

The Influence of Family Emotional Functioning on Insecure Attachment Patterns in Young Adults' Romantic Relationships: The Mediating Role of Parent–Child Attachment

Tingna Liu^{1*}

¹ International College Beijing, China Agricultural University, Beijing, 100083, China

Abstract. Parent-child attachment is an important factor influencing the young adults' romantic attachment style. Family emotional function also has an impact on the parent-child attachment (PCA) pattern. Meanwhile, family emotional functions significantly impact young adults' mental health and their attachment patterns of romantic relationships. Studies show that the proportion of anxious teenagers who suffer from high emotional neglect from their mothers has risen to 23.1%. The result of the father's neglect is similar to this. This article focuses on exploring the influence of family emotional functioning on insecure attachment patterns in young adults' romantic relationships: the mediating role of PCA. Through the quantitative analysis method, questionnaires were distributed through Question star. This study used SPSS 25.0 software and its extension program PROCESS v4.0 to analyze the data. The results demonstrate that the link between family emotional functioning and avoidant attachment is partially mediated by PCA, while PCA plays a complete mediating role in the anxious attachment. This study supports the theoretical path that family emotional functions affect the romantic attachment patterns of young adults through PCA, emphasizing the deep influence of the original family on an individual's romantic behavior.

1 Introduction

Relationships are an important part of a young adults' lives, and an important topic often addressed in young adults counseling. A healthy relationship may positively impact an individual's life, fostering personal growth and emotional well-being. On the other hand, an unhealthy relationship may reversely impact an individual's life, causing depletion and mental distortion. With the increasing awareness of counseling and self-exploration among Chinese young adults, there is growing awareness of how the family of origin influences individuals' attachment patterns and their romantic relationships (RR).

Family is the first environment in which an individual lives and grows up, and the parenting style significantly influences the formation of an individual's personality and development. Under the influence of rapid social change and multiculturalism in

* Corresponding author: tingna.liu@ucdenver.edu

contemporary society, the family structure, the parent-child relationship and the pattern of individual emotional development are undergoing profound changes. More and more young adults are facing problems such as lack of family emotional support and insufficient parent-child interactions in their growing up process. Research showed that the proportion of adolescents with anxiety who suffered from a high level of emotional neglect by their mothers rose to 23.1%. The results for father's neglect were close to this [1]. This suggests that the problem of Chinese young adult's emotional neglect is closely related to the emotional functioning of the family and has a profound impact on mental health. At the same time, this lack of emotional functioning can also profoundly impact their romantic relationship patterns in adulthood.

2 Literature review

Research has shown that the family is the starting point of individuals in their lives and the key environment for the development of his or her personality, emotions, and social behavior patterns [2]. Psychological development is greatly impacted by the family emotional function, which refers to a family's capacity to meet the emotional needs of its members, provide psychological support, and facilitate emotional expression and communication [3].

Adolescents who experience physical neglect may struggle to form and sustain healthy intimate relationships [4]. High conflict, divorced, indifferent, or neglectful family environments often hinder children from developing appropriate emotional expression and responsiveness [5]. Young adults growing up in this kind of environment are likely to build insecure attachment patterns in intimate relationships, such as overdependence, fear of abandonment, and discomfort with intimacy [6]. This pattern of insecure attachment may cause individuals to tend to show strong separation anxiety in romantic relationships [7]. These young adults are excessively preoccupied with the fear of abandonment that they will frequently seek validation from their partner, and even overinterpret their partner's behavior, which makes it difficult for them to build trust with romantic partners [8]. This indicates that experiencing emotional neglect during childhood may profoundly influence intimate relationships in adulthood, and that focusing on family emotional functioning is more urgent.

A theoretical framework provided by Attachment Theory may help to understanding the impact of family emotional functioning in childhood on intimate relationships in adulthood. According to Bowlby, an individual's early attachment experiences, especially interactions with primary caregivers, internalize a set of "internal working models" that influence the subsequent construction of trust, intimacy, and attachment security [9]. This suggests that good family emotional functioning can provide children with a continuous and stable emotional response system, thus forming a sense of psychological security.

