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Mediating Role of Cognitive Flexibilities in the Relationship between Parenting Styles and Self-Esteem among Children

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Abstract

Objective: The growing acknowledgment of self-esteem as an essential element of psychological well-being has highlighted the influence of parenting styles on the self-esteem of children as a significant concern in developmental psychology. This study enhances prior research on the association between self-esteem and parenting styles by investigating the mediating effect of cognitive flexibility.

Method: This research is a quantitative, cross-sectional, correlational study carried out in 2024 involving children between the ages of 6 and 12 in Beijing, China. Parents who volunteered participated by filling out self-report surveys, such as the short version of the Parenting Styles and Dimensions Questionnaire (PSDQ), the Rosenberg Self-Esteem Scale (RSES), and the Cognitive Flexibility Inventory (CFI). These surveys were distributed via a Sojump link shared on social media. For the statistical analysis, descriptive statistics, Pearson correlation analysis, and path analysis were employed.

Results: A total of 150 children took part in this survey. The correlation analysis revealed that there were positive associations between the authoritative parenting style and the cognitive flexibility scale among children ($r = 0.325$, $P < 0.01$) and cognitive flexibility and self-esteem ($r = 0.448$, $P < 0.01$). There was also a significant negative correlation between authoritative parenting and authoritarian parenting ($r = -0.402$, $P < 0.01$). Moreover, results support the mediational hypothesis. However, the authoritative parenting style is no longer a significant contributor to self-esteem among children after controlling for cognitive flexibility as the mediator, $\beta = 0.11$, $SE = 0.10$, $t = 1.06$, $P = 0.2897$, 95% CI [-0.0941, 0.3131], suggesting a full mediation. This result indicated that the indirect coefficient was significant $\beta = 0.1919$, $SE = 0.0595$, 95% CI [0.0846, 0.3160].

Conclusion: The results of this study present an intriguing profile suggesting that certain psychological factors, such as authoritative parenting and cognitive flexibility, may enhance children's to self-esteem development. This research offers valuable insights for parents, educators, policymakers, and future researchers regarding the significance of authoritative parenting and cognitive flexibility in shaping children's self-esteem.

Key words: *Cognitive Flexibility; Cross-Sectional Study; Parenting; Psychological Well-Being; Self-Esteem*

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Self-esteem, a crucial aspect of self-concept, significantly affects children's growth, identity, social interactions, and overall well-being. Numerous studies indicate that parenting styles, attachment relationships, and family environments play a vital role in shaping self-esteem (1). Specifically, authoritative parenting, described via control and warmth, is linked to greater self-esteem (2), whereas neglectful parenting and authoritarian methods tend to diminish self-esteem (3). The implications of parenting styles extend to children's intellectual, social, and emotional development, wherein authoritative approaches are linked to enhanced self-esteem, social skills, and emotional stability (4, 5). Additionally, while permissive parenting can occasionally boost self-esteem, its overall impact tends to be mixed; similar to that of authoritarian techniques (6, 7).

Exploring the cultural context, particularly in regions like Beijing, is essential for understanding how family dynamics and cultural variables influence parenting practices and their effects on children (5). Transitioning effectively between activities and mental states is also critical for children as they navigate new environments and challenges. Early developmental experiences enhance academic performance, social skills, and executive functions, like inhibitory control and working memory (8). Cognitive flexibility— the ability to adapt to varied stimuli— plays the main role in children's exploration and learning. This skill contributes to self-regulation, emotional control and overall learning effectiveness (9). Research indicates that cognitive flexibility mediates the relationships between self-esteem and parenting styles, wherein supportive parenting enhances both self-esteem and cognitive flexibility (10). This adaptability is beneficial for helping children overcome social and cognitive difficulties, thereby boosting resilience and well-being. Moreover, a balance of parental support and moderate control can further foster self-esteem and cognitive flexibility, enabling children to thrive in changing environments (11).

The influence of self-esteem extends beyond individual outcomes; it also impacts the broader effects of parenting on mental health and social adaptation. Warm and supportive parenting not only boosts self-esteem but also cultivates resilience (10). Parental and educator support fostering self-esteem is critical for enhancing academic achievements and mental health (12, 13). Conversely, negative parenting approaches can lead to reduced self-esteem and psychological maladjustment, highlighting the necessity for positive parenting strategies. Findings suggest that authoritative parenting promotes both self-esteem and cognitive flexibility in children in Beijing, emphasizing how universal parenting strategies can facilitate psychological and intellectual development.

