Meta-Analysis of the Relationship Between Parenting Styles and Healthy Personality Among Chinese Students

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Abstract

To explore the relationship between healthy personality and family parenting styles among Chinese children and adolescents and its moderating mechanisms, this study conducted a meta-analysis of 1504 effect sizes from 52 studies involving 19,642 participants. The results showed that: (1) positive parenting styles were significantly positively correlated with healthy personality, whereas negative parenting styles were significantly negatively correlated with healthy personality; (2) the effect of parenting styles on healthy personality was moderated by the age group of children and adolescents, showing an inverted U-shaped trend of "small at both ends, large in the middle", primarily manifesting as a greater impact during middle and high school stages and a smaller impact during primary school and university stages. Furthermore, the influence of parenting styles on healthy personality in children and adolescents was also moderated by child gender, era, and region. The findings of this study provide a scientific perspective and empirical evidence for the cultivation and education of healthy personality among Chinese children and adolescents within the context of Chinese family culture.

Full Text

A Meta-Analysis of the Relationship Between Chinese Family Parenting Styles and the Development of Healthy Personality in Children and Adolescents

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Abstract: To investigate the relationship between healthy personality development and family parenting styles among Chinese children and adolescents and its moderating mechanisms, this study conducted a meta-analysis of 1,504 effect sizes from 52 studies involving 19,642 participants. The results indicated that: (1) Positive parenting styles were significantly positively correlated with healthy personality, while negative parenting styles were significantly negatively correlated with healthy personality; (2) The influence of parenting styles on healthy personality was moderated by age group, showing an inverted U-shaped trend of "smaller at both ends and larger in the middle," primarily manifesting as stronger effects during middle and high school stages and weaker effects during elementary and university stages. Additionally, the impact of parenting styles on healthy personality was moderated by child gender, era, and region. These findings provide a scientific perspective and empirical evidence for the cultivation and education of healthy personality among children and adolescents within the context of Chinese family culture.

Keywords: family parenting style; children and adolescents; healthy personality; meta-analysis; moderating effect

1 Introduction

The essence of education lies in cultivating individuals with healthy personality. Healthy personality, also known as perfect or ideal personality, refers to a person who continuously enriches themselves, taps their potential, and strives for happiness according to their self-defined life goals (Huang, 2017). The sound development of personality not only forms the foundation for an individual's lifelong capabilities, wisdom, happiness, and well-being (Friedman & Kern, 2014; Roberts & Yoon, 2022), but also represents an urgent requirement for implementing the fundamental task of fostering virtue through education and promoting the comprehensive development of children and adolescents in moral, intellectual, physical, aesthetic, and labor dimensions (Miao, 2021). In recent years, the Chinese government has issued multiple policy documents to safeguard the development of healthy personality in children and adolescents by strengthening the prevention and monitoring of mental health (Yu & Ju, 2018; Yu & Zhang, 2020).

According to ecological systems theory, the formation and development of personality in children and adolescents are inseparable from their surrounding environment and are influenced by multiple factors including family, peers, school, community, region, and culture (Bronfenbrenner, 2005). Among these, parents, as the earliest and most direct interactors with children, exert an extremely important influence on the formation of healthy personality in children and adolescents (Shiner et al., 2021; Shiner & Caspi, 2003). Numerous scholars have explored the impact of family parenting styles on personality development, yet research conclusions remain inconsistent. Some studies indicate that positive parenting styles are significantly positively correlated with healthy personality, while negative parenting styles are significantly negatively correlated (Schofield

et al., 2012; Xie et al., 2016; Zhou, 2018). Other research suggests no significant relationship between the two (Li, 2021; Wang, 2006), and some studies even report significant positive correlations between negative parenting styles and healthy personality (Lu, 2013).