On this basis, parent-child attachment (PCA) has been recognized as an important mediating mechanism connecting family-of-origin emotional functioning with adult romantic attachment patterns [10]. Individuals who form secure attachments with their parents have been found to be more likely to develop stable, trusting intimate relationships, whereas anxious or avoidant PCAs had a strong positive association with insecure attachment patterns in romantic relationships [11]. Morris et al.'s tripartite model, which describes how the family affects children's emotion regulation, provides a detailed explanation of this idea [12]. Emotional expression patterns and emotion regulation strategies in the family are internalized by children through observation and imitation, thus affecting the development of their self-regulation ability [12]. Therefore, family emotional functioning not only shapes children's emotional foundations, but also profoundly influences the quality of their subsequent interpersonal interactions, especially their romantic attachment patterns.

In this context, exploring how family emotional functioning affects young adults' attachment security in romantic relationships through PCA not only helps to understand the

root causes of conflict and separation anxiety in romantic relationships, but also provides a direction for psychological intervention, family education and social support systems. In today's world of emphasizing mental health awareness and emotional education, this topic has important practical significance and research value. Although there have been studies focusing on the correlation between the family functioning, the PCA and romantic relationships, there are still limited studies that integrate the three in a mediation model for empirical testing. Therefore, the present study, targeting young college students, aimed to explore whether family emotional functioning influences their insecure attachment patterns in romantic relationships through PCA, and to test the following hypotheses:

H1: Family emotional functioning is significantly and positively correlated with PCA.

H2: Family emotional functioning demonstrates a significant negative association with individuals' level of insecure attachment.

H3: PCA security has a significant negative correlation with individuals' level of insecure attachment.

H4: PCA has a mediating effect between family emotional functioning and insecure attachment.

The present study is refined into two categories of insecure attachment:

Anxious Attachment-Experiences in Close Relationships Inventory (ECR)-Anxiety)

H5a: Family emotional functioning shows a significantly and negatively correlation with levels of anxious attachment.

H5b: PCA mediates the effect between family affective functioning and anxious attachment.

Avoidant attachment (ECR-Avoidance)

H6a: Family emotional functioning is significantly and negatively correlated with levels of avoidant attachment.

H6b: PCA mediates the effect between family affective functioning and avoidant attachment.

3 Method

3.1 Participants

This study took the group of young adults aged 18-25 as the survey object, and distributed the questionnaires through Question star, a total of 215 young adults completed the questionnaire survey. After excluding 10 invalid questionnaires, there were 205 valid questionnaires, accounting for 95.15%. According to the official age classification in Centers for Disease Control and Prevention (CDC), the group of 18-25 years old is called young adult [13]. This study excluded the questionnaires that did not meet the age group, and the valid questionnaires were all 18-25 years old, with some romantic experience or in a romantic relationship, who voluntarily participated in this study and completed the anonymous questionnaires. Among them, 32.04% were male and 67.96% were female.

3.2 Measures

3.2.1 *Adaptability, Partnership, Growth, Affection, and Resolve (APGAR) Family Emotional Functioning Scale*

The APGAR scale was developed by Smilkstein to assess family emotional function [14]. The scale consists of five items measuring the dimensions of Adaptability, Partnership, Growth, Affection, and Resolve. A 3-point response scale was employed for each item (0 =

hardly ever, 1 = some of the time, 2 = almost always), and total scores ranged from 0 to 10, with elevated scores signifying enhanced family emotional functioning. A score of 7 to 10 indicates highly functional family, 4 to 6 indicates moderately dysfunctional family, and 0 to 3 indicates severely dysfunctional family. The present study this paper used the Chinese revised version to measure children's family functioning with good reliability (Cronbach's $\alpha = .884$) [15].

3.2.2 Inventory of Parent and Peer Attachment (PPA) Parent and Peer Attachment Subscale (Parent Section)

The IPPA, created by Armsden and Greenberg, is designed to test the attachment quality between adolescents and their parents as well as peers [16]. In this paper, I used the Chinese version of the Parent Peer Attachment Questionnaire (IPPA-R) revised by Zhang Yingli et al. and selected the PCA subscales to measure the level of PCA [17]. The questionnaire contains 25 items categorized into three dimensions: Trust, Communication, and Alienation. Each item was rated on a 5-point Likert scale (1 = completely disagree to 5 = completely agree), with certain items reverse scored. Higher scores indicate more secure emotional connections with parents. The scale's Chinese version was inspected with good reliability (Cronbach's $\alpha = .932$).

