Article



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The Impact of Parenting Styles of University Students' Parents on Parent-Child Relationships, and The Mediating Role of Neurotic Personality Traits

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Abstract: This paper aims to explore the influence of college students' parenting style on parentchild relationship and neurotic peopleWhether the lattice plays an intermediary role in it. Methods: Simple parenting style scale and parent-child relationship quantity were used. The questionnaire and the Big Five Personality Scale were used to investigate college students. Results: (1) Parental rearing of college students. There was a significant positive correlation between style and parentchild relationship (p<0.01). Neurotic personality and parent-child relationship There was a significant positive correlation (p<0.01) .Neurotic personality and parenting style existed A significant positive correlation. (4) There were gender differences in college students' parenting styles (t=2.351, p<0.05). The score of male students' parenting style is slightly higher than that of college students' (5) Parenting style does not exist in the grade (6) The neurotic personality of college students is partly related to the parenting style and personal relationship Mediating effect.

Keywords: college students; parenting style; parent-child relationship; neurotic personality

1. Introduction

1.1. research background

The university years are a crucial stage in life, full of opportunities but also fraught with challenges. While immersed in the joys of campus life, various pressures silently and relentlessly follow, including academic advancement, employment, and interpersonal relationships, all of which can be overwhelming. Additionally, interacting with parents is an unavoidable and essential aspect of life. Parents are the first people we encounter in our lives, and their parenting style significantly influences the formation of our personalities. Different parenting styles impact individual development in various ways. A good parenting style can promote healthy development both physically and psychologically, while a poor parenting style can have the opposite effect. Psychologist Diana Baumrind categorized parenting styles into four types: authoritative, authoritarian, permissive, and neglectful. Authoritarian parenting leads to a lack of independent thinking, indecisiveness, and inflexibility in individuals. Permissive parenting results in capriciousness, impulsiveness, and a lack of self-control and creativity. Neglectful parenting fosters mistrust in others and society, leading to hostility, fear, and avoidance. Under authoritative parenting, individuals exhibit strong cognitive abilities, high self-esteem, independence, and a sense of responsibility. During parent-child interactions, the behavior and speech of parents are

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Copyright: © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/license s/by/4.0/). subtly absorbed and accepted by children. Thus, the nature of our relationship with our parents naturally varies based on their parenting style. For instance, gentle parents might more easily earn their children's affection, while strict parents may struggle with their children. Therefore, appropriate parenting styles are not only a bridge to building a positive parent-child relationship but also a key factor in shaping a child's personality. However, even today, many parents are unsure about how to educate their children, and there are numerous examples of children going astray due to improper parenting. It is urgent and essential for parents to understand suitable parenting and parent-child interaction methods.

1.2. Research Objectives

This study focuses on college students as its research subjects and utilizes a questionnaire survey to understand the current state of parent-child relationships among these students. It aims to explore the impact of parenting styles and neuroticism on parent-child relationships, and also to investigate whether neuroticism plays a mediating role in this context. By examining the state of parent-child relationships among college students and drawing on both domestic and international experiences, as well as relevant psychological research findings, the study seeks to identify methods to improve parent-child relationships, considering both parenting styles and neuroticism. This will not only enhance the personality health of college students but also provide reference guidelines for parents on how to interact with their children.

1.3. Significance of the Study

Exploring the relationships between parenting styles, parent-child relationships, and neuroticism can help to further understand how parenting styles and neuroticism in college students influence parent-child relationships.

Studying the current state of parenting styles, parent-child relationships, and neuroticism in college students can draw attention from parents and society to the development of students' personality and mental health. This can encourage various sectors to propose more suitable methods for parent-child interaction and parenting. Additionally, it can help students gain a better understanding of themselves, improve themselves, and recognize their neurotic traits.

1.4. Research Hypotheses

H1: There are differences in parenting styles, parent-child relationships, and neuroticism among demographic variables.

H2: There is a correlation between parenting styles, parent-child relationships, and neuroticism.

H3: Neuroticism mediates the relationship between parenting styles and parent-child relationships.

