The Relationship Between Adolescent Attachment Patterns and Defense Mechanisms
An Analysis of the Influence Path of Parenting Styles

Nianyi Cheng[1]

[1] *Varitas Collegiate Academy, Arlington 22202, The United States*
[1]*Email: nianyicheng_2008@163.com*

ABSTRACT
The family environment has a significant influence on the psychological development of adolescents. Parenting styles, attachment patterns, and defense mechanisms are interconnected, but the inner connections between these three modes of effect are poorly researched. Based on Mazu culture background, this study explores the impact of parenting style on adolescent defense mechanisms as well as the moderating effect of cultural factors. A questionnaire survey of 242 adolescents (aged 12-18) was performed. The results indicate that parenting styles affect attachment significantly, and that the attachment has a partial mediating effect on defense mechanisms. The more one is exposed to the Mazu culture, the more positive his/her parenting style, the more secure their attachment, and the more mature their defense mechanisms. The results indicate that parenting styles and the secure base of attachment are important avenues to consider when promoting mental health in adolescence, and that local cultural resources may be protective.

Keywords: *Parenting style, Attachment patterns, Defense mechanisms, Mazu culture.*

1. INTRODUCTION

Adolescent is a period of psychological development, which is a critical period for the formation of attachment patterns and defense mechanisms, and family environment has a significant influence on it, especially the parenting style [1]. Although there are theoretical overlaps between attachment and psychoanalysis regarding the long-term effects of early parent–child interactions, there is a dearth of research testing the entire chain of parent-child interaction, attachment and defense styles, particularly within non-Western cultures.

Parental practices are highly influenced by cultural values. Parenting in East Asian societies is more likely to be oriented towards family connectedness and dependence than in the individualistic orientation of Western societies [2]. Mazu culture is a major folk culture shared by the Fujian and Overseas Chinese culture, and is believed to be a culture of care, protection, and mutual support that exists in every day family communication and parenting attitudes [3][4].

Given this background, the present study explores the relationships between parenting styles, adolescent attachment patterns and defense mechanisms within the Mazu cultural context. In particular, we answer the following questions: (1) Are there significant differences in parenting styles between the different attachment patterns? (2) Is there a significant difference between the attachment patterns and defence mechanisms? (3) Are there mediation effects of attachment patterns between parenting styles and defense mechanisms? (4) Are there moderating effects in exposure to Mazu culture in these variables?

2. LITERATURE REVIEW

2.1 Parenting Styles

Parenting style refers to the relatively stable attitudes, behavioral patterns, and educational strategies that parents exhibit during child-rearing. Baumrind proposed a three-dimensional classification framework of authoritative, authoritarian, and permissive styles based on the

two dimensions of responsiveness and demandingness [5]. Maccoby and Martin expanded this into a four-category system (authoritative, authoritarian, indulgent, and neglectful), which remains the mainstream research paradigm today [6].

Typological approaches grasp the core idea of how the global concept of parenting should be categorized; specific behavioral dimensions are for finer-grained analysis. The Egna Minnen av Barndoms Uppfostran (s-EMBU) contains three dimensions: emotional warmth, rejection, and overprotection [7]. Emotional warmth involves behaviors that express parental love, encouragement, and praise; rejection refers to behaviors indicating parental disapproval, punishment, and deprivation; overprotection is excessive control and interference with the expression of freedom.

Research shows that parenting styles significantly affect adolescent mental health: negative parenting styles tend to lead children to form immature defense mechanisms, while positive parenting styles are conducive to the development of mature defense mechanisms [8].

2.2 Attachment Patterns

In fact, in 1969, Bowlby later proposed and systematically described attachment theory, based on which attachment takes place because of the central human tendency toward forming and maintaining close, affectionate bonds with other significant persons [9]. Later, Ainsworth et al. devised the “strange situation” technique and named three infant-attached conditions: secure infant attachment, anxious-avoidant attachment, and anxious-ambivalent attachment [10]. In general, researchers often describe adolescent attachment with three dimensions: secure, anxious, and avoidant types. A number of researchers have posited that secure attachment is associated with better development of emotion regulation and greater psychological health, whereas the two dimensions of insecure attachment are dimensions of possible risk factors for the manifestation of various internalizing or externalizing problems or maladaptive indicators [11].

2.3 Defense Mechanisms

Defense refers to mechanisms of adjustment that persons unconsciously implement to manage conflict and stress. Vaillant’s longitudinal studies classified defense mechanisms into three levels: mature (sublimation, humor); intermediate (repression, rationalization); and immature (projection, passive aggression). Only mature defense mechanisms are positively linked to good mental health. Cramer has also shown that the incidence of defense mechanisms is age-related in normal development, with regression to immature modes under life stress during adolescence [12].