3.2.3 Experiences in Close Relationships Inventory (ECR)

The ECR was created by Brennan et al. as a tool for assessing an individual's attachment style in romantic relationships [18]. In its original form, the scale includes 36 items, split into two dimensions—Anxiety and Avoidance—each comprising 18 items. In this study, the Chinese version of the ECR revised by Li Tonggui et al. was used and a 7-point Likert scale (1=strongly disagree, 7=strongly agree) was used, with higher overall scores reflecting a more pronounced insecure attachment characteristic for that dimension [19]. The scale had good reliability in this study (anxious $\alpha = .905$, avoidant $\alpha = .868$).

3.3 Data analysis

The data were analyzed using SPSS 25.0 software and its extension plug-in PROCESS v4.0. Descriptive statistics and internal consistency reliability tests were first performed on each study variable to ensure the reliability of the measurement tools. A preliminary evaluation of the linear relationship between the primary variables was then carried out using Pearson correlation analysis.

The mediation effect analysis, which was based on the nonparametric Bootstrap method of bias correction (the number of resampling was 5000 and the confidence interval was set at 95%), was carried out using the Model 4 model in the PROCESS macro that Hayes proposed [20]. The dependent variable was family emotional functioning, while the mediator variable was PCA, and insecure attachment was the dependent variable. In addition, the confounding effects of demographic variables such as gender were controlled for in the modeling process to improve the explanatory power and robustness of the model.

4 Results

4.1 Descriptive statistical analysis

In this study, the main variables of family emotional functioning, PCA and insecure attachment (avoidant vs. anxious) were analyzed with descriptive statistics.

Table 1. Descriptive Statistics.

	N	Minimum	Maximum	Mean	Standard Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Standard Error	Statistic	Standard Error
fam_fun	205	0	10	7.1854	2.72512	-0.702	0.17	-0.432	0.338
fam_at	205	46	125	92.1951	17.71343	-0.302	0.17	-0.602	0.338
trust	205	16	50	38.7902	7.78321	-0.592	0.17	-0.236	0.338
comm	205	13	45	32.2049	7.21769	-0.346	0.17	-0.433	0.338
alienation	205	6	30	14.8	4.6499	0.402	0.17	0.054	0.338
avoi	205	23	120	60.1317	17.66677	0.013	0.17	-0.229	0.338
anxi	205	18	121	65.8488	20.17063	0.013	0.17	-0.037	0.338
The number of valid cases	205								

Overall, the skewness and kurtosis of all variables fall within the reasonable range of ± 1 , indicating that the data basically conform to the normal distribution, which can satisfy the assumptions required for assumptions of correlation analysis and mediation effect test (see Table 1).

Table 2. Independent Sample Test.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Difference	95% CI	
									Lower	Upper
fam_fun	Equal variances assumed	2.457	0.119	1.64	203	0.103	0.66514	0.40569	-0.13476	1.46504
	Equal variances not assumed			1.714	143.325	0.089	0.66514	0.38802	-0.10185	1.43213

trust	Equal variances assumed	1.686	0.196	2. 22 7	203	0.027	2.56 627	1.15234	0.2 941 8	4.8 383 7
	Equal variances not assumed			2. 35 1	146 .94	0.02	2.56 627	1.09168	0.4 088 4	4.7 237
com m	Equal variances assumed	6.081	0.014	0. 98 3	203	0.327	1.06 093	1.07902	- 1.0 666	3.1 884 7
	Equal variances not assumed			1. 08 8	165 .92 5	0.278	1.06 093	0.97487	- 0.8 638 1	2.9 856 8
alie nati on	Equal variances assumed	0.034	0.855	- 1. 15 2	203	0.251	- 0.79 998	0.69453	- 2.1 694	0.5 694 5
	Equal variances not assumed			- 1. 11 8	118 .71 9	0.266	- 0.79 998	0.71551	- 2.2 168	0.6 168 5
avoi	Equal variances assumed	4.421	0.037	- 1. 46 5	203	0.144	- 3.85 895	2.63352	- 9.0 515 2	1.3 336 2
	Equal variances not assumed			- 1. 59	157 .93 8	0.114	- 3.85 895	2.42631	- 8.6 511 6	0.9 332 6
anxi	Equal variances assumed	0.768	0.382	1. 48 6	203	0.139	4.46 872	3.00631	- 1.4 588 8	10. 396 31
	Equal variances not assumed			1. 50 3	131 .43 7	0.135	4.46 872	2.97336	- 1.4 131 2	10. 350 55
fam _at	Equal variances assumed	3.847	0.051	1. 67 9	203	0.095	4.42 719	2.63616	- 0.7 705 7	9.6 249 4
	Equal variances not assumed			1. 81 9	157 .04	0.071	4.42 719	2.43414	- 0.3 807	9.2 350 7