2. Literature Review

2.1. Research on Parenting Styles

Parenting styles refer to the relatively stable behavior patterns exhibited by parents in their interactions with their children. These styles encompass the attitudes, values, and emotions conveyed to children through behaviors. As early as 1939, Symonds proposed that parenting styles could be divided into two basic dimensions: acceptance-rejection and control-obedience. Later, psychologists further divided parenting styles into two major dimensions: one being care, which involves responses to individual behavior, warmth, and acceptance, and the other being control, which includes harsh discipline and excessive protection. Commonly used measurement scales for parenting styles include the Parenting Styles and Dimensions Questionnaire, the short Egna Minnen av Barndoms Uppfostran, and the Alabama Parenting Questionnaire. Research indicates that parental warmth and understanding can enhance children's emotional regulation, goal-setting abilities, and empathy, and are positively related to individual subjective well-being. Parenting styles characterized by emotional warmth and encouragement are more likely to improve psychological well-being compared to authoritarian, indulgent, or neglectful styles. Some studies show that difficulties in emotional regulation during childhood are significantly negatively correlated with parental warmth and understanding, and significantly positively correlated with parental punishment, harshness, rejection, and denial. Additionally, high control, low support, hostility, rejection, and authoritarian parenting styles are closely related to children's anxiety. Therefore, parents should focus on their children's emotional needs and communicate and interact positively to support their healthy development. Furthermore, parenting styles also affect individual depressive emotions. Adolescents who receive less maternal warmth tend to experience more depressive emotions, and parental rejection can lead to low self-esteem and feelings of helplessness, increasing the risk of depression. Depressed individuals often describe their family environment as lacking warmth and care, and conflicts among family members are also closely related to depressive emotions. In summary, parents should provide emotional warmth and understanding as much as possible, avoid excessive punishment and interference, and maintain family harmony to help prevent and alleviate depressive emotions.

2.2. Research on Parent-Child Relationships

The parent-child relationship refers to the interpersonal relationship formed between parents and children through interaction in the context of their shared life, encompassing two fundamental dimensions: parent-child closeness and parent-child conflict. Parent-child closeness reflects the intimacy in the interaction between parents and children, while parent-child conflict refers to the discrepancies in goals, beliefs, and emotions between the two parties. In parent-child relationships, these two dimensions—closeness and conflict—are inseparable and often coexist. Commonly used scales for measuring parent-child relationships in experiments include the Parent-Child Closeness Scale, the Amber-McGregor Revised Parent-Child Relationship Scale, and the Zhang Xiao Revised Parent-Child Relationship Scale. Studies have shown that children from families with unhealthy parent-child relationships, highlighting the importance of maintaining a positive parent-child relationship for the growth and mental health of children.

2.3. Research on Neuroticism

Neuroticism is a personality trait associated with frequent experiences of negative emotions and is often used to describe the stability of an individual's emotional state. Modern theories of neuroticism primarily include the Three-Factor Model and the Five-Factor Model. The traditional Three-Factor Model posits that personality consists of three components: neuroticism, psychoticism, and introversion/extroversion traits. These components are considered relatively stable and enduring individual characteristics that reflect uniqueness in how individuals adapt to their environment. Subsequently, Eysenck linked neuroticism to an individual's physiological nervous system, defining it as the adaptive emotional responses exhibited by individuals in stressful situations.

The Five-Factor Model, based on factor analysis of descriptive personality-related vocabulary, divides personality into five dimensions: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Neuroticism is related to an individual's emotional regulation and emotional stability, and is commonly associated with negative emotions such as depression, vulnerability, shame, and embarrassment. Modern scholars believe that neuroticism is largely innate and possesses relatively stable characteristics. Moreover, substantial evidence indicates that the formation of early personality traits can influence an individual's subsequent behavior in work, life, and interpersonal interactions.

Neuroticism is commonly measured using self-report scales, such as Eysenck's EPQ, the NEO Personality Inventory (also known as the Big Five Inventory), and the BFI. It is important to note that personality traits are multidimensional, dynamic, and culturally varied. Therefore, assessments and research should consider specific contexts and individual characteristics to enhance the reliability and validity of the findings.

In personal development, parenting styles play a crucial role. Recent research has shown that parents' influence on aspects such as children's emotions, personality, and cognition is significant. Among these influences, the parent-child relationship plays a vital role. For example, Maccoby's research indicates that parenting styles can affect children's traits like neuroticism, mental health, and rejection. Domestic studies also confirm that parenting styles have a lasting impact on personality development. Summarizing the psychological counseling and therapy practices for high school students by Hu Junsheng, Teng Lanfang, and Wang Dengfeng, it was found that most adolescent psychological issues are related to parenting styles. This further underscores the importance of parenting styles on adolescent mental health; some parenting approaches may lead to children becoming lazy, dependent, timid, lacking ambition, or becoming liars. Buleroft's study discovered that if parents are unwilling to grant children more autonomy, it can lead to a divergence in self-perception between adolescents and parents, creating tension in the parent-child relationship. Smetana's 1995 study found that authoritative parents usually manage to avoid parent-child conflicts, while authoritarian parents may experience frequent and severe conflicts. This suggests that parents should respect their children's autonomy to build a healthy parent-child relationship. Research by Rueter and Conger shows that a warm and understanding family atmosphere helps parents and children successfully discuss and resolve conflicts, whereas a hostile and coercive atmosphere tends to escalate conflicts to a dysfunctional level.

