



Predictive modeling of the level of caregiving in romantic relationships based on attachment styles, considering the mediating role of guilt in romantic relationships

Saeid Mojarad¹; *Morteza Modares Gharavi²; Shahed Masoudi³

¹Ph.D. student in psychology, Faculty of Educational Sciences and Psychology, Islamic Azad University, Bojnord branch, Bojnord, Iran.

²Department of Clinical Psychology, Psychiatry and Behavioral Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

³Assistant professor of psychology, Department of Psychology, Islamic Azad University, Quchan branch, Quchan, Iran.

Abstract

Introduction: This study aimed to predict the level of caregiving in romantic relationships based on attachment styles, considering the mediating role of guilt in these relationships.

Materials and Methods: The research method was a descriptive correlational (path analysis) type. The statistical population included all married men and women living in Mashhad, Iran, in 2024. For this purpose, 400 people were selected using the multi-stage cluster sampling method. We used the Caregiving Questionnaires of Kams and Shaver (1994), the Attachment Styles of Hazen and Shaver (1978), and the Interpersonal Guilt of O'Connor et al. (1997) to collect data. LISREL 8.80 software and the path analysis model were applied to data analysis.

Results: The overall test indices indicated the overall fit of the model. The path coefficient from secure and ambivalent attachment style to guilt and the path coefficient from guilt to caregiving were significant ($P < 0.01$). The results of the indirect coefficients of secure and ambivalent attachment style on couples' caregiving with the mediation of guilt were significant ($P < 0.01$). In other words, guilt mediated the relationship between secure and ambivalent attachment styles and caregiving in romantic relationships.

Conclusion: The results suggest that couple therapists and family counselors should pay more attention to attachment styles and guilt as influential variables to better understand couples' problems.

Keywords: Attachment styles, Caregiving, Guilt, Romantic relationships

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*Corresponding Author:

Psychiatry and Behavioral Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.
modaresmg@gmail.com

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Introduction

Interpersonal relationships significantly impact life satisfaction and overall health across the lifespan (1). Relationship care refers to the ability to pay attention to and accurately perceive a spouse's signs of distress and need, and the tendency of an individual to provide physical and emotional access and closeness to alleviate the spouse's distress (2). The capacity to form intimate emotional bonds with a spouse through relationship care is a core feature of healthy personality functioning and mental health (3). The concept of caregiving includes emotional availability, emotional responsiveness, and engagement with a life partner (4). Caregiving in adult intimate relationships refers to a wide range of behaviors that complement situational attachment behavior (5).

Attachment theory is one of the leading theories in studying emotional relationships. Bowlby believes that the nature of the initial emotional relationship, namely mother-infant, determines the nature of an individual's emotional relationships throughout life (6). Various studies have shown that attachment styles are important predictors of caregiving behaviors (7). Attachment researchers, expanding on Bowlby's theories and considering the concept of a secure base by observing children's behavior in unfamiliar situations, have divided attachment styles into secure, insecure-avoidant, and insecure-ambivalent (8). In adulthood, the dynamics associated with attachment extend to romantic relationships (9). Adults with insecure attachment face difficulties in forming and maintaining satisfying romantic relationships (10).

One variable that can be related to attachment and caregiving styles is guilt. Overall et al. showed that ambivalent attachment styles are reflected in the occurrence and intensity of guilt in adult relationships (11). Guilt occurs when an individual commits an act that violates prevailing norms and values while internally evaluating the act as wrong (12). Guilt is a potential risk factor for aggression in intimate relationships and can influence and intensify marital conflict (13). Freud and Klein believed that guilt is often associated with self-punishment for motives that are considered unacceptable or destructive. However, it can also motivate individuals to make amends for the harm they believe they caused loved ones (14,15). Excessive or irrational guilt leads to distress, dysfunctional relationships, and

psychological harm (16). Khazaei et al. showed that guilt mediated the relationship between attachment style and relational aggression in couples (17). Tatum et al. found the mediating role of shame in the relationship between avoidant attachment and marital satisfaction (18). Zinnalska and Cichopek emphasized the lasting effect of early attachment experience on romantic relationships in adulthood. They concluded that avoidant and anxious attachment styles were associated with low relationship satisfaction (19).

Considering the importance of balanced family functioning and preventing its disintegration, it seems necessary to recognize the factors related to marital satisfaction. Therefore, if we pay attention to the factors affecting marital satisfaction, many psychological, emotional, and social problems in families and society will decrease. Therefore, guilt can be considered a variable that plays a prominent role in relationships. This study aims to investigate the role of attachment styles on the quality of caregiving in couples through the mediation of guilt in romantic relationships.

