skewness and kurtosis values of Mahalanobis distance scores to 1.08 and 1.18 respectively. These values for Mahalanobis distance scores indicate that the assumption of normal distribution of multivariate data among the data is upheld.

results of Table 2, the indirect path coefficient between childhood maltreatment and forgiveness ($p = .001$, $\beta = -.089$) was negative and significant. Additionally, the indirect path coefficients between avoidant attachment ($p = .001$, $\beta = -.137$) and anxious attachment ($p = .001$, $\beta = -.097$) with forgiveness were negative, and the indirect path coefficient between secure attachment and forgiveness ($p = .001$, $\beta = .049$) was positive and significant. Based on these findings, the study demonstrated that in betrayal victims, early maladaptive schemas mediate the relationship between

secure attachment and forgiveness positively, and the relationship between both avoidant and anxious attachment styles with forgiveness, as well as the relationship between childhood maltreatment and forgiveness, negatively and significantly. Figure 1 illustrates the structural model of the

study explaining the causal relationships between attachment styles and childhood maltreatment with forgiveness in betrayal victims based on the mediating role of early maladaptive schemas.

Figure 1

Model with Beta Coefficients

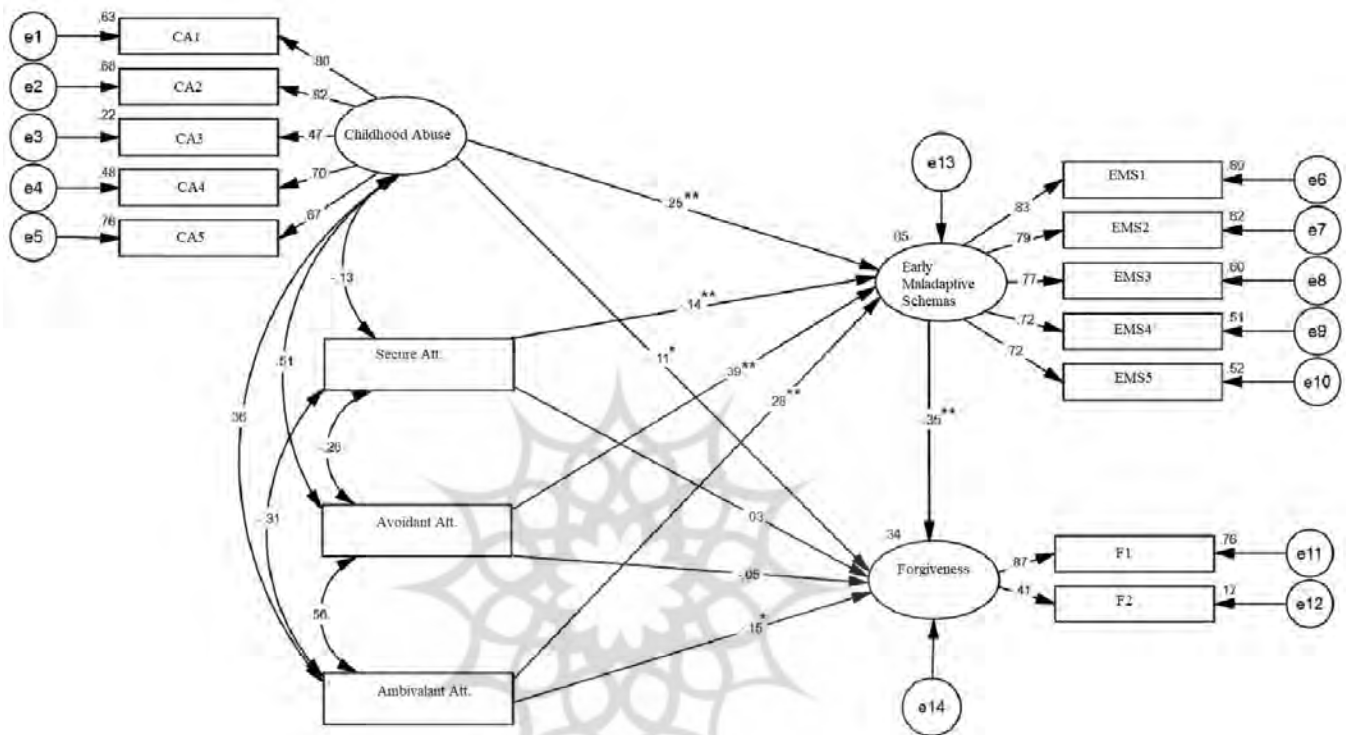


Figure 1 shows that the total squared multiple correlations (R^2) for the forgiveness variable was .34. This indicates that attachment styles, childhood maltreatment, and early maladaptive schemas explain 34% of the variance in forgiveness among betrayal victims.

4. Discussion and Conclusion

The findings of the study indicate that secure attachment has a direct and positive relationship with forgiveness in betrayal victims, whereas avoidant and anxious attachment styles have a direct but negative relationship with forgiveness in these individuals. The results from examining the mediating role of early maladaptive schemas in the relationship between attachment styles and forgiveness in betrayal victims show that in the relationship between secure attachment and forgiveness, the schemas do not play a mediating role. However, in the relationship between insecure avoidant and anxious attachment styles, early

maladaptive schemas have a negative mediating role. These findings are consistent with the prior (Ammari et al., 2023; Barzegaran et al., 2021; Najari et al., 2023; Peets et al., 2013; Zeynel & Uzer, 2020; Zolfaghari et al., 2021).