2.4. Research on the Interrelationships of Parenting Styles, Parent-Child Relationships, and Neuroticism

In personal development, parenting styles play a crucial role. Recent research has shown that parents' influence on aspects such as children's emotions, personality, and cognition is significant. Among these influences, the parent-child relationship plays a vital role. For example, Maccoby's research indicates that parenting styles can affect children's traits like neuroticism, mental health, and rejection. Domestic studies also confirm that parenting styles have a lasting impact on personality development. Summarizing the psychological counseling and therapy practices for high school students by Hu Junsheng, Teng Lanfang, and Wang Dengfeng, it was found that most adolescent psychological issues are related to parenting styles. This further underscores the importance of parenting styles on adolescent mental health; some parenting approaches may lead to children becoming lazy, dependent, timid, lacking ambition, or becoming liars. Buleroft's study discovered that if parents are unwilling to grant children more autonomy, it can lead to a divergence in self-perception between adolescents and parents, creating tension in the parent-child relationship. Smetana's 1995 study found that authoritative parents usually manage to avoid parent-child conflicts, while authoritarian parents may experience frequent and severe conflicts. This suggests that parents should respect their children's autonomy to build a healthy parent-child relationship. Research by Rueter and Conger shows that a warm and understanding family atmosphere helps parents and children successfully discuss and resolve conflicts, whereas a hostile and coercive atmosphere tends to escalate conflicts to a dysfunctional level.

3. Research Subjects and Methods

3.1. Research Subjects

This study used a questionnaire survey method, employing convenience sampling to distribute questionnaires to university students. A total of 412 questionnaires were collected, and after excluding those with incomplete or inattentive responses and those completed too quickly, 300 valid questionnaires remained, resulting in an effective response rate of 72.8%. The basic information of the subjects is shown in Table1 below:

Table 1. The basic information of the subjects.

| variable | | number | percent |
|----------|-------------------------|--------|---------|
| gender | male | 172 | 57.3 |
| gender | female | 128 | 42.7 |
| | Freshman | 21 | 7 |
| | sophomore | 92 | 30.7 |
| grade | junior | 121 | 40.3 |
| Since | senior | 52 | 17.3 |
| | Senior fifth | 4 | 1.3 |
| | postgraduates and above | 10 | 3.4 |

3.2. Research Tools

3.2.1. Simplified Parenting Style Questionnaire

Scholars Jiang Jiang, Lu Zhengrong, Jiang Mijing, and Xu Yan (2010) introduced the sEMBU and combined it with the Chinese version of EMBU initially translated and revised by Yue Dongmei, Li Minggao, and Jin Kuihe (1993) to develop the Simplified Parenting Style Questionnaire. This scale, consistent with the original English version, includes three dimensions, with the number of items reduced to 21: 6 items for the rejection dimension, 7 items for the emotional warmth dimension, and 8 items for the overprotection dimension. In this study, the Cronbach's α coefficient for this questionnaire was 0.876, indicating good reliability and validity.

3.2.2. Parent-Child Relationship Scale

The original Parent-Child Relationship Scale was developed by Barnes and Olson in 1980 and was later translated and revised by An Bexin. The version used in this study is the revised version by An Bexin. The scale consists of 20 questions, which require students to answer based on their true circumstances. It uses a 5-point scoring system, with scores ranging from 1 to 5: 1 representing "strongly disagree," 2 representing "somewhat disagree," 3 representing "neutral," 4 representing "somewhat agree," and 5 representing "strongly agree." The scoring rules include some reverse scoring items; a higher total score indicates a better parent-child relationship. In this study, the Cronbach's α coefficient for this questionnaire was 0.724, indicating good reliability and validity.

3.2.3. Big Five Personality Inventory

Developed by American psychologists Costa and McCrae in 1987, the Big Five Personality Inventory was later revised into Chinese by Professor Zhang Jianxin from the Chinese Academy of Sciences and is widely used in the field of personality measurement. The questionnaire includes five subscales, with the Neuroticism dimension consisting of 12 items scored on a five-point scale, some of which are reverse-scored. This dimension assesses emotional regulation and emotional instability. Individuals with high scores in Neuroticism tend to experience psychological stress, unrealistic thoughts, excessive demands and impulsivity, as well as maladaptive coping responses. In this study, the Cronbach's α coefficient for this questionnaire was 0.743, indicating good reliability and validity.