2.4 Relationships Among Parenting Styles, Attachment Patterns, and Defense Mechanisms

Parental behavioral patterns, attachment, and defense mechanisms are theoretical constructs that prior research has sought to link through empirical findings.

For instance, Karavasilis et al. showed that secure attachment to teenagers is predicted significantly by emotional warmth from the parents [13]. Similarly, Laczkovics et al. found that defense mechanisms partially mediate the influence of insecure attachment on adolescents’ mental health, suggesting that internal relational patterns may bridge family environment and psychological adjustment [14]. However, more microecological studies testing this pathway of influence from attachment to parenting style in forming defense mechanisms remain to be discussed.

3. RESEARCH DESIGN

3.1 Research Hypotheses

From here, the following hypotheses are raised:

H1: The parenting style of adolescents has a certain predictive effect on their attachment style. Namely, emotional warmth positively predicts secure attachment, and rejection positively predicts insecure attachment.

H2: Adolescents’ attachment style significantly predicts their defense mechanisms. Secure attachment positively predicts mature defense mechanisms, and insecure attachment positively predicts immature defense mechanisms.

H3: Attachment style mediates the relationship between parenting style and defense mechanisms, such that parenting style influences defense mechanisms indirectly through its effect on attachment style.

H4: Adolescents influenced by Mazu Culture exhibit more effective emotional warmth in parental style and secure attachment; the more developed adolescents' Mazu Culture is, the more prominent the positive variables will be.

3.2 Participants

In this study, students from junior high school to senior high school were included within the age range of 12 to 18 years in areas that have a strong Mazu culture, i.e., Putian, Quanzhou in Fujian Province, and Chaoshan in Guangdong Province. Stratified random sampling was used according to the proportion of gender and grade to ensure a balanced distribution of gender and grade. In total, 280 questionnaires were distributed, of which 242 were validly completed and returned, yielding an effective rate of 86.4%. The general situation of samples is shown in "Table 1".

Table 1. Sample Characteristics (N = 242)

Variable	Category	n	%
Gender	Male	118	48.8
	Female	124	51.2
Grade	Junior high	132	54.6
	Senior high	110	45.4
Mazu culture exposure	High exposure	135	55.8
	Low exposure	107	44.2

3.3 Measures

Parenting Style Questionnaire: The short version of the Egna Minnen av Barndoms Uppfostran (s-EMBU) consists of three dimensions: rejection-DBI, emotional warmth-LEI, and overprotection-DBI. There are 42 items on a 4-point scale. In the current study, the Cronbach's α of three dimensions ranged from 0.78 to 0.86.

Attachment Pattern Questionnaire: The short form of the Inventory of Parent and Peer Attachment (IPPA) for adolescents consists of three dimensions: secure attachment, attachment anxiety, and attachment avoidance. There are 24 items on a 5-point scale. In this study, the Cronbach's α of the three dimensions was from 0.76 to 0.84.

Defense Mechanism Questionnaire: In this study, a simplified version of the Defense Style Questionnaire (DSQ) was used. There are three subscales in the Defense Mechanism Questionnaire: mature, intermediate, and immature defense mechanisms. The questionnaire includes 40 items on a 5-point scale. In the present study, the Cronbach's α of these three dimensions ranged from 0.72 to 0.81.

Background Information Survey: Self-compiled sheet of age, gender, and grade of the subjects; the extent of one's exposure to Mazu culture, e.g., whether one's family believes in Mazu, whether one's family participates in the celebration of Mazu Day, etc.

3.4 Data Analysis

This was followed by testing mediation with the stepwise regression method of Baron and Kenny (1986) using SPSS 26.0 software to conduct descriptive statistical analysis, correlation analysis, and hierarchical regression analysis; verification with the bias-corrected bootstrap method (5,000 resamples) [15].

4. RESULTS

4.1 Common Method Bias Test

By Harman's single-factor method, all items were subjected to an unrotated factor analysis. The percentage of variance explained by the first factor was 18.76%, below the conventional threshold of 40% used to indicate the absence of serious common method bias. Common method variance is unlikely to have a significant effect on the regression results.

4.2 Descriptive Statistics and Correlations

Described in "Table 2" were the variables' descriptive statistics and correlations. Almost every variable is correlated with parenting style dimension, attachment style pattern, and defense mechanism type at the 0.05 level or above, and the correlation of significance at the 0.01 level laid the foundation for subsequent tests of mediating effects.