Research emphasizes the significant impact of parenting styles on children's non-cognitive development, emotional health, and behavioral outcomes. Deng and Tong (14) identify respectful parenting as essential for nurturing non-cognitive growth, while Guan *et al*. (15) highlight how authoritarian practices can lead to emotional and behavioral problems, in stark contrast to the positive effects of authoritative parenting. Yang's study (16) on Chinese middle school students reveals that socioeconomic and gender factors considerably influence parenting effectiveness, showing that authoritative parenting particularly bolsters academic success for children from low-income households. This finding underscores the importance of parental engagement in bridging educational disparities.

Subsequent research has examined the broader psychological effects of various parenting methods. For instance, Marcone *et al*. (17) links authoritarian parenting to both internalizing and externalizing behaviors, emphasizing the need for behavioral control to improve mental health outcomes. Kong and Yasmin (5) underscore parental self-efficacy in enhancing educational results through authoritative practices. Akhter *et al*. (18) finds that authoritative parenting fosters positive traits like agreeableness and conscientiousness while reducing neuroticism. Moreover, comprehensive evaluations of parenting styles affirm the benefits of authoritative approaches for academic and behavioral development, discouraging permissive or neglectful practices (19). Carroll (20) calls for further exploration into the complex relationships between parenting styles and behavioral issues in children.

In summary, the connection between self-esteem and parenting styles in children—especially within the Chinese context—reveals a complex landscape influenced by cognitive flexibility and self-regulation. Research highlights that the authoritative approach—described via empathy and responsiveness—promotes significant growth in children, yielding improvements in educational outcomes and self-esteem (5, 21). Additionally, supportive parenting fosters emotional regulation through enhanced self-efficacy related to schoolwork, boosting positive homework-related emotions (22). Beliefs in filial piety can also mediate mental health outcomes, reinforcing the importance of parent-child relationships in cultivating adaptive thinking and psychological well-being (23, 24).

To further enhance resilience, parental support plays a critical role by reducing conflicts and improving emotional warmth, subsequently elevating self-esteem and decreasing psychological inflexibility (10). Research indicates that effective parenting enhances children's self-regulation and emotional control, addressing behavioral issues through positive parental engagement (25-27). Family communication also plays a role in cognitive flexibility, helping to mitigate the impacts of family dynamics on children's well-being (28).

In understanding the main role of self-esteem in children's psychological and social development, understanding the determinants of its formation is essential for fostering positive outcomes while minimizing risks such as bullying and victimization. Investigating the mediating role of cognitive flexibility within the context of parenting styles and self-esteem can aid in developing tailored interventions that promote children's socio-emotional health and resilience. The present research seeks to investigate the complex interplay between parenting styles, self-esteem, and cognitive flexibility among Chinese children, while considering how cultural factors may shape these relationships. By shedding light on the impact of parental behaviors on children's self-esteem and regulatory mechanisms, this research aims to provide valuable insights for creating culturally appropriate interventions that support healthy developmental trajectories. The study will specifically focus on two research questions: Are there significant relationships between different parenting styles and children's self-esteem and cognitive flexibility in China? And what mediating role does cognitive flexibility play in the link between parenting styles and self-esteem among Chinese children?

Materials and Methods

Research Method and Design

This study adopted a non-experimental correlational methodology, consistent with the approach defined by Pilcher and Cortazzi (29), in which quantitative approaches are used to analyze social phenomena, develop theoretical frameworks, and make study assumptions. The primary goal was to examine the impact of several parenting styles—authoritative, authoritarian, and permissive—on children's self-esteem, with cognitive flexibility serving as a moderator. Parenting styles are predictor variables, self-esteem is the criterion variable, and cognitive flexibility acts as a mediator. All variables were assessed at the interval level using Likert scales. Data were gathered through a survey, which is a standard tool in quantitative research (29). This cross-sectional study collected data at a single moment in time and used a convenience sampling method among children in China.