3.3. Data Analysis

This study primarily used SPSS 26.0 and Process 4.1 for statistical analysis. The statistical methods involved include descriptive analysis, independent samples t-test, oneway ANOVA, correlation analysis, and mediation effect analysis, with p<0.05 indicating statistical significance.

4. Results

4.1. Common Method Bias Testing

The study employed a questionnaire method. To eliminate potential common method bias and enhance the reliability and validity of the questionnaire, it strictly controlled the sources of common method bias, used scales with good reliability and validity, varied the placement of questionnaire items, and employed reverse scoring among other methods. During the statistical process, Harman's single-factor test was used for non-rotational exploratory factor analysis of the variables. The results showed 12 factors with eigenvalues greater than 1, with the first factor explaining 33.419% of the variance, which is below the 40% threshold. This indicates that common method bias in the measurement of this study is not significant.

4.2. Basic Information on Parenting Styles, Parent-Child Relationships, and Neuroticism in University Students

After converting the questionnaire scores, SPSS 26.0 software was used to conduct descriptive analysis on the parenting styles, parent-child relationships, and neuroticism personality of college students. The specific statistical results are shown in Table 2:

| | min | max | mean | sd |
|-------------------------------|-----|-----|--------|--------|
| Father reject | 6 | 21 | 12.960 | 3.149 |
| Mother reject | 7 | 21 | 13.080 | 2.965 |
| Father's emotional warmth | 7 | 28 | 17.273 | 3.454 |
| Mother's emotional warmth | 7 | 28 | 18.223 | 3.172 |
| Father's overprotection | 9 | 32 | 18.707 | 3.998 |
| Mother's overprotection | 11 | 32 | 19.650 | 3.870 |
| Parenting Styles | 54 | 162 | 99.893 | 16.126 |
| Parent-Child Relationships | 34 | 100 | 64.083 | 9.426 |
| Neuroticism | 12 | 60 | 35.157 | 7.939 |

Table 2. specific statistical results.

According to the table, the average score for college students' parenting styles is approximately 99.893, with a minimum score of 54 and a maximum score of 162. Among the three dimensions of parenting styles, mothers generally score higher than fathers. The mean score for parent-child relationships is 64.083, with a highest score of 100 and a lowest score of 34. The average score for neuroticism personality in college students is 35.157, with a maximum of 60 and a minimum of 12.

4.3. Analysis of Demographic Differences among Variables

4.3.1. Gender Differences in Parenting Styles, Parent-Child Relationships, and Neuroticism

Independent samples t-tests were used to analyze the differences in parenting styles, parent-child relationships, and neuroticism personality among college students based on gender. The results indicate significant gender differences in parenting styles. Specifically, male students have notably higher scores in parenting styles compared to female students, with significant differences observed in the dimensions of parental warmth and maternal overprotection, where male students scored higher. Gender differences in parent-child relationships and neuroticism personality among college students were not significant, as shown in Table 3:

Table 3. Gender differences in parent-child relationships and neuroticism personality among college students.

| | t | р | | |
|------------------|--------------------|----------------|-------|-------|
| | male (n=172) | female (n=128) | | Ĩ |
| Father reject | 13.145±3.037 | 12.711±3.290 | 1.182 | 0.238 |
| Mother reject | 13.250±2.916 | 12.852±3.025 | 1.152 | 0.250 |
| Father's | | | | |
| emotional | 17.657±3.505 | 16.758±3.329 | 2.245 | 0.026 |
| warmth | | | | |
| Mother's | | | | |
| emotional | 18.605±3.297 | 1.711±2.930 | 2.434 | 0.016 |
| warmth | | | | |
| Father's | 18.988 ± 4.070 | 18.328±3.882 | 1.417 | 0.157 |
| overprotection | | | | |
| Mother's | 20.122±3.955 | 19.016±3.6774 | 2.470 | 0.014 |
| overprotection | | | 0.051 | 0.010 |
| Parenting Styles | 101.767±16.598 | 97.375±15.170 | 2.351 | 0.019 |
| Parent-Child | 64.558±9.830 | 63.445±8.853 | 1.011 | 0.313 |
| Relationships | 25 500 10 104 | 24.000 + 7.720 | 0.000 | 0.296 |
| Neuroticism | 35.500±8.104 | 34.695±7.720 | 0.868 | 0.386 |

4.3.2. Grade Differences in Parenting Styles, Parent-Child Relationships, and Neuroticism

One-way ANOVA was used to examine whether there are differences in parenting styles, parent-child relationships, and neuroticism personality across different grades. The results revealed significant differences in parenting styles among different grades, with notable differences in parental warmth, parent-child relationships, and neuroticism personality. Further LSD post-hoc tests were conducted to compare specific differences between grades, as shown in tables 4 and table 5.