Table 2. Means, Standard Deviations, and Correlation Matrix (N = 242).

Variable	M	SD	1	2	3	4	5	6	7	8
1.Emotional warmth	3.42	0.67	1							
2.Rejection	2.15	0.71	-.52**	1						
3.Overprotection	2.68	0.69	-.18**	.31**	1					
4.Secure attachment	3.85	0.72	.58**	-.49**	-.12	1				
5.Attachment anxiety	2.94	0.78	-.41**	.44**	.29**	-.54**	1			
6.Attachment avoidance	2.87	0.80	-.39**	.46**	.09	-.51**	.48**	1		
7.Mature defense	3.56	0.70	.47**	-.38**	-.06	.53**	-.35**	-.40**	1	
8.Immature defense	2.78	0.79	-.44**	.50**	.23**	-.48**	.49**	.52**	-.57**	1

a Note: * $p < 0.05$, ** $p < 0.01$. All correlations are Pearson product–moment coefficients.

4.3 *Regression of Attachment Patterns on Parenting Styles*

Parenting style dimensions were hierarchically included in the regression analysis as independent variables. The three dependent variables were secure attachment, attachment anxiety, and attachment avoidance, respectively. The regression results are summarized in "Table 3".

Table 3. Regression of Attachment Patterns on Parenting Styles (β values)

Independent variable	Secure attachment	Attachment anxiety	Attachment avoidance
Emotional warmth	0.48**	-0.31**	-0.27**
Rejection	-.35**	0.33**	0.39**
Overprotection	-0.08	0.24**	0.05
R^2	0.41	0.33	0.30

Emotional warmth positively predicted secure attachment and negatively predicted attachment anxiety and avoidance. Rejection negatively predicted secure attachment and positively predicted attachment anxiety and avoidance, whereas overprotection was positively associated with attachment anxiety but showed no significant effect on secure attachment or avoidance. H1 is thus supported.

4.4 *Regression of Defense Mechanisms on Attachment Patterns*

"Table 4" shows the regression of the three dimensions of attachment to the defense mechanisms:

Table 4. Regression of Defense Mechanisms on Attachment Patterns (β values)

Independent variable	Mature defense	Intermediate defense	Immature defense
Secure attachment	0.49**	-0.22**	-0.38**
Attachment anxiety	-.18*	0.35**	0.31**
Attachment avoidance	-0.21**	0.14*	0.37**
R^2	0.38	0.27	0.44

Secure attachment mechanisms positively predicted mature types of defense mechanisms. The attachment predicts a wide range of immature and intermediate types. Avoidance attachment mechanisms positively predict immature defense types. H2 is thus supported.

4.5 *Mediating Effect of Attachment Patterns*

In fact, to test H3's mediating effect of attachment patterns, the third step of the stepwise

regression proposed by Baron and Kenny and bootstrap tests were used simultaneously. Considering that the direct effects of parenting patterns on defense mechanisms were only reduced but still significant when testing the combined maternal parenting style and attachment pattern variables, we continued to investigate the indirect effects of parenting styles through attachment patterns. Only CI values of the mediating effects of secure attachment between emotional warmth and mature defenses did not include zero. Mediation effects are 0.18 (95% CI = [0.10, 0.27]) between emotional warmth and mature defenses via secure attachment, with mediation effects of −0.15 (CI = [−0.23, −0.08]) between rejection and mature defenses. The proportion of the total effect explained by mediation ranged from 55% to 68% across the two paths, indicating partial mediation. Therefore, H3 is supported.

4.6 Moderating Role of Mazu Culture Exposure

An independent-sample t-test was performed on the high/low groups of exposure to Mazu culture ("Table 5").

Table 5. Differences by Mazu Culture Exposure Level (M ± SD)

Variable	High exposure (n=135)	Low exposure (n=107)	t	p
Emotional warmth	3.68 ± 0.58	3.10 ± 0.69	6.92	<0.001
Rejection	1.92 ± 0.60	2.45 ± 0.72	-6.24	<0.001
Secure attachment	4.12 ± 0.61	3.52 ± 0.74	6.74	<0.001
Attachment anxiety	2.65 ± 0.71	3.31 ± 0.75	-6.91	<0.001
Mature defense	3.82 ± 0.62	3.24 ± 0.68	6.84	<0.001
Immature defense	2.47 ± 0.70	3.17 ± 0.76	-7.40	<0.001

The high-exposure group exhibited significantly above-average levels of emotional warmth, secure attachment, and mature defense, while the opposite was true of rejection, attachment anxiety, and immature defense. H4 is supported.