Sample and Location

In the current study, we aimed to recruit 150 parents of children aged 6 to 12 who currently attend primary schools in Beijing, China. The GPower 3.1 computation, taking into account various parameters such as error type (statistical power of 0.80), significance level ($\alpha = 0.05$), and the desired statistical power, estimated a minimum sample size of 119 for this cross-sectional survey. An additional 20% recruitment was considered to reduce incomplete responses and ensure data adequacy. The convenience sampling technique, as a non-probable sampling approach, was utilized in this study. Convenience sampling, a nonprobability sampling approach, is widely employed in similar research because it is simple and inexpensive (30). However, it has disadvantages, such as selection bias and a lack of generalizability. Despite these disadvantages, convenience sampling might be advantageous in some cases, such as when randomization is not possible (31).

Instrumentation

Parenting Styles and Dimensions Questionnaire-Short Version (PSDQ)

The PSDQ, created by Robinson *et al*., was used to evaluate parenting styles (32). This 32-item questionnaire consists of three subscales: authoritative (15 items), authoritarian (12 items), and permissive (five items). The subscales have strong reliability, with Cronbach's alpha values of $\alpha = 0.86$, $\alpha = 0.82$, and $\alpha = 0.64$, respectively (33). Oliveira *et al.* (34) found a Cronbach's alpha coefficient of $\alpha = 0.745$ for the entire questionnaire, showing strong internal consistency. In this study, the authoritative, authoritarian, and permissive parenting style subscales were employed. Items on the authoritative subscale include "I encourage my child to talk about their troubles" and "I give praise when my child behaves well." In contrast, items on the authoritarian subscale include "I use physical punishment as a form of discipline" and "I spank my child when they are disobedient." Participants rate each item from 1 (never) to 5, with higher mean scores indicating more frequent use of the right parenting style. Wang *et al*. (33) showed that the PSDQ has good internal consistency with a Cronbach's alpha of 0.77 in the Chinese population.

Rosenberg Self-Esteem Scale (RSES)

To test self-esteem, we utilized the RSES, which is made up of ten items that assess adolescents' total self-worth or feelings of value (35). The RSES is based on a four-point Likert scale, ranging from strongly agree to strongly disagree. Half of the initiatives employ positive language, while the others use negative language. It is a commonly used self-esteem assessment tool that has been shown to be extremely trustworthy. The overall score range is 10 to 40 points, and higher values indicate better levels of self-esteem. Jiang *et al*. confirmed the Chinese version of this scale through a longitudinal study (36).

Cognitive Flexibility Inventory (CFI)

The CFI, created by Dennis and Vander Wal (37), comprises 20 items with seven response options and includes three key dimensions: a) the inclination to view challenging situations as manageable, b) the capacity to recognize multiple explanations for events and human behavior, and c) the ability to propose various solutions for complex problems. Responses are measured on a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The maximum score for this inventory is 140, while the minimum is 20. A higher score indicates greater cognitive flexibility, whereas a

score closer to 20 reflects lower cognitive flexibility. Dennis and Vander Wal demonstrated that this inventory has a concurrent validity of -0.39 when compared to the Beck depression questionnaire and a convergent validity of 0.75 with Martin and Robin's cognitive flexibility scale. The Cronbach's alpha coefficient for the whole scale is 0.90, with 0.87, 0.89, and 0.55 for the subscales. Cronbach's alpha values for perception of controllability, perception of distinct options, and perception of justification of behavior were 0.76, 0.59, and 0.84, respectively (37). The validity and reliability of the CFI were confirmed in the Chinese population (38, 39).

Data Collection Procedures

The ethical consideration form for this project was collected from the UCSI Institutional Ethics Committee (IEC) with the IEC-INT-2024-FOSSLA-MCP-0007 ethical code. Following permission, the researchers visited primary schools in Beijing to find suitable parents. After obtaining informed consent, parents filled out the demographic information and questionnaires such as PSDQ, RSES, and CFI, which took about 30 minutes. The next step was data analysis.

Statistical Analysis

Descriptive statistics were employed to analyze the variables in this study. Demographic information, such as age, gender, and educational level, were presented using frequency counts and percentage distributions. The skewness and kurtosis of the scores from the PSDQ, CFI, and SESE were examined to assess the normality of the participants' results on these scales. Furthermore, the Pearson correlation coefficient was used to explore the relationships among parenting styles, self-esteem, and cognitive flexibility. Additionally, the SPSS macro PROCESS (model 4) was applied with a bootstrapped sample of 5,000 and a 95% confidence interval to explore the mediating roles of narcissism and self-control in the relationship between gaming addiction and aggression.