Therefore, the precise nature of the relationship between family parenting styles and healthy personality development in children and adolescents, and whether this relationship is moderated by other factors, has become an issue requiring further investigation. Moreover, as a collectivist culture, China differs from Western individualistic cultures in often requiring children to obey authority and respect elders (Guan & Li, 2017; Markus & Kitayama, 1998). The influence of family parenting styles on personality development may thus involve unique mechanisms under indigenous cultural contexts (Cheung & Lim, 2022). Consequently, this study focuses on Chinese children and adolescents. Using meta-analysis, this research examines the relationship between Chinese family parenting styles and healthy personality development in children and adolescents, as well as potential moderating variables affecting this relationship, aiming to provide more scientific findings and reference basis for family education in China.

1.1 The Concept and Measurement of Healthy Personality in Children and Adolescents

Healthy personality represents the state achieved when human nature, endowed by biological evolution, is fully actualized, representing the perfect integration of various positive personality traits (Huang & Zheng, 2014). Since the physiological and psychological functions of children and adolescents are still developing dynamically, healthy personality in this population refers to the stable, healthy, and balanced development of typical personality traits that are universal and positively adaptive within personality structure (Yang et al., 2015, 2019).

Regarding measurement, researchers primarily use two categories of instruments. The first category consists of tools specifically developed by Chinese scholars Yang Lizhu and colleagues based on the connotation of healthy personality and large-sample research, including the "Primary School Children's Personality Rating Scale" and the "Middle School Student Personality Rating Scale." Although these questionnaires target different age groups, their dimensions of healthy personality are largely similar, comprising five dimensions: intellectual characteristics, conscientiousness and self-control, extraversion, prosociality, and emotional stability, all demonstrating good reliability and validity (Yang, 2015). The second category comprises personality assessment scales based on modern Western personality theories, among which the Big Five personality test based on the Five-Factor Model (McCrae et al., 2005) is most widely used, showing high cross-cultural and cross-situational consistency and stability (Minkov et al., 2019; Rammstedt et al., 2010). The Five-Factor Model divides personality into five traits: openness, neuroticism, conscientiousness, extraversion, and agreeableness, with a structure and connotation similar to the

five dimensions used to measure healthy personality mentioned above (Yang et al., 2017). Its Chinese version, revised by Luo and Dai (2015), has been widely applied in Chinese cultural contexts (Luo et al., 2016). Therefore, this meta-analysis includes the Big Five personality test.

Additionally, the Eysenck Personality Questionnaire (Eysenck et al., 1985) and Cattell's 16 Personality Factor Test (Cattell, 1943) are frequently used in personality trait research. The Eysenck Personality Questionnaire includes four dimensions: neuroticism, psychoticism, extraversion, and lie scale, with its Chinese version revised by Chen et al. (1983). The 16PF includes 16 personality traits such as warmth and reasoning, with its Chinese version revised by Dai and Zhu (1988). Both revised scales demonstrate good reliability and validity. Research indicates that these two tests share considerable factorial commonality with the Big Five personality test (Linden et al., 2012; Zawadzki & Strelau, 2010) and have been widely applied in Chinese cultural contexts. Therefore, these two tests are also included in this study. To facilitate meta-analysis, this study adopts the Big Five personality model to integrate dimensions from different scales, thereby obtaining the most reasonable and reliable model of healthy personality.

1.2 The Concept and Measurement of Family Parenting Styles

Family parenting style refers to the emotional atmosphere created by parents' educational behaviors during communication with their children, representing a directional attitude of parents toward their children (Darling & Steinberg, 1993). Parenting styles have different classification types. The classic typology by Baumrind (1967) divides parenting styles into authoritative, authoritarian, and permissive types based on the degree of parental demands. Subsequently, Maccoby and Martin (1983) added the dimension of parental support, resulting in four types: authoritative (high demand, high support), authoritarian (high demand, low support), permissive (low demand, high support), and neglectful (low demand, low support).