5. DISCUSSION

5.1 How Parenting Styles Shape Adolescent Attachment Patterns

The two dimensions most strongly implicated were emotional warmth and rejection. From the attachment theory viewpoint, emotional warmth is the most important dimension of raising children in that it is possible to provide a "secure base" for the adolescent to venture out into the wider world while remaining assured that comfort and consolation will always be there when needed and thus tends to develop a securely attached adolescent. On the contrary, the rejection dimension tears apart such a secure base so that the adolescent grows up with an inner working model of being "unloved" from within and "untrusted" by others from outside, resulting in either an anxious or avoidant attachment orientation.

Interestingly, overprotection predicted attachment anxiety but not avoidance. This finding indicates that when parents are overprotective, the adolescent will develop difficulty achieving independence but will rarely avoid intimacy. As per attachment theory, the characteristic dimension of anxious attachment is overinvolvement and fear of abandonment, and thus overprotection will build this picture.

5.2 How Attachment Patterns Influence Defense Mechanisms

Secure attachment was positively predicted for mature defenses; insecure attachment, on the other hand, was positively predicted by immature defenses. Such a result can also be extensively theoretically discussed by the theoretical analysis of Mikulincer and Shaver. Indeed, from a psychoanalytic standpoint, a securely attached individual, feeling psychically rich and in an environment of apparent security, would then be able to use mature defenses when experiencing stress-inducing events; for instance, he would be able to find creative solutions to painful experiences or even laugh at the situation. In contrast, a person with an insecure attachment pattern will be very rudimentary and childlike: he shifts to others what arouses in him unacceptable sentiments and, by defense, runs away from the real situation into fantasy.

As for the two dimensions that relate to attachment anxiety and attachment avoidance, respectively, attachment anxiety may be positively associated with intermediate defenses, and attachment avoidance is only related to an immature defense. Hence, the different patterns imply that two paths of insecure attachment have different underlying psychological dynamics. That is, the attachment-anxious subject, hyper-sensitive to interpersonal signs, will use intermediate defenses such as repression and rationalization. In contrast, an avoidant subject, whose attachment is in denial, will face stress by isolating himself from the emotive area.

5.3 The Mediating Role of Attachment Patterns: An Integrated Pathway Model

In line with this evidence, we found that attachment is a partial mediator of parenting and defense mechanisms. In this case, the present research contributes to integrating previously disparate theories into one development process from the family environment, through the internal working model of adaptation, toward true psychological adaptation. After emotional warmth causes secure attachment, it indirectly yields a mature defense; after rejection causes attachment anxiety and avoidance, it indirectly yields immature defenses.

Many conceptual arguments can be made concerning this mediation model. First, it integrates attachment theory—the parent's role—and defense mechanisms theory—the outcome of psychological adjustment—in a chain, from cause to effect. Second, it explains the varied forms of psychological adjustment among adolescents from the same parenting style, which attachment variation mediates to explain this phenomenon finally. Third and last, the model opens new perspectives on possible interventions in adolescent mental health directly at the level of parenting and attachment security.

5.4 The Protective Role of Mazu Culture

The more one accesses Mazu culture, the more one will find positive parenting, that is, more emotional warmth, less rejection, and more attachment security and adjustment of defense. In this sense, local culture may be regarded as a cultural resource for facilitating good adolescent mental health. It appears that Mazu culture embodies friendliness and mutual love; strengthening the thickening of the community. Such parenting may remind parents of being more emotionally supportive and less rejecting instead of physically participating in festival activities. These would give adolescents a sense of belonging and intergenerational support, promoting attachment security and mature defense modes.

Hence, culturally updated interventions appear hopeful. Instead of attaching the mentally ill to traditional beliefs, considering them as backwardness, the mental health counselor and the educator should identify such beliefs as a good resource for healthy development. However, the variables cannot be said to be causally related in the present cross-sectional design; it may also be that properly functioning families are culturally more active. Longitudinal work is needed to confirm these causal hypotheses.