The results showed that none of the variables were statistically significant in the male and female groups, except for the “trust dimension” of PCA, which showed a significant difference between the genders (see Table 2).

4.2 Correlation analysis

Table 3. Correlation.

		fam_fu n	fam_a t	avoi	anxi	trust	comm	alienati on
fam_fun	Pearson Correlation	1	.755* *	-0.04	-.209* *	.711* *	.724* *	-.563**

	Sig. (2-tailed)	0	0.572	0.003	0	0	0
fam_at	Pearson Correlation	.755**	1	-.218*	-.317*	.938*	.923*
	Sig. (2-tailed)	0		0.002	0	0	0
avoi	Pearson Correlation	-0.04	-.218*	1	0.028	-.235*	-.154*
	Sig. (2-tailed)	0.572	0.002		0.692	0.001	0.027
anxi	Pearson Correlation	-.209*	-.317*	0.028	1	-.255*	-.243*
	Sig. (2-tailed)	0.003	0	0.692		0	0
trust	Pearson Correlation	.711**	.938*	-.235*	-.255*	1	.800*
	Sig. (2-tailed)	0	0	0.001	0		0
comm	Pearson Correlation	.724**	.923*	-.154*	-.243*	.800*	1
	Sig. (2-tailed)	0	0	0.027	0	0	
alienati on	Pearson Correlation	-.563*	-.807*	.198*	.406*	-.658*	-.626*
	Sig. (2-tailed)	0	0	0.004	0	0	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Results demonstrated that family emotional function significantly and positively correlated with PCA ($r = .755$, $p < .01$), which verifies the hypothesis H1 (see Table 3). A significant negative correlation was observed between PCA and avoidant attachment ($r = -.218$, $p < .01$), as well as between parent–child attachment and anxious attachment ($r = -.317$, $p < .01$), which supports the hypothesis H3 (see Table 3). The correlation between family emotional functioning and avoidant attachment was not significant ($r = -.040$, $p = .572$), which does not prove the hypothesis H6a (see Table 3). Additionally, the correlation between family emotional functioning and anxious attachment was significant and negative ($r = -.209$, $p < .01$) (see Table 3). This testifies the hypothesis H5a. The results tentatively support a possible mediating mechanism of PCA between family affective functioning and insecure attachment.

Regarding the three dimensions of PCA, family emotional functioning showed significant positive correlations with trust and communication, and a significant negative correlation with alienation. The trust dimension showed significant negative association with both avoidant ($r = -.235$, $p < .01$) and anxious attachment ($r = -.255$, $p < .01$). Anxious attachment and the communication component were revealed to be significantly correlated negatively. ($r = -.243$, $p < .01$) and avoidant attachment ($r = -.154$, $p < .05$). The alienation dimension exhibited opposing associations with the two attachment styles: a significant positive correlation with avoidant attachment ($r = .198$, $p < .01$) and a significant negative correlation with anxious attachment ($r = -.406$, $p < .01$).

4.3 Mediation model

To explore the mechanism of the influence of family emotional functioning on young adults' insecure attachment patterns, a bias-corrected Bootstrap test (5,000 extractions) was used. The 95% CI of the mediating effect value did not include 0, which indicated that the mediating effect was significant.

Significant direct effect of family emotional functioning on young adults’ avoidant attachment ($c' = 1.8903$, $p = .0050$) and a significant indirect effect through PCA were observed ($ab = -2.1477$, 95% CI $[-3.0661, -1.3031]$). Further path analyses indicated that family emotional functioning significantly positively predicted PCA ($a = 4.9094$, $p < .001$), whereas PCA significantly negatively predicted avoidant attachment ($b = -0.4375$, $p < .001$). The significance of both direct and indirect effects suggests that PCA partially mediates the link between family emotional functioning and avoidant attachment, confirming hypothesis H6b. This means that emotional functioning within the family not only indirectly reduces the level of avoidant attachment by enhancing PCA, but also independently and directly acts on avoidant attachment (See Figure 1).