Table 4. specific differences.

| E. the sec | | 12 022 2 20 | 10 1 41 10 00 | 10 510 0 (| | | 0.260.07 |
|------------|------------------|------------------|---------------|-------------|------------|------------------|-----------|
| Father | 13±2.214 | | 13.141±3.39 | | 12±1.414 | 12.8±2.936 | 0.36 0.87 |
| reject | | 8 | 4 | 23 | | | 71 |
| Mother | 13.762±3.27 | 13.076±2.73 | 13.083±3.21 | 12.558±2.6 | 14±2.16 | 14±3.127 | 0.81 0.54 |
| reject | 15.702±5.27 | 1 | 1 | 6 | 14±2.10 | 14±3.127 | 2 2 |
| Father's | 16 762+2 54 | 17.707±2.98 | 18 107+3 69 | 15 115+2 8 | 16 75+3 86 | | 6.90 0.00 |
| emotional | 8 | 2 | 6 | 4 | 2 | 15.7±4.191 | 5 0 |
| warmth | 0 | 2 | 0 | Ŧ | 2 | | 5 0 |
| Mother's | 18 619+2 31 | 18.533±2.94 | 18 686+3 37 | 16 865+2 5 | | | 3.490.00 |
| emotional | 2 | 8 | 9 | 52 | 16.5±3.786 | 16.7±4.668 | 9 4 |
| warmth | 2 | 0 | 2 | 52 | | | 94 |
| Father's | 20 048+3 41 | 18.326±3.56 | 19 306+4 66 | 17 577+2 6 | | | 2.09 0.06 |
| overprote | 3 | 8 | 17.500±4.00 | 96 | 18±4.967 | 18.3±4.296 | |
| ction | 3 | 0 | 5 | 90 | | | 76 |
| Mother's | 20 048+2 44 | 19.663±4.10 | 20 116+2 00 | 18 510+2 1 | | | 1.37 0.23 |
| overprote | 20.048±3.44 2 | 19.003±4.10 9 | 20.110±3.90 | | 18.5±4.203 | 19.4 ± 5.038 | 0 5 |
| ction | 2 | 9 | 3 | 09 | | | 0 5 |
| Parentir | ng Styles 102 | 2.238±11.941 | 100.326±14. | 552 102.438 | ±18.593 | 0(0)17700 | 2.71 |
| | 93 | 3.154±11.614 | 95.75±18.264 | ł | | 96.9±17.729 | 9 0.02 |
| Parent- | | | | | | | |
| Child | 63.286±5.96 | 63.217±7.82 | 66.01±10.98 | 61 510+7 4 | 73.75±14.2 | 58.8±9.6 | 3.69 |
| Relationsh | 8 | 5 | 6 | 01.319±7.4 | 45 | 36.6±9.0 | 0.003 |
| ips | | | | | | | |
| Neuroticis | 35.762±5.89 | 33.554±8.07 | 36.438±8.43 | 34.692±5.7 | 44.5±11.44 | 31.8±8.548 | 3.003 |
| m | 8 | 8 | 5 | 85 | 6 | 01.010.040 | 0.012 |

Table 5. Specific difference ranking.

| Father's emotional warmth | 3>2>1>5>6>4 | | | |
|-----------------------------------------|----------------------------------------|--|--|--|
| Mother's emotional warmth | 3>1>2>4>6>5 | | | |
| Parent-Child Relationships | (5>(3>(1)>(2)>(4)>(6) | | | |
| Neuroticism | (5)>(3)>(1)>(4)>(2)>(6) | | | |
| Note: Ofreshman OSenhamore year Biunier | Acopior Bonior fifth BPostgraduate and | | | |

Note: ①freshman, ②Sophomore year, ③junior, ④senior, ⑤Senior fifth, ⑥Postgraduate and above.