With increasing research attention, numerous measurement tools for parenting styles have emerged. Among them, the most widely applied is the Egna Minnen Beträffande Uppfostran (EMBU), developed by Perris et al. (1980) from the perspective of parental promotion of children's socialization behaviors, including separate scales for paternal and maternal parenting styles. The paternal scale includes six dimensions: emotional warmth and understanding, punishment and strictness, excessive interference, favoritism toward the subject, rejection and denial, and overprotection. The maternal scale includes five dimensions: emotional warmth and understanding, punishment and strictness, excessive interference and overprotection, rejection and denial, and favoritism toward the subject. The Chinese version of EMBU, revised by Yue et al. (1993), demonstrates good reliability and validity and represents the primary tool for measuring Chinese family parenting styles (Xie et al., 2022). Additionally, the Parental Authority Questionnaire (PAQ) and Parental Bonding Instrument (PBI) are frequently

used. PAQ, developed by Buri et al. (1991), includes three dimensions: authoritarian, permissive, and democratic. PBI, developed by Parker et al. (1979), contains three dimensions: care, encouragement of autonomy, and control. Both PAQ and PBI have been revised into Chinese versions by Zhou et al. (2010) and Yang et al. (2009), respectively, with good reliability and validity. To facilitate meta-analysis, this study follows Lei et al. (2020) in integrating parenting styles into positive and negative categories. Positive parenting styles involve a warm and supportive relationship between parents and children, serving a protective and promotive function for child development. Negative parenting styles involve attitudes and behaviors of denial, rejection, punishment orientation, or overprotection, which are detrimental to the development of healthy personality in children (Jugert et al., 2016). Based on this analysis, this study specifically divides parenting styles into three dimensions: warmth and supportiveness (positive parenting style), authoritarianism and strictness, and indulgence and permissiveness (negative parenting styles), integrating dimensions from scales such as EMBU, PBI, and PAQ.

1.3 The Relationship Between Family Parenting Styles and Healthy Personality and Influencing Factors

Family parenting styles and healthy personality in children and adolescents are closely related (Kitamura et al., 2009; Schofield et al., 2012). Research has found that abused children exhibit lower agreeableness, conscientiousness, and openness, and higher neuroticism compared to non-abused children (Rogosch & Cicchetti, 2004), while children under positive parenting styles show higher agreeableness and conscientiousness and lower neuroticism (Schofield et al., 2012). Studies with Chinese samples also reveal that positive parenting styles are significantly positively correlated with extraversion, agreeableness, conscientiousness, and openness, and negatively correlated with neuroticism in the Big Five personality dimensions. Negative parenting styles such as authoritarianism and strictness, and indulgence and permissiveness, are significantly negatively correlated with extraversion, agreeableness, conscientiousness, and openness, and positively correlated with neuroticism (Qian & Xia, 1996; Yu & Qin, 2015; Zhou, 2018).

However, some studies have found that permissive parenting styles show weak or non-significant correlations with agreeableness and openness (Wang, 2006; Yang, 2004), while authoritarian parenting styles show significant positive correlations with openness (Lu, 2013). These inconsistencies suggest that although a relationship exists between parenting styles and healthy personality in children and adolescents, it is not stable and may be influenced by multiple moderating variables. Therefore, beyond examining the relationship between parenting styles and healthy personality, this study employs meta-analysis to integrate numerous studies in this field, identify moderating factors affecting their relationship, and clarify reasons for inconsistent findings, providing references for future research.

First, the moderating role of parent gender. Fathers tend to adopt more authoritarian and controlling parenting styles, while mothers tend to be more patient and gentle (Berndt et al., 1993). Influenced by the traditional notion of "men managing external affairs, women managing internal affairs," mothers serve as primary caregivers, and children often understand and interpret events around them through their mothers, forming their explanatory style (Burns & Seligman, 1989). Therefore, mothers may have greater influence than fathers (Pinquart, 2016). Based on this, we hypothesize that parent gender moderates the relationship between family parenting styles and healthy personality in children and adolescents.