Results

Demographic Information

A total of 150 participants completed all questionnaires. Table 1 summarizes the demographic information of the participants. The participants' age ranges from 6 to 12 years (M = 9.07, SD = 2.07). 81 girls (54%) and 69 (46%) boys were recruited in this study. In regard to participants' academic level, Year 1 comprises 25 individuals, accounting for 16.7% of the total, and Year 2 consists of 18 participants, representing 12.0%, year 3 comprises 20 individuals, representing 13.3%, while Year 4 has the lowest participation with just 12 participants, equating to 8.0% of the participants. Conversely, Year 5 exhibits more involvement with 30 participants, representing 20.0%, while Year 6 boasts the greatest participation rate at 30.0% with 25 participants. The differing levels of involvement underscore significant tendencies that might guide future educational initiatives and resource distribution to improve academic results across various year groups.

Table 1. Descriptive Statistics of Age, Gender and Academic Level (n = 150) of Children who Participated in the Survey

Variable	N	%
Children's Age		
6	25	16.7
7	18	12.0
8	20	13.3
9	12	8.0
10	30	20.0
11	23	15.3
12	22	14.7
Gender		
girls	81	54
boys	69	46
Children's Academic Level		
Year 1	25	16.7
Year 2	18	12.0
Year 3	20	13.3
Year 4	12	8.0
Year 5	30	20.0
Year 6	25	30.0

Note. n = number of participants, % = percentage of participants.

Test of Normality

Data is deemed to follow a normal distribution when the skewness and kurtosis values fall within the thresholds of -2 to +2 and -7 to +7, respectively. Referring to Table 2, the skewness and kurtosis coefficients for various parenting styles, cognitive flexibility, and self-control are all within the ±2 and ±7 ranges. Therefore, we can conclude that the dataset aligns with a normal distribution.

Table 2. Normality Assumption for Parenting Styles, Cognitive Flexibility, and Self-Esteem

Scale	Skewness	Kurtosis
Authoritative Parenting Style	-0.016	-0.791
Authoritarian Parenting Style	0.401	-0.738
Permissive Parenting Style	0.710	0.214
Cognitive Flexibility	0.561	0.775
Self-esteem	0.302	-0.277

Correlation Analysis

To investigate the primary aim of this study—the relationship between parenting styles (including authoritative, authoritarian, and permissive), cognitive flexibility, and self-esteem in children in China—a Pearson correlation coefficient analysis was carried out (see Table 3). According to this analysis, there exists a noteworthy and negative correlation between authoritative parenting and authoritarian parenting ($r = -0.402$, $P < 0.01$), suggesting that higher levels of authoritative parenting are linked to lower levels of authoritarian parenting. Besides that, a noteworthy positive correlation exists between the authoritative parenting style and cognitive flexibility scale in children ($r = 0.325$, $P < 0.01$). This suggests that as the level of authoritative parenting increases, so does the level of cognitive flexibility. Moreover, there exists a noteworthy positive correlation between cognitive flexibility and self-esteem levels in children ($r = 0.448$, $P < 0.01$). This indicated that higher levels of authoritarian parenting style are related to higher levels of children's self-esteem.

Table 3. Correlations between Parenting Styles, Cognitive Flexibility and the Self-Esteem Score

	1	2	3	4	5
Permissive Parenting Style	1.000				
Authoritative Parenting Style	0.131	1.000			
Authoritarian Parenting Style	0.054	-0.402**	1.000		
Cognitive Flexibility	0.088	0.325**	0.114	1.000	
Self-esteem	0.087	0.087	0.180*	0.448**	1.000