This finding can be explained by considering how early maladaptive schemas are formed. According to Young et al. (2003), the root of schema formation lies in an individual's failure to meet basic needs, particularly the need for attachment, which leads to the formation of schemas. Based on attachment theory, early relational experiences with a caregiver lead to the formation of initial relational patterns, which Bowlby (1970) called internal working models. These internal working models regulate expectations, interpretations, and emotional states of the infant when the caregiver is unavailable. The attachment system leads to the construction of an internal working model that contains all attachment-related information and filters it through this model. These models act like mental rules that frame future

interactions with others and self-perception. They can predict a couple's behavior and their interpretations. These internal working models become the basic framework for perception, experience, interpretation, and prediction of current and attachment-related events such as betrayal. Therefore, internal working models, in the form of early maladaptive schemas through styles and coping responses, influence cognitive, emotional, and behavioral processes of betrayal victims, directing them and potentially creating barriers in the process of forgiveness in betrayal victims.

Individuals with secure attachment and fewer schemas, because they possess a positive and constructive internal working model, unlike those with maladaptive schemas, have a positive view of themselves and others or relationships (Goulter et al., 2019). Therefore, when faced with betrayal, their cognitive processes are less likely to be biased and erroneous, and they are able to go through cognitive steps related to forgiveness such as re-framing the betrayer positively, reinterpreting the betrayal story from the betrayer's perspective, and finding meaning for themselves and their lives. Also, (Davison, 2023; Goulter et al., 2019) they accept themselves and believe they are worthy of respect, value, and also trust others and enter relationships, and thus are more likely to accept the betrayer's apology and trust them again after betrayal.

However, individuals with insecure avoidant and anxious/ambivalent attachment, because their need for attachment is damaged, have more early maladaptive schemas which cause biases in perception and interpretation, the formation of inflexible and incorrect beliefs and assumptions, further impairing the processes of forgiveness. For example, a victim with avoidant attachment and schemas like abandonment, because they struggle to trust others, will immediately leave the relationship after the betrayal is revealed and will not forgive the betrayer.

Also, a victim with an anxious/ambivalent attachment, having more maladaptive schemas because their need for attachment is damaged, is intensely focused on the relationship with anxiety and hypervigilance, always doubting the continuation of the relationship and maintaining secure attachment, worried about being rejected. They do not trust in the love and affection of others and do not consider themselves or others worthy of love and respect. Therefore, when such a person faces a real threat like betrayal or even perceives the existence of such a risk, their thoughts, emotions, and physical sensations associated with their schemas are activated, showing intense and inappropriate defensive reactions such as aggression and

making immediate decisions to cut off contact and not forgive. In essence, insecure attachment fosters the increase of schemas in the victim, and the schemas in turn reduce forgiveness.

One of the main limitations of the research was the sampling type; the conditions and limitations of the COVID-19 pandemic on one hand, and the sensitive subject of betrayal in our culture on the other, made it a lengthy and time-consuming process to achieve the necessary sample size. Also, betrayal victims, especially if some time had passed since the betrayal, were not very willing to cooperate, as it would remind them of past pains and injuries. Despite assurances of confidentiality, some individuals were still reluctant to cooperate. Therefore, the sample was primarily composed of individuals participating through online questionnaires rather than those visiting private counseling centers or under the supervision of social welfare. Given that unmarried individuals are less committed to forgiveness (Záhorcová et al., 2023) and since 46% of the participants in the study were in unofficial relationships with the betrayer, it is possible that the research results may be biased and more likely include individuals who had not forgiven and had separated. Therefore, caution must be exercised in generalizing the research results to all betrayal victims. However, this could also be a strength of the research, as the participants, regardless of other external factors influencing forgiveness such as communicational, familial, and cultural factors, mostly made decisions about forgiveness or non-forgiveness based on internal factors, which is more consistent with the research goal.

5. Suggestions and Limitations

Based on the research results, 82.8% of the participants were women, and since gender can influence reactions to betrayal (Wróblewska-Skrzek, 2021), the results may have been influenced by the moderating variable of gender and generalizing them to men may be difficult. The large number of questions resulting from five standard questionnaires and several demographic questions caused that out of 1523 participants who were hard to find, only 653 completed the questionnaires and answered all the questions. Although this sample size was sufficient for the type of research method, collecting this number of samples was a very difficult and time-consuming task. Therefore, it is possible that due to fatigue, participants may not have answered the final questions accurately, although appropriate incentives were considered to encourage participants to answer all questions

until the end. Also, participants could answer all the questions at once and if tired, could enter the site using the same previous link at other times and answer the remaining questions. Overall, due to the large number of questions and because the forgiveness questionnaire was the last one to be completed, the results obtained from it may have been influenced by the fatigue of the participants. One of the fundamental limitations of the current research, like all studies examining early maladaptive schemas, is that schemas are cognitive, emotional, and behavioral patterns that should not be identified and assessed solely through questionnaires. In fact, questionnaires only assess the cognitive dimension of schemas, which can be biased, and accurate and correct assessment of individuals' schemas requires interviews and the use of experiential techniques such as imagery, which was not feasible given the large sample size and the topic of betrayal, and like other domestic and international quantitative studies, the results are based on questionnaire findings. Therefore, caution should be exercised when generalizing results related to early maladaptive schemas.

It is suggested that such research be conducted separately among individuals attending courts who are applicants for divorce or individuals visiting counseling centers who are likely wanting to rebuild relationships. It is also suggested that research be specifically conducted among married individuals or unmarried betrayal victims separately, and the results be compared. It is suggested that such research be conducted specifically among men, but since collecting samples among men is difficult due to cultural issues, qualitative research requiring fewer samples should be used. Another research suggestion is that for accurate assessment and measurement of schemas, reliance should not only be on questionnaires, and qualitative research specifically on the role of early maladaptive schemas in forgiveness or non-forgiveness in betrayal victims should be conducted; as in the review of previous research, no qualitative research examining the role of maladaptive schemas was found.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

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

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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