Second, the moderating role of child gender. According to the parenting process model (Belsky, 1984), due to different gender social roles, children differ in toy and game selection, clothing, household chore division, and behavioral norms from an early age. For instance, fathers provide more encouragement to girls but more interference and rejection to boys (Xu et al., 2022; Yue et al., 2022; Zhao et al., 2023). Therefore, we hypothesize that child gender moderates the relationship between parenting styles and healthy personality.

Third, the moderating role of age group. As children grow older, parental influence decreases while intimate relationships with peers and teachers are established (Kitamura et al., 2009; Xie et al., 2022). Personality formed within the family is carried into other environments for continued development, while the family's relative influence declines (Richards, 1981). Thus, we hypothesize that age group may moderate the relationship between parenting styles and healthy personality.

Finally, the moderating roles of research era and region. Temporal changes and regional socio-cultural-economic levels may affect parental educational concepts and parenting styles. On one hand, family education was once considered the mother's responsibility, but fathers' roles have become increasingly prominent, transforming family education into a shared parental responsibility (Wu et al., 2012). On the other hand, parents in eastern China demonstrate significantly higher emotional warmth and significantly lower punishment and strictness compared to parents in western China (Zhang, 2011). Therefore, we hypothesize that research era and region may moderate the relationship between parenting styles and healthy personality.

In summary, this study aims to reveal the precise relationship between Chinese family parenting styles and healthy personality in children and adolescents through meta-analysis and examine moderating variables affecting this relationship. Given that different socio-cultural contexts may influence parenting styles, healthy personality, and their relationship (Chao, 1994; Fan, 2021; LeVine, 1974), this study focuses on Chinese culture and samples to explore this relationship. Accordingly, we propose two hypotheses: (1) Chinese family parenting styles are significantly related to healthy personality development in children and adolescents; (2) Factors such as parent gender, child gender, age group, era, and region may moderate the relationship between parenting styles

and healthy personality development. This study follows the standardized reporting procedures for open meta-analysis (Liu et al., 2021).

2 Methods

2.1 Literature Search

This study comprehensively searched Chinese and English literature on the relationship between family parenting styles and healthy personality from January 1993 to June 2022, with a secondary update in December 2022. Chinese literature was searched in CNKI, VIP, Wanfang, and China Master's Theses Full-text Database using keywords including "family parenting style," "family rearing style," "parenting style," "parental rearing style," "paternal parenting style," "maternal parenting style," "healthy personality," and "personality." English databases included Web of Science, PubMed, Google Scholar, Springer Link, Elsevier SD, EBSCO, OvidSP, Wiley Online Library, and ProQuest, using keyword combinations of "Parenting Style," "Parenting," "Parental Rearing Behaviour," "Rearing Style," "Personality," "China," and "Chinese." Manual searches of article references were also conducted to avoid omissions. The initial search yielded 1,353 relevant articles.

2.2 Literature Inclusion and Exclusion Criteria

Based on previous research and this study's topic, inclusion criteria for the meta-analysis were: (1) Empirical studies on the relationship between family parenting styles and healthy personality with complete data and clear sample sizes; (2) Chinese samples, or Chinese sample data on parenting styles and healthy personality provided in mixed Chinese-foreign samples; (3) Typically developing participants, excluding atypical groups such as those with mental disorders; (4) Non-repeated data, with journal articles selected over dissertations when identical data were used; (5) Clear reporting of measurement methods for both parenting styles and healthy personality; (6) Inclusion of at least one correlation coefficient between parenting style dimensions and healthy personality or other convertible effect size indicators. Ultimately, 52 articles met the criteria (49 Chinese, 3 English), yielding 1,504 effect sizes with a total sample of n = 19,642. The literature search, screening, inclusion, and exclusion process is shown in Figure 1 [Figure 1: see original paper].

2.3 Literature Coding

The following information was coded from included studies (Table 1): (1) First author name and publication year; (2) Sample size; (3) Gender ratio; (4) Age stage; (5) Parenting style scale; (6) Healthy personality scale; (7) Whether parent gender was distinguished; (8) Region. Two raters independently coded the literature, resolving discrepancies through discussion to achieve consensus, with a final consistency coefficient of 0.91, indicating accurate coding. Based on two important time nodes in China's "Five-Year Plan for Family Education"

(1996 and 2007), the era was divided into Stage 1: 1996–2011 and Stage 2: 2012–2021 (Xie et al., 2022).