** Correlation is significant at 0.01 level (2-tailed).
* Correlation is significant at 0.05 level (2-tailed).

Mediation Analysis

Mediation analysis utilizing bootstrapping was conducted to examine how cognitive flexibility mediates the relationship between authoritative parenting style and self-esteem in children from Beijing, China. The findings revealed that authoritative parenting significantly predicts cognitive flexibility ($B = 0.56$, $SE = 0.14$, $t = 4.18$, $P < 0.01$, 95% CI [-0.29, 0.83]), and that cognitive flexibility is also a strong predictor of self-esteem ($B = 0.34$, $SE = 0.056$, $t = 6.04$, $P < 0.01$, 95% CI [0.22, 0.44]). These results provide support for the mediation hypothesis. However, once cognitive flexibility was controlled for, the authoritative parenting style no longer showed a significant effect on self-esteem in children ($B = 0.11$, $SE = 0.10$, $t = 1.06$, $P = 0.28$, 95% CI [-0.09, 0.31]), indicating a complete mediation effect. The adjusted R square of the model suggested that 19% of the variance in children's self-esteem can be explained by the predictors.

Additionally, model fit indices were evaluated to assess the adequacy of the mediation model. The Root Mean Square Error of Approximation (RMSEA) was found to be 0.042, indicating a good fit, as RMSEA values less than 0.05 are generally considered acceptable. The Comparative Fit Index (CFI) was 0.914, and the Tucker-Lewis Index (TLI) was 0.903, both of which suggest an adequate model fit, with values above 0.90 typically indicating good fit. The indirect effect was evaluated using a percentile bootstrap estimation method with 5,000 samples utilizing the PROCESS macro-Version 4. Results revealed that the indirect coefficient was significant ($B = 0.19$, $SE = 0.059$, 95% CI [0.08, 0.31]). As a result, the null hypothesis positing the absence of the mediating role of cognitive flexibility in the relationship between authoritative parenting style and children's self-esteem is rejected. Table 4 illustrates the total effect, direct effect, and indirect effect of the model, while Figure 1 highlights the significance of each mediation pathway.

Table 4. Mediation Analysis: Mediating Role of Cognitive Flexibility between Parenting Style and Self-Esteem (n = 150).

	Estimates	SE	t	P	95% CI	
					Lower	Upper
Total effect						
Authoritative parenting style → self-esteem	0.109	0.103	1.06	0.290	-0.094	0.313
Direct effect						
Authoritative parenting style → self-esteem	-0.082	0.097	-0.84	0.401	-0.275	0.111
Indirect effect						
Authoritative parenting style → cognitive flexibility → self-esteem	0.191	0.059	3.40	0.001	0.084	0.316

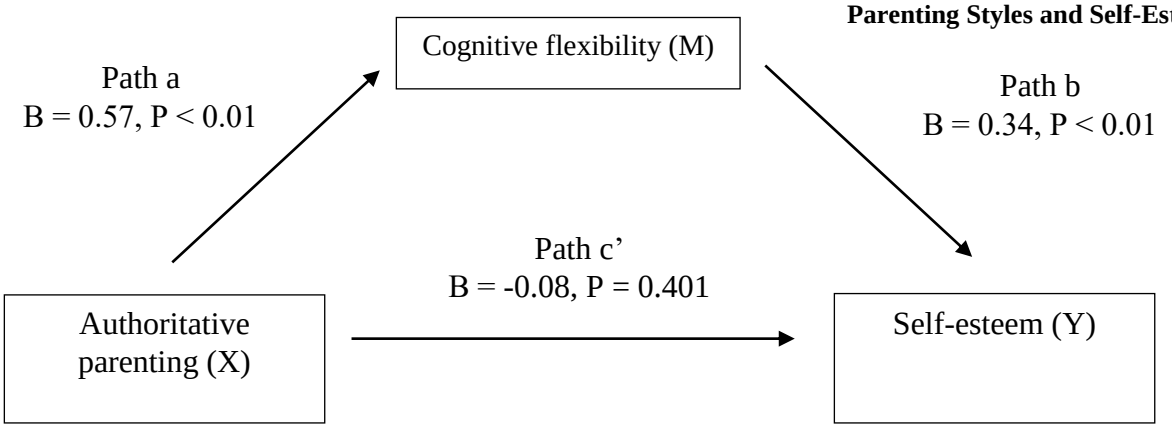

Figure 1. Path Analysis: Mediation Model Showing Role of Cognitive Flexibility on Relationship between Authoritative Parenting and Self-Esteem.