5.5 Limitations and Future Directions

Several limitations of this study should be noted. First, due to the cross-sectional nature of this study, it is impossible to test the mediation hypotheses modeled here as causal pathways. The mediation effects proposed in this model await the evidence of longitudinal research. Second, since all information was obtained from self-reports, there are reasonable concerns regarding shared method variance. However, there is no large common method bias, given the results of the test. Third, because sampling was concentrated in areas with more evident Mazu culture, the result may not be described as generalizable to all other cultural contexts. Fourth, parenting and attachment are not directly measured; therefore, classes or conditions implied by subjects should be hypothesized. The parent's behavior might be evidenced by parental reports, teachers' ratings, or behavioral observations. Fifth, even though partial mediation was detected, special attention should be paid to what variables have not been included or not operationalized in the current study that could offer an interesting perspective on the mediational model, such as peer experience, school atmosphere, and temperament.

6. CONCLUSION

This study explored the correlation between parenting style, attachment style and defense mechanisms for adolescents in the context of Mazu culture. The results indicate that emotional warmth

is linked to secure attachment and mature defense mechanisms, while rejection and overprotection are linked to insecure attachment and immature defense mechanisms. The results also suggest that parent styles and defense mechanisms are related but that there is a partial mediator mechanism involving attachment patterns, showing that family environment is directly and indirectly related to psychological adaptation. Moreover, higher levels of Mazu culture exposure are correlated with positive parenting, attachment security, and adaptive defenses, indicating that local culture resources can serve as a protective factor in adolescents' development. The results underscore the importance of parent-child relationships, cultural perspectives, and parenting in efforts to promote mental health during adolescence. Longitudinal and multi-method designs should be employed for future studies to further test causal mechanisms and enhance generalizability.

REFERENCES

[1] Prunas, A., et al. (2019) Defense Mechanisms, Remembered Parental Caregiving, and Adult Attachment Style. Psychoanalytic Psychology, 36(1), 64.

[2] Smetana, J. G. (2017) Current Research on Parenting Styles, Dimensions, and Beliefs. Current Opinion in Psychology, 15, 19-25.

[3] Peilin, Y. (2022) Contemporary Mazu Belief: Cultural Interactions and Nation Identification. Praxis, Folks' Beliefs, and Rituals: Explorations in the Anthropology of Religion, 77.

[4] Lin, H. Y., and Cai, D. C. (2023) The Research of the Value of the Influence of Mazu Belief on Folk Culture. System Innovation for a Troubled World, CRC Press, 130-134.

[5] Rezai N. F., and Rahimi, H. (2013) The Impact of Authoritative, Permissive and Authoritarian Behavior of Parents on Self-Concept, Psychological Health and Life Quality. European Online Journal of Natural and Social Sciences, 2(1), 78.

[6] Maccoby, E. E., Martin, J. A., Hetherington, E. M., and Mussen, P. H. (1983) Socialization, Personality, and Social Development. Handbook of Child Psychology, 4, 1-101.

[7] Arrindell, W. A., et al. (1999) The Development of A Short Form of the EMBU: Its Appraisal with Students in Greece, Guatemala, Hungary and Italy. Personality and Individual Differences, 27(4), 613-628.

[8] Xia, Y., Wu, B., Zhang, Z., Yang, K., Jiao, C. A., and Zhou, X. (2023) Correlation Between Defense Mechanisms and Parenting Style of Adolescents with Non-Suicidal Self-Injury. Journal of Psychosocial Nursing and Mental Health Services, 61(11), 17-22.

[9] Shaver, P. R., and Mikulincer, M. (2009) An Overview of Adult Attachment Theory. Attachment Theory and Research in Clinical Work with Adults, 17-45.

[10] Van Rosmalen, L., Van der Veer, R., and Van der Horst, F. (2015) Ainsworth's Strange Situation Procedure: The Origin of An Instrument. Journal of the History of the Behavioral Sciences, 51(3), 261-284.

[11] Cooper, M. L., Shaver, P. R., and Collins, N. L. (1998) Attachment Styles, Emotion Regulation, and Adjustment in Adolescence. Journal of Personality and Social Psychology, 74(5), 1380.

[12] Cramer, P. (2015) Understanding Defense Mechanisms. Psychodynamic Psychiatry, 43(4), 523-552.

[13] Karavasilis, L., Doyle, A. B., and Markiewicz, D. (2003) Associations between Parenting Style and Attachment to Mother in Middle Childhood and Adolescence. International Journal of Behavioral Development, 27(2), 153-164.

[14] Laczkovics, C., et al. (2020) Defense Mechanism Is Predicted by Attachment and Mediates the Maladaptive Influence of Insecure Attachment on Adolescent Mental Health. Current Psychology, 39(4), 1388-1396.

[15] Baron, R. M., and Kenny, D. A. (1986) The Moderator–Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. Journal of Personality and Social Psychology, 51(6), 1173.