2.4 Data Processing and Analysis

This study used the Comprehensive Meta-Analysis 3.0 software package (Borenstein et al., 2009) for analysis. Effect sizes were calculated using Pearson's correlation coefficient r, with Fisher's Z transformation applied. Some studies reported t, F, or ^{2} values, which were converted to r values using appropriate formulas before inclusion (Ding, 2016). Heterogeneity was assessed using I^2 and τ^2, with $I^2 > 50\%$ indicating significant heterogeneity, and Q-tests examining the significance of τ^2 (Borenstein et al., 2009). For effect model selection, since included studies covered elementary, middle, and university students from urban and rural areas using different measurement tools, random-effects models were adopted for effect size calculations and moderator analyses. For gender moderation, as most studies did not report correlations by gender, gender ratio (female proportion) was used as a continuous moderator variable in meta-regression analysis (Li et al., 2019). Publication bias was assessed using fail-safe N (Nfs) and funnel plots, with $N\text{fs} > 5k + 10$ and symmetrical funnel plots indicating minimal publication bias. When results from these methods diverged, Egger's regression test was used, with a non-significant intercept ($p > 0.05$) indicating negligible publication bias (Cooper, 2016).

3 Results

3.1 Publication Bias Assessment

As shown in Table 2 , except for the relationship between authoritarianism/strictness and openness, fail-safe N values for all other parenting style-personality dimension relationships far exceeded the critical value of $5k + 10$, with funnel plots showing basic symmetry, indicating no significant publication bias. For the relationship between authoritarianism/strictness and openness, although fail-safe N was relatively low ($N\text{fs} = 166$), the funnel plot was basically symmetrical (Figure 2 [Figure 2: see original paper]), with studies primarily distributed in the upper portion of the plot. Egger's regression coefficient was non-significant (intercept = -0.139, $p = 0.899$). In summary, no significant publication bias was detected, confirming the reliability of the meta-analysis results.

3.2 Main Effects

Main effect results are presented in Table 2. Positive parenting style (emotional supportiveness) showed significant positive correlations with all five healthy personality dimensions ($p\text{s} < 0.001$). Negative parenting style dimensions of authoritarianism/strictness showed significant negative correlations with all five personality dimensions ($p\text{s} < 0.01$). Negative parenting style dimensions of indulgence/permissiveness showed significant negative correlations with emotional

stability and agreeableness (ps < 0.001). Heterogeneity tests revealed $I^2 > 50\%$ for all parenting style-personality dimension relationships, with significant Q-values ($p < 0.01$), indicating high between-study heterogeneity. The τ^2 values indicated substantial variance available for weight calculation, suggesting that between-study differences were influenced by moderator variables, warranting moderator analysis (Cooper, 2016).

3.2.1 Moderating Effect of Age Group

As shown in Figure 3 [Figure 3: see original paper], age group significantly moderated the relationship between positive parenting styles and healthy personality, with the relationship showing an inverted U-shaped trend across age groups. Specifically, age significantly moderated the relationship between emotional supportiveness and emotional stability (Q-between = 59.93, $p < 0.001$), with smaller effect sizes in elementary school ($r = 0.151$) and university ($r = 0.136$) stages, but larger effects in middle school ($r = 0.263$), combined middle-high school ($r = 0.172$), and high school ($r = 0.157$) stages. Age also significantly moderated the relationship between emotional supportiveness and agreeableness (Q-between = 18.78, $p < 0.001$), with smaller effects in elementary school ($r = 0.201$), high school ($r = 0.128$), and university ($r = 0.176$) stages, but larger effects in middle school ($r = 0.238$) and combined middle-high school ($r = 0.272$) stages. The moderating effect on openness was marginally significant (Q-between = 9.07, $p = 0.06$), with smaller effects in elementary school ($r = 0.187$), high school ($r = 0.127$), and university ($r = 0.131$) stages, but larger effects in middle school ($r = 0.218$) and combined middle-high school ($r = 0.290$) stages.