Table 6. Specific difference ranking.

| | FJ | MJ | FEW | MEW | FO | MO | PS P-CR | Neuroticism |
|----------------------------------|---------|--------|-----------|---------|---------|---------|---------|-------------|
| Father reject | | | | | | | | |
| Mother reject | 0.705** | | | | | | | |
| Father's emotional warmth | -0.350 | -0.315 | | | | | | |
| Mother 's emotional warmth | -0.278 | -0.368 | 0.717** | | | | | |
| Father's overprotection | 0.742 | 0.624 | 0.572** | 0.442** | | | | |
| Mother 's overprotection | 0.513 | 0.647 | 0.422** | 0.533** | 0.671** | | | |
| PS 0.76 | 52** | 0.771* | * 0.725** | 0.710** | 0.878** | 0.821** | | |
| P-C R | -0.265 | -0.302 | 0.411** | 0.301** | 0.444 | 0.351 | 0.449** | |
| Neuroticism | 0.378 | 0.436 | 0.238** | 0.176** | 0.422** | 0.396** | 0.439** | 0.571** |

4.4. Analysis of the Relationships between Parenting Styles, Parent-Child Relationships, and Neuroticism

Pearson correlation analysis results show that parenting styles are significantly positively correlated with both parent-child relationships and neuroticism personality (p<0.01). Specifically, the dimension of parental warmth is significantly positively correlated with both parent-child relationships and neuroticism personality (p<0.01), while the dimension of parental overprotection is significantly positively correlated with neuroticism personality (p<0.01). Additionally, parent-child relationships and neuroticism personality are significantly positively correlated (p<0.01). Detailed results are shown in Table 6.

4.5. Mediating Role of Neuroticism in the Relationship between Parenting Styles and Parent-Child Relationships

In this study, parental warmth is significantly correlated with both parent-child relationships and neuroticism personality, meeting the criteria for in-depth mediation effect analysis in statistics. Therefore, the PROCESS plugin in SPSS was used for analysis with Model 4 to examine the mediating effect of neuroticism personality on the relationship between parental warmth and parent-child relationships. The results indicate that father's emotional warmth significantly predicts parent-child relationships, and this direct effect remains significant even when a mediator is included. Father's emotional warmth also significantly predicts neuroticism personality, and neuroticism personality significantly predicts parent-child relationships. Moreover, the 95% confidence interval for the direct effect of father's emotional warmth on parent-child relationships and the mediating effect of neuroticism personality [0.142, 0.528] does not include 0, indicating that parenting style can not only directly predict parent-child relationships but also indirectly predict them through neuroticism personality. The proportions of the direct effect and the mediating effect are 71% and 29% of the total effect, respectively. In summary, there is a partial mediation effect in the relationship between paternal warmth, parent-child relationships, and neuroticism personality. The detailed results are shown in the Figure 1, table 8 and table 9 below:



Figure 1. Father's emotional warmth and Parent-Child Relationships.

Table 7. Analysis of parent-child relationship, father's emotional warmth, neurotic personality.

| Procedure | Iv | Dv | R | R-sq | F | β | t |
|-----------|-------------|------------|-------|-------|---------|-------|--------|
| First | PCR | FEW | 0.411 | 0.169 | 60.639 | 0.411 | 7.787 |
| Second | Neuroticism | FEW | 0.238 | 0.057 | 17.867 | 0.238 | 4.227 |
| Third | DCD | FEW | 0.07 | 0.407 | 101.559 | 0.292 | 6.342 |
| | PCR N | euroticism | 0.637 | 0.406 | | 0.501 | 10.888 |

| Effect relationship | EV | Bootse | BootLLCI | BootULCI | Effect ratio |
|------------------------|-------|--------|----------|----------|--------------|
| Total effect | 1.122 | 0.144 | 0.839 | 1.406 | |
| Direct effect | 0.797 | 0.126 | 0.55 | 1.044 | 71% |
| Mediating effect | 0.325 | 0.099 | 0.142 | 0.528 | 29% |

Table 8. Relationship between direct effect and the mediating effect .

Mother's emotional warmth significantly predicts parent-child relationships, and this direct predictive effect remains significant even when a mediator is included. Maternal warmth also significantly predicts neuroticism personality, and neuroticism personality significantly predicts parent-child relationships. Additionally, the 95% confidence interval for the direct effect of maternal warmth on parent-child relationships and the mediating effect of neuroticism personality [0.089, 0.523] does not include 0, indicating that maternal warmth can not only directly predict parent-child relationships but also indirectly predict them through neuroticism personality. The proportions of the direct effect and the mediating effect are 69% and 31% of the total effect, respectively. In summary, there is a partial mediation effect in the relationship between maternal warmth, parentchild relationships, and neuroticism personality. Detailed results are shown in the table 10, table 11 and Figure 2 below:

Table 9. Analysis of parent-child relationship, mother's emotional warmth, neurotic personality.

| Procedu re | IV | DV | R | R-sq | F | β | t | |
|---------------|-------------|--------------------|-------|-------|--------|----------------|-----------------|--|
| First | PCR | MEW | 0.301 | 0.09 | 29.583 | 0.301 | 5.439 | |
| Second | Neuroticism | n MEW | 0.176 | 0.031 | 9.472 | 0.176 | 3.078 | |
| Third | PCR | MEW Neuroticism | 0.606 | 0.367 | 86.144 | 0.207 0.534 | 4.408 11.398 | |