Materials and Methods

The present research method is descriptive of the correlation type (path analysis). The statistical population of this study included all married men and women residing in Mashhad, Iran, who were referred to family counseling centers in Mashhad in 2024. Research literature related to the statistical method of structural equation modeling was referred to when calculating the sample size. Kline recommends a sample size of at least 200 people; and considers the rule of 20 people for each parameter in the model ideal for calculating the sample size in the structural equation method (20). Considering the parameters, the sample size of this study was 400 people. For this purpose, the questionnaires were designed online on the first form site; then, using the multi-stage cluster sampling method, five regions were randomly selected from among the regions of Mashhad, and two counseling centers were randomly selected from each region. The questionnaire link was provided to the clients to complete using the accessible method.

Inclusion criteria included being married, having been married for at least one year, having an age range of 20 to 55 years, and consent to participate in the research. Exclusion

criteria included an age range of less than 20 or more than 55 years, being single or divorced, and not consenting to participate in the research.

Research instruments

A) Hazen and Shaver Attachment Styles Questionnaire: This questionnaire was developed by Hazen and Shaver (1978) and revised in 1993. The test has 24 questions that are scored on a five-point Likert scale. This scale has been validated by Besharat. The test-retest reliability was reported to be 0.60 with a two-week interval and 0.70 for the Revised Adult Attachment Scale. Cronbach's alpha coefficients were calculated to be 0.74, 0.71, and 0.69 for secure, avoidant, and ambivalent styles. The correlation coefficient between the two administrations in the test-retest was 0.92, indicating very good reliability of the questionnaire (21).

B) Caregiver Questionnaire (CQ): This 32-item questionnaire was developed by Kans and Shaver (1994) and measures the four components of caregiving: proximity, sensitivity, control, and coercion. Each component consists of 8 questions and is answered on a 6-point Likert scale. Kans and Shaver reported the reliability of the subscales of this questionnaire using Cronbach's alpha between 0.80 and 0.87 and the test-retest method after one month between 0.77 and 0.88. Also, the convergent validity of this questionnaire was obtained by examining the correlation coefficients between it and the

Attachment Style Questionnaire, ranging from 0.31 to 0.87 (3). Fallahzade et al. reported the Cronbach's alpha coefficients for the subscales of proximity, sensitivity, control, and coercion as 0.92, 0.93, 0.91, and 0.70, respectively (22).

C) Interpersonal Guilt Questionnaire (IGQ-67): O'Connor et al. developed this questionnaire in 1997. It has 67 questions. Each question is on a five-point Likert scale from strongly disagree= 1 to strongly agree= 5, and items 10, 16, 23, 27, 34, 35, 37, 42, 46, 47, 50, 52, and 56 are reverse scored. The reliability of the test was calculated using Cronbach's alpha method for the survivor's guilt component as 0.85, separation guilt as 0.82, omnipotence guilt as 0.83, and self-hatred guilt as 0.87 (23). The test reliability was obtained by the test-retest method by Abbasi in Iran, for the entire scale as 0.87 and Cronbach's alpha as 0.86 (24).

The path analysis method was used to analyze the research findings using LISREL 8.80 software.

Results

In this study, 400 people with a mean age 34.8 participated, of whom 250 (62.5%) were women and 150 (37.5%) were men. The education level was 93 (23.3%) with a diploma, 67 (16.8%) with an associate degree, 182 (45.5%) with a bachelor's degree, and 58 (14.5%) with a master's degree or higher. The mean, standard deviation, and correlation coefficients between the research variables are presented below.

Table 1. Mean, standard deviation, and correlation coefficients between research variables

Variable	Mean	Standard deviation	1	2	3	4	5	6	7
1. Secure attachment	14.25	3.25	1						
2. Avoidant attachment	13.51	3.43	0.43**	1					
3. Ambivalent attachment	12.47	4.35	0.33**	0.58**	1				
4. Attachment to father	7.65	2.08	0.39**	0.56**	0.45**	1			
5. Attachment to mother	7.73	1.69	0.48**	0.37**	0.42**	0.45**	1		
6. Feeling guilty	192.70	24.19	-0.10*	0.22**	0.42**	-0.04	-0.05	1	
7. Caregiving	104.21	15.45	0.35**	-0.17**	-0.16**	-0.15**	-0.08	0.30**	1

According to Table 1, the correlation coefficients showed a significant positive correlation between ambivalent and avoidant attachment styles and guilt and between guilt and caregiving. Before testing the model, we assessed the assumptions of normality,

collinearity of variables, and independence of errors. We used the Kolmogorov-Smirnov test to examine the data normality.

This test was not significant in all variables, so the assumption of normality of the data was confirmed ($P > 0.05$). Also, a tolerance index of

0.1 or less indicated collinearity. Variance Inflation Factor (VIF) is another method of detecting collinearity; a value of the variance inflation factor higher than 10 indicates collinearity. In the present study, the values obtained from calculating the variance inflation factor were less than 10, and the tolerance coefficient was greater than 0.1, which showed that the collinearity did not occur in these variables.