For negative parenting styles, age group also showed significant moderating effects with an inverted U-shaped trend. Specifically, age significantly moderated the relationship between authoritarianism/strictness and openness (Q-between = 11.87, $p < 0.05$), with the largest effect size in high school (r = -0.122) and smaller effects in elementary school (r = -0.003), middle school (r = -0.09), combined middle-high school (r = -0.008), and university (r = -0.051) stages. Age significantly moderated the relationship between authoritarianism/strictness and agreeableness (Q-between = 34.49, $p < 0.001$), with larger effects in middle school (r = -0.293) and combined middle-high school (r = -0.247) stages, and smaller effects in elementary school (r = -0.175), high school (r = -0.191), and university (r = -0.218) stages. The relationship between indulgence/permissiveness and emotional stability was also moderated by age (Q-between = 8.69, $p = 0.07$), with larger effects in middle school (r = -0.121), combined middle-high school (r = -0.172), and high school (r = -0.145) stages, and smaller effects in elementary school (r = -0.102) and university (r = -0.103) stages.

3.2.2 Moderating Effects of Era, Region, and Parent Gender

Era and region significantly moderated relationships between specific parenting style dimensions and personality traits (Table 3). For era, it significantly

moderated the relationship between authoritarianism/strictness and emotional stability (Q-between = 7.09, $p < 0.01$), with Stage 1 showing a significantly stronger effect than Stage 2, indicating that the negative correlation weakened significantly over time. Era also significantly moderated the relationship between authoritarianism/strictness and conscientiousness (Q-between = 7.83, $p < 0.01$), with the negative correlation weakening significantly across eras. For region, it significantly moderated the relationship between positive parenting style (emotional supportiveness) and conscientiousness (Q-between = 7.84, $p < 0.01$), with effect sizes significantly lower in eastern regions than in western regions. Parent gender showed no significant moderating effects on any dimension relationships.

3.2.3 Moderating Effect of Child Gender

To examine whether child gender (female ratio) moderated the relationship between parenting styles and healthy personality, gender was entered as a covariate in meta-regression models. As shown in Table 4 , child gender significantly moderated the relationship between positive parenting style and openness, with the positive correlation decreasing significantly as the female proportion increased. Child gender also significantly moderated relationships between negative parenting styles and agreeableness, with the negative correlation increasing significantly as the female proportion increased for both negative parenting dimensions.

4 Discussion

4.1 The Relationship Between Parenting Styles and Healthy Personality

Based on meta-analysis of 52 studies with 19,642 participants, this study found significant correlations between family parenting styles and healthy personality in Chinese children and adolescents. Positive parenting styles showed significant positive correlations with all five personality dimensions, while negative parenting styles showed significant negative correlations. Authoritarianism/strictness, as a high-demand, low-support parenting style, exerted relatively comprehensive effects on healthy personality development, whereas indulgence/permissiveness, characterized by low demand and high support, primarily affected emotional stability and agreeableness. These findings indicate that different parenting styles differentially impact personality development (Asanjarani et al., 2022; Ayoub et al., 2021). According to ecological systems theory, each individual exists within a multi-dimensional, multi-level social ecosystem, and parents, as the earliest microsystem affecting individual development, play a crucial role (Bronfenbrenner & Morris, 2007). When parents adopt parenting styles with appropriate demands and support, children's healthy personality develops optimally, whereas when parents make no demands or provide no support, healthy personality cannot develop properly. These results align with most previous research (Dong et al., 2020; Jiang et al., 2017; Peng et al., 2019; Sun et al., 2016; Tian & Yuan,

2019; Zhang et al., 2021) and correspond with existing meta-analytic findings on specific dimensions (Dong et al., 2022; Lei et al., 2018; Pinquart & Gerke, 2019; Wong et al., 2021).