Table 10. Relationship between direct effect and the mediating effect.

| Effct relationship | EV | Bootse | BootLLCI | BootULCI | 效应占比 |
|-----------------------|-------|--------|----------|----------|------|
| Total effect | 0.893 | 0.164 | 0.57 | 1.216 | |
| Direct effect | 0.614 | 0.139 | 0.34 | 0.888 | 69% |
| Mediating effect | 0.279 | 0.111 | 0.089 | 0.523 | 31% |



Figure 2. Mother's emotional warmth and Parent-Child Relationships.

5. Discussion

5.1. Differences in Parenting Styles, Parent-Child Relationships, and Neuroticism Personality among College Students Based on Demographics

Firstly, in terms of academic year, there are significant differences in parenting styles, parent-child relationships, and neuroticism personality traits among college students. The Big Five personality trait of parent-child relationship scores the highest, while those for graduate students and above are the lowest. As students approach the end of their undergraduate studies, they face many issues, and their interactions with parents are inevitably more frequent than before. This closer contact may lead to a more intimate parent-child relationship. However, as students step into the workforce, they need to face various life issues independently, resulting in reduced contact with parents and a natural distancing in the relationship. Among the dimensions of parenting styles, the only significant difference is in emotional warmth. Parents of lower-year students generally exhibit higher emotional warmth compared to those of higher-year students. Lower-year students, who are new to the environment and need time to adjust, have a greater need for emotional support from their parents. Consequently, their connection with parents tends to be closer, and parents may be more attentive to their child's needs and parenting. As students advance in their academic years, their increasing independence results in less frequent contact with parents, leading to a natural distance in their relationship. Neuroticism scores the highest among Big Five traits for students nearing graduation and lowest for graduate students and above. The approaching graduation signifies an increase in pressure, which poses significant challenges to both mental and physical well-being, consequently raising the probability of emotional disturbances. On the other hand, graduate students, who have already gained some experience and developed resilience to stress, generally maintain a more stable emotional state.

Secondly, from a gender perspective, male college students score significantly higher than female college students in terms of parenting styles and parent-child relationships. Specifically, within parenting styles, parental warmth and maternal overprotection show significant gender differences. In families, parents of boys tend to adopt stricter parenting methods compared to parents of girls. This style includes more training and punishment. Additionally, in terms of social cognition and cultural aspects, boys are often perceived as stronger, braver, more autonomous, and more independent, which further influences parental attitudes and methods. As a result, parents of boys may exhibit warmer attitudes to mitigate the negative effects of their stricter educational approaches. Moreover, it cannot be denied that some families may still hold outdated patriarchal views, leading to differential treatment of children, with parents generally favoring children of the opposite sex. Consequently, mothers might be more inclined to protect boys. In terms of neuroticism, boys score slightly higher than girls, reflecting more stress and whimsical thoughts. This may also be related to certain social views and stereotypes, such as the expectation that boys should be more composed and responsible, which can add unnecessary pressure on them. Additionally, since boys are often more involved in competition, the mental stress they experience is often higher than that of girls.

5.2. The Correlation between Parenting Styles, Parent-Child Relationships, and Neuroticism in College Students

The Correlation between Parenting Styles, Parent-Child Relationships, and Neuroticism in College Students

Firstly, this study finds a significant positive correlation between college students' parenting styles and their parent-child relationships, as well as a significant positive correlation with neuroticism. Additionally, parenting styles have a significant positive predictive effect on parent-child relationships. Specifically, the dimension of parental emotional warmth is positively correlated with both parent-child relationships and neuroticism. The dimension of parental overprotection is significantly positively correlated with

neuroticism. Generally, we tend to believe that the more emotional warmth parents provide, the better the parent-child relationship will be, since people are generally inclined to feel grateful. When parents treat their children well, children naturally want to reciprocate. Parental emotional warmth is often accompanied by a warm, intimate family atmosphere and positive parent-child interactions, which promote emotional communication and intimacy between parents and children. This result is consistent with Xu Xinpei's related research.

However, for neuroticism, although parental emotional warmth may temporarily alleviate our emotional issues, over time, we might become overly reliant on this comforting environment and behave recklessly. Neuroticism does not merely reflect emotional stability; it also manifests as fanciful thinking, lack of constraints, and reckless behavior. Zhao Hu's research indicates that parental care and favoritism can lead to a child's casual attitude towards life, distrust of others, and lack of self-control, which is similar to our results.