Also, the value of Watson's camera is 2.24, which was less than 4, and it can be said that the assumptions have not been violated. Therefore, according to the obtained indicators, we can conclude that the test conditions have been met.

Table 2 presents the proposed goodness-of-fit indices. The following indices were used to examine the fit of the factor models. Figure 1 presents standardized coefficients in the proposed model.

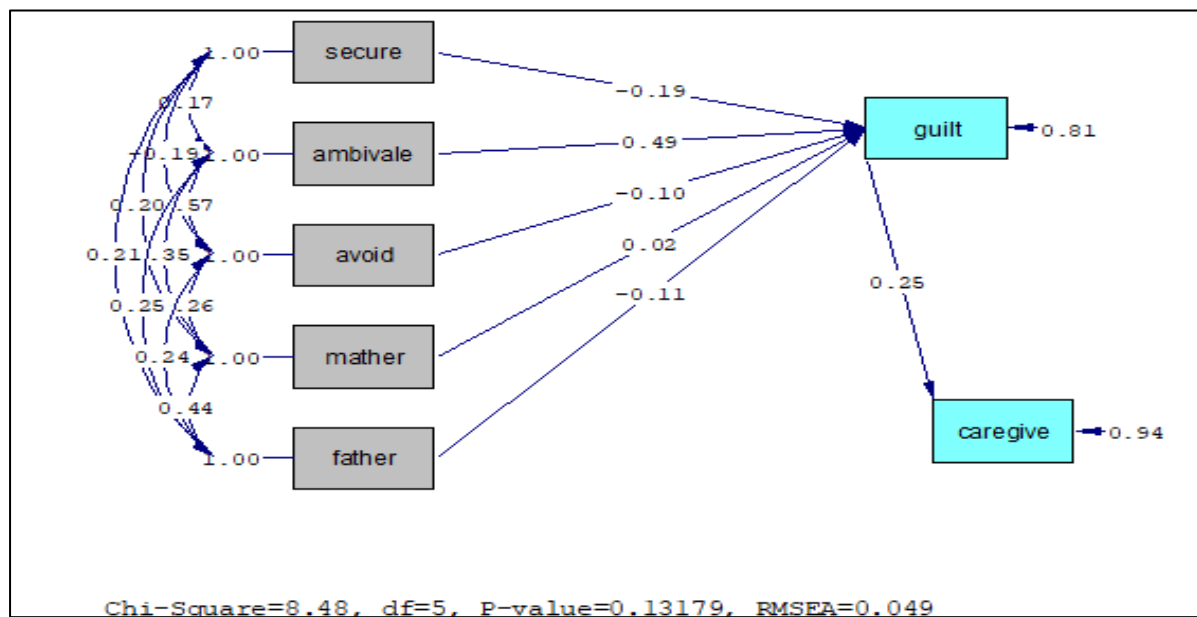


Figure 1. Standardized coefficients in the proposed model

Table 2. Goodness-of-fit indices of the proposed model

χ^2	df	χ^2/df	RMSEA	GFI	AGFI	NFI	CFI
8.48	5	1.69	0.04	0.99	0.96	0.98	0.99

If χ^2/df is less than 2, RMSEA was less than 0.10, and the NFI, AGFI, CFI, and GFI indices were greater than 0.90, the test had a high fit (24). As can be seen, most of the indices indicated a good fit for the model.

The direct path coefficients and their significance and indirect path coefficients used to examine the mediating role of guilt are presented below (Table 3).

Table 3. Direct path coefficients

Path	Estimate	S.E	t	Standard coefficient
Secure attachment → Feeling guilt	-1.64	0.51	-3.25*	-0.19
Avoidant attachment → Feeling guilt	3.20	0.45	7.07*	0.49
Attachment to father → Feeling guilt	-0.79	0.57	-1.38	-0.10
Attachment to mother → Feeling guilt	-0.09	0.35	0.26	0.02
Attachment to father → Feeling guilt	-0.54	0.30	-1.81	-0.11
Feeling guilt → Caregiving	0.07	0.02	4.48*	0.25

According to Table 3, the path coefficient from secure attachment style (-0.19) and ambivalent attachment style (0.49) to guilt was significant.

Also, the path coefficient from guilt to caregiving (0.25) was positive and significant. Indirect path coefficients between research variables are reported below (Table 4).

Table 4. Indirect effects of attachment styles on couples' caregiving mediated by guilt

Mediated variable	Criterion variables	Statistics			Predictive variables		
Feeling guilt	Caregiving	Error coefficient	Secure attachment	Ambivalent attachment	Avoidant attachment	Attachment to father	Attachment to mother
		t	-0.12	0.24	-0.06	-0.04	0.01
			0.05	0.06	0.04	0.02	0.01
			-2.63*	-3.78*	-1.32	-1.68	0.26

As seen in Table 4, the indirect effect of secure attachment style on caregiving mediated by guilt was negative and significant, and the indirect effect of ambivalent attachment style on caregiving mediated by guilt was positive and significant. Therefore, guilt only mediated the relationship between secure and ambivalent attachment styles and caregiving in romantic relationships.