Analytical psychology suggests that supporting individuals toward self-realization and integrated personality requires providing a free, protected, yet bounded space. Freedom and protection create security for active exploration and self-development, manifested in parenting as emotional acceptance and understanding, positive responsiveness, and appropriate fulfillment of children's needs. Boundaries help individuals understand the importance of behavioral rules, manifested as relatively strict behavioral requirements. Only through this combination can healthy personality develop harmoniously and balancedly (Shen et al., 2005). Our findings show that providing support without demands, or even indulgence, leads children and adolescents to develop strong self-centered thinking, disregard rules in family, school, and society, exhibit minimal self-control, and struggle with empathy and perspective-taking, resulting in decreased emotional stability and agreeableness (Shan et al., 2017; Jia et al., 2019; Liu et al., 2012; Sun et al., 2015). Authoritarian/strict parenting showed comprehensive negative correlations with all five dimensions, indicating that providing children and adolescents with a free, protected space is crucial for development (Liu et al., 2021; Tong, 2020; Zhang & Zhao, 2013). Parents should adopt understanding and supportive approaches, create a warm and comfortable family atmosphere, and provide children with a free, protected, yet bounded space to foster healthy and integrated personality development.

4.2 Moderating Effects of Parenting Styles on Healthy Personality

First, this study's results demonstrate that age group significantly moderates the relationship between parenting styles and healthy personality across multiple dimensions. Specifically, family parenting styles most significantly influence healthy personality development during middle school or combined middle-high school stages, with weaker effects during elementary, high school, and university stages, forming an overall inverted U-shape. This pattern aligns with previous meta-analytic findings that age moderates relationships between parenting styles and academic achievement, procrastination, emotion regulation, social-emotional competence, and even suicidal ideation (Gao et al., 2023; Lei et al., 2020; Tong, 2020; Xie et al., 2022; Li et al., 2021). According to group socialization theory, behaviors learned within and outside the family constitute two independent systems. As children grow older, the extra-familial behavioral system gradually replaces and surpasses the intra-familial system, eventually becoming the primary acquired component of personality (Harris, 1995). During elementary and middle school stages, children's primary activity setting is the family, making them directly and extensively influenced by parenting. In high school and university, most children live at school, and with increasing age, their ecological systems become more complex, relatively reducing family influence while teacher and peer influences increase (Gao et al., 2023). The

weaker moderating effect in elementary school compared to middle school may be because children's cognitive and social development is not yet mature (Yang et al., 2019), so parenting effects have not fully manifested. Conversely, middle school represents a "storm and stress" period of personality development, where rapid physiological and psychological changes amplify parenting effects. When parents use negative parenting such as punishment or strictness, it exacerbates instability in personality (Zhang et al., 2022) and intensifies parent-child conflict (Branje et al., 2012). If families provide sufficient understanding, acceptance, emotional support, and guidance, they help children become more open, agreeable, and emotionally stable, thereby promoting healthy personality development.

Second, research era influenced the relationship between parenting styles and healthy personality, specifically for authoritarianism/strictness with emotional stability and conscientiousness. The negative correlation was significantly weaker in Stage 2 (2012–2021) than Stage 1 (1996–2011). Previous meta-analyses have reported similar results, showing that negative correlations between negative parenting styles and academic achievement weakened over time (Xie et al., 2022). This suggests that with economic development and socio-cultural changes, parents increasingly value family education and recognize that understanding and supportive approaches better promote healthy child development (Jia et al., 2015). Meanwhile, as the state vigorously promotes high-quality education system construction, schools' educational influence on students' comprehensive development in "moral, intellectual, physical, aesthetic, and labor" dimensions has grown and achieved certain effectiveness (Lü, 2022), manifesting as weakened effects of negative parenting styles on healthy personality over time.