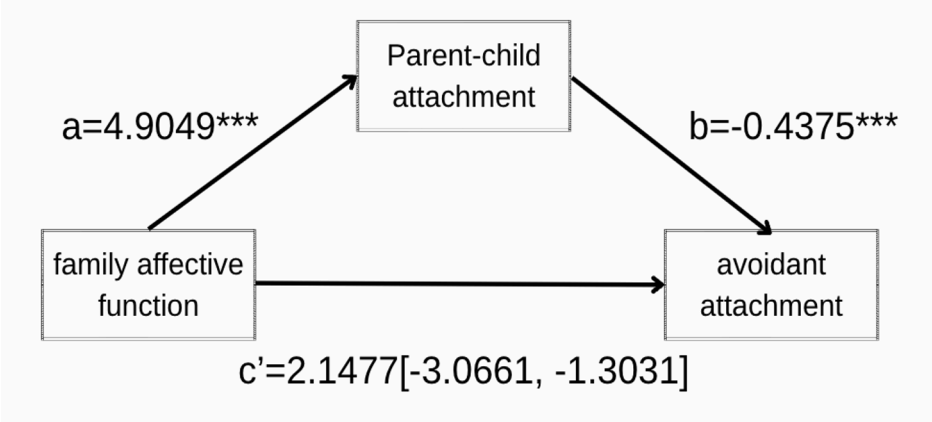


Fig. 1. Results of the mediation effects analysis (Photo/Picture credit: Original).

The results of the mediation effects analysis showed that family emotional functioning significantly influenced anxious attachment patterns in young adults’ romantic relationships through PCA. In particular, family emotional functioning was significantly positively correlated with PCA ($a = 4.9094$, $p < .001$), and PCA was a significantly negatively correlated with anxious attachment ($b = -0.4240$, $p = .0003$). Bootstrap analyses indicated an indirect effect of -2.0816 , with a confidence interval of $[-3.5327, -0.8501]$, did not contain zero, and was statistically significant. However, the direct effect of family emotional functioning on anxious attachment was not significant ($c' = 0.5382$, $p = .4754$), suggesting that PCA fully mediates the relationship, providing support for Hypothesis 5b (See Figure 2).

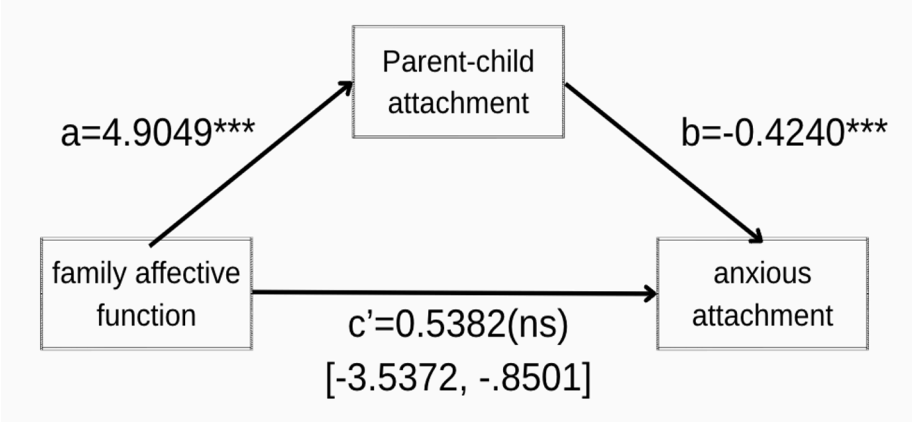


Fig. 2. Results of the mediation effects analysis (Photo/Picture credit: Original).

5 Discussion

This study aimed to investigate how family emotional functioning influences insecure attachment patterns in the romantic relationships of young adults and to further explore the mediating effect of PCA within this framework. By analyzing questionnaire data, the findings partially supported the research hypotheses.