Parental overprotection, on the other hand, can lead to a loss of personal opinions and independent thinking, turning individuals into mere dependents of others. Regarding overprotection, firstly, such behavior negatively impacts a child's development. Children need a certain degree of autonomy during their growth, which helps them build confidence and independent thinking skills. Overprotective behavior deprives children of this autonomy, leading to excessive dependence on parents and difficulties in facing life's setbacks. Secondly, overprotective behavior can also lead to a lack of self-worth and selfconfidence in children. When parents excessively intervene in their children's choices and behaviors, it may lead children to incorrectly believe that they are incapable of making independent decisions, which increases the risk of developing neuroticism. Lastly, overprotection can result in a lack of social skills and interpersonal abilities. When children rely too much on their parents, they might struggle to establish healthy relationships with peers. This lack of interpersonal experience and skills may make them feel uneasy and anxious in future situations.

In addition, there is a significant positive correlation between neuroticism levels in college students and their parent-child relationships. This result differs somewhat from our usual understanding. Typically, we might expect that a closer parent-child relationship leads to greater emotional stability. However, in reality, excessive intimacy and emotional warmth from parents may result in children lacking the ability to independently handle emotional issues. Additionally, greater reliance on parents may also lead to reduced personal responsibility and adaptability. Conversely, higher levels of neuroticism might make individuals more inclined to rely on their parents, leading to further strengthening of the parent-child relationship.

5.3. The Impact of Parental Parenting Styles, Parent-Child Relationships, and Neurotic Personality on University Students

The results of regression analysis and mediation effect analysis indicate that parental emotional warmth can positively predict parent-child relationships, neurotic personality can positively predict parent-child relationships, and parental emotional warmth can positively predict neurotic personality. Additionally, neurotic personality partially mediates the relationship between parental emotional warmth and parent-child relationships. This finding suggests that parental emotional warmth not only has a direct effect on parentchild relationships but also indirectly influences parent-child relationships by affecting the level of neuroticism. In parent-child relationships, parental emotional warmth can directly promote positive interactions between parents and children, leading to a good parent-child relationship. However, excessive parental help and care can lead to a decline in children's independence and adaptability, causing them to struggle with problems and tend to revert to relying on their parents. This tendency further deepens the parent-child bond, resulting in a vicious cycle. This insight provides a new perspective for understanding the mechanisms influencing parent-child relationships.

5.4. Limitations and Future Directions of This Study

Firstly, this study used only a single questionnaire survey method for data collection, which may impact the representativeness of the sample and the credibility of the data. Therefore, results need to be interpreted and inferred with caution, considering potential influencing factors. To gain a more comprehensive understanding of the research field, future studies should employ multiple research methods and integrate different types of data for further investigation and analysis. Additionally, some participants might have filled out the questionnaire merely to receive the incentive, which could also affect the results. Secondly, this study was limited to students in Guangzhou and surrounding areas, which narrows the scope of the research and does not cover a broader geographic area, thus limiting the generalizability and transferability of the conclusions. Future research should aim to expand this scope. Moreover, the choice of mediator variables in this study appears to be somewhat inadequate based on the results, as it did not fully consider other influencing factors. Finally, the interpretation and analysis of the research results need to be more comprehensive and in-depth, further integrating and exploring other possible factors and mechanisms to reveal a more accurate and complete relationship between the variables.

6. Conclusion

This study uses a questionnaire survey method to investigate the parenting styles, parent-child relationships, and neuroticism of 300 university students and their interrelationships. The findings are as follows:

- 1) There are significant differences in parental emotional warmth and maternal overprotection among students of different academic years. Additionally, there are significant gender differences in parental emotional warmth, parent-child relationships, and neuroticism.
- Neuroticism in university students has a significant positive correlation with parentchild relationships.
- 3) Parental emotional warmth has a significant positive correlation with parent-child relationships.
- 4) Both parental emotional warmth and parental overprotection have significant positive correlations with neuroticism.
- 5) Emotional warmth from parents not only directly predicts parent-child relationships but also indirectly predicts them through neuroticism, indicating that neuroticism partially mediates the relationship between parental emotional warmth and parentchild relationships.

7. Advice

In many families, parents have a strong tendency to "overprotect" their children, believing that providing meticulous care and affection is the best way to show love. However, this approach can easily lead to children losing their autonomy, becoming dependent on others rather than facing challenges independently. Therefore, a better approach for parents is to ensure they care for their children while focusing on developing their children's autonomy and problem-solving skills. This not only promotes the child's overall growth and development but also enhances their self-confidence and adaptability, helping them become "stronger" over time.

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