Third, region significantly moderated the relationship between positive parenting style (emotional supportiveness) and conscientiousness, with significantly stronger effects in western than eastern regions. This may be due to economic and cultural differences affecting parental educational concepts (Hu, 2008). Parents in western regions, facing greater economic pressure, may have stronger expectations for children to become self-reliant through education and achieve better lives. Under long-term influence of such thinking, children's sense of responsibility and self-control may be positively affected, as reflected in the saying "children from poor families mature early." Additionally, western China's urbanization level is lower than eastern China's, with less developed infrastructure, providing more opportunities for children to participate in practical life activities and develop themselves through labor, thereby fostering responsibility and conscientiousness (Tan, 2019). Notably, the literature search spanned from January 1993 to December 2022, during which the development gap between eastern and western regions continuously narrowed, possibly explaining why regional moderation was not significant for other dimensions.

Finally, child gender also moderated the relationship between parenting styles and healthy personality. The effect of positive parenting on openness was

stronger for boys, while negative parenting's effect on agreeableness was stronger for girls. This aligns with gender expectations rooted in China's millennia-long agricultural civilization. In Confucian culture, males are expected to be more resilient, tolerant, and broad-minded, with fewer such expectations for females. Consequently, parents apply stricter parenting with more interference and rejection to boys, while providing more warmth and patience to girls (Yang & Hou, 2014). Additionally, as females' neurological development matures earlier than males, they score higher on multiple healthy personality dimensions (De Bolle et al., 2015; Li et al., 2021; Zhang & Wang, 2022). Therefore, when boys receive warm, supportive positive parenting, they gain more free and protected space, expanding traits of emotional richness, wisdom, and creativity. When girls receive insufficient support and guidance through negative parenting, their empathy and cooperation abilities are affected, reducing agreeableness (Zhang & Zhao, 2013). Furthermore, influenced by gender roles, boys' behavior depends more on themselves, while girls are more susceptible to significant others, such as engaging in more communication and positive interaction with parents, making them more vulnerable to parenting influences (Tong, 2020). This study also found no significant moderating effect of parent gender, indicating that fathers and mothers exert similar influences on children's healthy personality development when using the same parenting style.

4.3 Limitations and Future Directions

Although this study focused on Chinese samples and confirmed the close relationship between Chinese family parenting styles and healthy personality development in children and adolescents, analyzing moderating effects of parent gender, child gender, age group, era, and region, several limitations remain:

First, this study's definition of healthy personality derives from the Western Big Five model, with limited and unsystematic indigenous research. Future studies should attempt to construct definitions and theoretical models of healthy personality within Chinese cultural contexts.

Second, meta-analysis requires high literature retrieval comprehensiveness. The current study's focus on the relationship between parenting styles and healthy personality faces challenges as no unified definition of healthy personality exists and different studies use varying measurement tools. Therefore, the literature search may not have covered all relevant studies. Additionally, some data may be missing due to confidentiality or other factors, potentially affecting accuracy. Future research should establish operational definitions and specific dimensions of healthy personality before conducting literature searches.

Third, numerous studies have shown that parental education level, family economic status, and other factors interact with parenting styles to influence healthy personality development (Li & Zhang, 2021; Liu, 2021; Lu et al., 2015). However, most included studies did not report such information. Future research should incorporate these variables and explore other potential

moderators to more comprehensively reveal the relationship between parenting styles and healthy personality development.

5 Conclusions

(1) Chinese family parenting styles are closely related to healthy personality development in children and adolescents. Positive parenting styles show significant positive correlations with all five personality dimensions. Negative parenting styles, specifically authoritarianism/strictness, show significant negative correlations with all five dimensions, while indulgence/permissiveness shows significant negative correlations with emotional stability and agreeableness.

(2) Age group substantially moderates the relationship between parenting styles and healthy personality, showing an overall inverted U-shaped trend, with stronger effects during middle and high school stages than during elementary and university stages. Additionally, child gender, era, and region also moderate this relationship.

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Note: Figure translations are in progress. See original paper for figures.