First, it was found that family affective functioning significantly and positively predicted the level of PCA. This result is consistent with attachment theory as well as the findings of previous research, suggesting that the quality of affective support and interactions in the family of origin has a profound effect on the security of an individual's attachment with his or her parents [9, 12]. When families provide higher levels of emotional responsiveness and support, individuals are more likely to form stable, trusting parent-child relationships.

Second, PCA significantly and negatively predicted insecure attachment (including avoidant and anxious) in romantic relationships, suggesting that individuals' experiences of emotional connectedness gained in early parent-child relationships are internalized into attachment styles in later intimate relationships. This result is consistent with Fraley and Shaver's theory of the "internal working model" and supports the role of parent-child relationships in perpetuating attachment traits in adult intimate relationships [10].

In exploring how family emotional functioning influences avoidant attachment patterns in young adults' romantic relationships through PCA. The results of the mediation analysis further indicated that although PCA played a significant mediating role between the two, there was still a significant direct effect of family affective functioning on avoidant attachment. This implies that in addition to influencing avoidant attachment through PCA, emotional functioning in the family context also exert a direct influence on romantic relationships through other pathways or mechanisms that have a direct effect on romantic relationships. For example, communication styles and feelings of self-worth developed in the family may influence how individuals behave in intimate relationships. Thus, the overall results support the partial mediation model of PCA, emphasizing the important influence of the family emotional environment and parent-child dynamics on attachment patterns in young adults' romantic relationships.

The study revealed that PCA significantly mediates the effect of family emotional functioning on anxious attachment in young adults, supporting the full mediation model. Good family emotional functioning was effective in enhancing PCA quality, whereas enhanced PCA significantly reduced individuals' tendency toward anxious attachment in romantic relationships. This finding suggests that the functionality of the family system has an indirect but critical path of influence on individuals' sense of security in RRs. It is noteworthy that the direct impact of family emotional functioning on anxious attachment lost significance after including PCA, which suggests a full mediating role of the latter in this relationship.

When dividing the family-parenting attachment into three dimensions, the results shows that the trust and communication dimensions were significantly and negatively related to both avoidant and anxious attachment. This suggests that strong trust and communication between parents and children may help shield young adults from forming insecure attachment styles in romantic contexts. However, alienation was positively linked to avoidant attachment, while exhibiting a strong negative relationship with anxious attachment. This suggests that when young adults feel emotionally alienated from their parents, they may be more likely to adopt avoidant strategies in their RRs, distancing themselves emotionally from their partners. At the same time, the negative relationship between alienation and anxious attachment may reflect the complex and potentially suppressive effects of emotional disconnection on the expression of attachment anxiety.

In line with prior research, this study emphasizes the crucial role of early PCA in shaping internalized patterns of emotion regulation. Therefore, interventions for anxious attachment in romantic relationships should not focus solely on the intimate relationship itself, but also on the individual's family-of-origin system and the quality of parent-child interactions.

Nonetheless, several limitations exist. The primary limitation lies in its cross-sectional design, which restricts the ability to draw causal inferences. Second, the sample was mostly from college students in the same region, which may limit the external validity of the results. Third, the dependency scale may be susceptible to social desirability bias. Future research could employ a longitudinal design to further examine whether the mediating role of PCA remains stable over time and across different cultural and geographic contexts.

In summary, the present study supported the theoretical path that family emotional functioning influences young adult's romantic attachment patterns through PCA and emphasized the deeper influence of family of origin on individual romantic behaviors. The findings of the study offer a valuable theoretical foundation and practical insights for psychological counseling, relationship education and family intervention in colleges and universities.

6 Conclusion

This study examined the influence of family emotional functioning on insecure attachment patterns in young adults' romantic relationships, focusing on the mediating role of parent-child attachment dimensions. The findings indicated that emotionally supportive family environments were linked to greater trust and communication, and reduced alienation in parent-child relationships. Additionally, these attachment dimensions significantly predicted young adults' avoidant and anxious attachment styles in romantic contexts.

These findings underscore the critical role of early family emotional experiences in shaping young adults' relational patterns beyond the family unit. By strengthening emotional bonds and communication within the parent-child relationship, it may be possible to foster more secure and adaptive attachment behaviors in young adults' romantic relationships. To further validate and extend the current findings, future research should investigate these dynamics over time and across a broader range of cultural contexts.