Discussion

This study aimed to predict the level of caregiving in romantic relationships based on attachment styles, considering the mediating role of guilt in romantic relationships. The results showed that secure attachment style negatively and ambivalent attachment positively and significantly predicted guilt in romantic relationships, and the path coefficient from guilt to caregiving was positive and significant. These findings were consistent with the findings of Malik, Wells, and Witkowski (25) and Overall et al. (11). Atalar and Koca showed a significant positive relationship between secure attachment style, life satisfaction, and self-compassion (26).

Overall et al. showed that people with anxious attachment styles express extreme vulnerability when the relationship is threatened, which leads to feelings of guilt in the romantic partner (11). Irrational guilt stems from pathological beliefs that have their roots in infancy and the child's traumatic relationships with parents and other family members. People who feel guilty are inclined to do whatever they can to receive approval from a power source and reduce their guilt (15).

The findings also showed that the model had a good fit and that secure and ambivalent attachment styles could predict caregiving in romantic relationships through the mediation of guilt. In a study in Birjand-Iran, Khazaei et al. selected 320 people using a convenience method and. The findings showed that guilt played a mediating role in the relationship between attachment style and couples' communicative aggression (17). In this regard,

Tatum et al. examined the mediation of shame on 384 American adults. The findings showed that the tendency to shame played a mediating role in the relationship between avoidant attachment and marital satisfaction (18). Tolmacz et al investigated the relationship between attachment style and marital satisfaction with the mediation of worry. For this purpose, questionnaires were completed online by 280 young people aged 19 to 32. The results of structural equations showed that worry mediated the relationship between attachment style and marital satisfaction. In explaining the relationship between attachment style and caregiving, people with a secure attachment style tend to enjoy long-term relationships and have positive beliefs in love (6). In contrast, people with an avoidant attachment style often face many challenges in maintaining their relationships and end their relationships due to fear of intimacy (27). Instead of caring, they take on the role of a needy person and maintain physical and emotional distance from their partner to relieve their feelings. In addition, relationship caregiving refers to the ability to pay attention to and accurately understand the signs of distress and need for the partner and the tendency of the person to provide physical and emotional access and closeness to relieve the partner's distress (2).

High levels of guilt can derail the caregiving process. The person who wants to care for another must recognize the other person's problems and develop a plan for sensitive and effective help. Self-attacking occurs when the person believes that if something bad happens, he or she is bad. The anxiety and guilt that people experience due to their anger at the object of their inattentive, abusive, and hurtful love are unconsciously punishing themselves (28). Guilt is distressing because it reflects self-criticism for unethical actions, although it may lead to positive outcomes such as seeking forgiveness and reparation (29). People with a secure attachment style can establish relatively stable and satisfying emotional and intimate

relationships. Spouses with this characteristic can be supportive, risk-taking, seeking different solutions to solve problems, and showing more intimacy. In this way, they become closer to their spouse, and the intimacy between the couple increases, which has an effective role in caregiving (30).

Like any other study, the present study faced limitations, including using a questionnaire as a data collection tool. On the other hand, this study was conducted in Mashhad, so caution should be exercised when generalizing the results. Qualitative and individual interview methods should be used in future studies to obtain more accurate information. Couples therapists and family counselors should pay more attention to attachment styles and guilt as influential variables to better understand couples' problems and use the results obtained in this study to better understand interpersonal relationships.

Conclusion

In general, secure and ambivalent attachment styles, among the variables related to guilt, can play an important role in the quality of care in romantic relationships. Secure and ambivalent attachment styles, mediated by guilt, could predict care in romantic relationships. Also, guilt can predict caregiving in couples positively and significantly.

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Conflict of Interest

There was no conflict of interest.

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Ethical Considerations

To comply with the ethical considerations of the research, the subjects were assured of the confidentiality of the information while stating the general purpose of the research. This article is derived from the first author's doctoral dissertation and the Ethics Committee of Islamic Azad University, Bojnord Branch approved this research.

Code of Ethics

IR.IAU.BOJNORD.REC.1402.014 from

Authors' Contributions

This article is derived from the first author's doctoral dissertation (Saeed Mojared). The first author participated in carrying out the research stages, and manuscript drafting. The second author (Morteza Modares Gharavi) contributed to these matters by suggesting the research title, designing the various stages of the research from the research methodology perspective, editing the article, and analyzing the texts. The third author (Shahed Masoudi) provided advice and corrections to the first author and suggested a research method for the texts.

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