References

1. Chinese Academy of Sciences: Report on the Mental Health Development of Chinese Nationals (2023–2024), (Social Sciences Academic Press, Beijing, 2024)
2. S. Krauss, U. Orth, R. W. Robins: Family environment and self-esteem development: A longitudinal study from age 10 to 16, *J. Pers. Soc. Psychol.*, **119**(2), 457–478 (2020)
3. S. Kapetanovic, T. Skoog: The role of the family's emotional climate in the links between parent-adolescent communication and adolescent psychosocial functioning, *J. Abnorm. Child Psychol.*, **49**(2), 141–154 (2021)
4. J. A. Cederbaum, S. Negriff, A. Palmer Molina: Child maltreatment and romantic relationships in adolescence and young adulthood: The mediating role of self-perception, *Child Abuse Negl.*, **109**, 104718 (2020)
5. L. Merino, A. Martínez-Pampliega, M. Herrero: Differential impact of parental practices and parental emotional clarity on child symptoms in single-child vs. multiple-child divorced families, *Children (Basel)*, **11**(12), 1481 (2024)
6. K. L. O'Hara, C. A. Rhodes, S. A. Wolchik, I. N. Sandler, J. Yun-Tein: Longitudinal effects of post-divorce interparental conflict on children's mental health problems

- through fear of abandonment: Does parenting quality play a buffering role?, *Child Dev.*, **92(4)**, 1476–1493 (2021)
7. J. Momeñe, A. Estévez, M. D. Griffiths, P. Macía, M. Herrero, L. Olave, I. Iruarizaga: The impact of insecure attachment on emotional dependence on a partner: The mediating role of negative emotional rejection, *Behav. Sci.*, **14(10)**, 909 (2024)
 8. G. Bassi, E. Mancinelli, S. Spaggiari, A. Lis, S. Salcuni, D. Di Riso: Attachment style and its relationships with early memories of separation anxiety and adult separation anxiety symptoms among emerging adults, *Int. J. Environ. Res. Public Health*, **19(14)**, 8666 (2022)
 9. J. Bowlby: *A Secure Base: Parent-child Attachment and Healthy Human Development*, (Basic Books, New York, 1988)
 10. R. C. Fraley, P. R. Shaver: Adult romantic attachment: Theoretical developments, emerging controversies, and unanswered questions, *Rev. Gen. Psychol.*, **4(2)**, 132–154 (2000)
 11. M. Wei, D. W. Russell, B. Mallinckrodt, D. L. Vogel: The Experiences in Close Relationship Scale (ECR)-Short Form: Reliability, validity, and factor structure, *J. Pers. Assess.*, **88(2)**, 187–204 (2005)
 12. A. S. Morris, J. S. Silk, L. Steinberg, S. S. Myers, L. R. Robinson: The role of the family context in the development of emotion regulation, *Soc. Dev.*, **16(2)**, 361–388 (2007)
 13. Centers for Disease Control and Prevention: *Important milestones: Your child's development*, (U.S. Department of Health and Human Services, Washington, 2022)
 14. G. Smilkstein: The Family APGAR: A proposal for a family function test and its use by physicians, *J. Fam. Pract.*, **6(6)**, 1231–1239 (1978)
 15. Z. Zhang: *Handbook of Behavioral Medicine Scales*, (Chinese Medical Electronic & Audio-Visual Publishing House, Beijing, 2005)
 16. G. C. Armsden, M. T. Greenberg: The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence, *J. Youth Adolesc.*, **16(5)**, 427–454 (1987)
 17. Y. L. Zhang, Y. L. Zhang, Y. X. Zhang, J. L. Wang, C. Y. Huang: Reliability and validity of the Chinese version of the revised adolescent attachment questionnaire among junior high school students, *Chin. Ment. Health J.*, **25(1)**, 66–70 (2011)
 18. K. A. Brennan, C. L. Clark, P. R. Shaver: Self-report measurement of adult attachment: An integrative overview, in J. A. Simpson, W. S. Rholes (Eds.), *Attachment Theory and Close Relationships*, 46–76, (The Guilford Press, New York, 2022)
 19. T. Li, K. Kato: Measuring adult attachment: Chinese adaptation of the ECR scale, *Acta Psychol. Sin.*, **38(3)**, 399–406 (2006)
 20. A. F. Hayes: *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach* (3rd ed.), (The Guilford Press, New York, 2022)