Discussion

Correlational Relationships

The results of this study revealed a significant relationship among parenting styles, self-esteem levels, and cognitive flexibility. These findings align with previous research indicating that parenting approaches, particularly authoritative parenting, are crucial in enhancing children's self-esteem (40). For example, Kou (41) found that authoritative parenting, which is described via warmth, support, and defined limits, has a good effect on both the psychological well-being and the self-esteem of children. The results found by Mandal *et al*. (2) and Okunlola *et al*. (42) are similar in that they discovered that authoritative parenting significantly correlates to greater levels of self-esteem in children, highlighting the significance of this parenting technique as a constructive parenting strategy. Consistent with our findings, previous research has demonstrated that cognitive flexibility is linked with self-concept and self-reliance (43, 44), and self-esteem is directly associated with cognitive flexibility (45). For instance, Pinquart and Gerke (3) discovered that children who have a higher cognitive flexibility are likely to have a better level of self-esteem. This finding highlights the linked nature of these developmental characteristics. Nevertheless, it is necessary to take into account cultural factors. According to the findings of certain studies, there are specific cultural circumstances in which authoritarian parenting may be more beneficial than authoritative parenting. One such environment is China, which is characterized by the prevalence of collectivist beliefs (10). Despite this, the current study discovered that there is no meaningful connection between authoritarian parenting and either self-esteem or cognitive flexibility, although there was a weak link.

Mediatory Findings

The findings from the mediation analysis provide significant insights into the relationship between the authoritative parenting style, cognitive flexibility, and children's self-esteem. The results reveal a clear predictive pathway in which authoritative parenting enhances cognitive flexibility, which in turn positively influences self-esteem among children in Beijing, China. This aligns well with existing literature that underscores the pivotal role of parenting styles in shaping various aspects of children's psychological development (46, 47). The first notable finding was that authoritative parenting is a significant predictor of cognitive flexibility. This outcome suggests that the warmth, support, and guidance typically associated with authoritative parenting contribute to children's ability to adapt their thinking and behavior in response to new information and experiences. The positive correlation indicates that children who experience high levels of authoritative parenting are likely to exhibit enhanced cognitive flexibility. Such flexibility is essential for effective problem-solving and adjustment to social situations, as it allows children to navigate complex environments and make appropriate choices based on varying contexts (5, 21). According to the findings of Liu *et al*. (22), supportive parenting helps children improve their emotional regulation by encouraging them to feel confident in their ability to do their assignments and by using the cognitive reappraisal strategy. These findings highlight the critical role that parental support plays in the development of children's cognitive and emotional abilities to adjust to unfamiliar situations.

Moreover, cognitive flexibility emerged as a robust predictor of self-esteem. This finding is particularly significant as it suggests that children who possess greater cognitive flexibility tend to have higher self-esteem. It is plausible that cognitive flexibility allows children to understand themselves and their capabilities better, leading to more favorable self-assessments and a higher sense of self-worth. The ability to adjust one's thoughts and behaviors can help children manage challenges and setbacks more effectively, contributing to a resilient self-perception. This underscores the importance of fostering cognitive skills within educational and familial settings to enhance children's overall psychological health (23, 48). Most importantly, the analysis indicated full mediation, evidenced by the fact that the direct effect of authoritative parenting on

self-esteem became non-significant when controlling for cognitive flexibility. This finding underscores the critical mediating role cognitive flexibility plays between parenting style and self-esteem (49, 50). Essentially, while authoritative parenting does initially contribute to self-esteem, it is through the enhancement of cognitive flexibility that this relationship is fully realized. This suggests that interventions aimed at improving self-esteem in children might benefit from a dual focus: enhancing the supportive practices of parents and simultaneously promoting cognitive skills within children.

The results of this mediation analysis hold important implications for educational practice and parental engagement strategies. Recognizing the importance of authoritative parenting can guide parents and educators to adopt approaches that are warm and structured, which may cultivate essential cognitive skills in children. Furthermore, programs aimed at parental education could include components that explicitly teach strategies for enhancing cognitive flexibility, providing children with tools to adapt to various situations, thus improving their self-esteem in the process. In conclusion, the findings highlight the need for parenting approaches that are supportive and responsive to cultivate self-esteem, cognitive flexibility, and self-regulation in Chinese children. These findings highlight the significance of parenting approaches that are sensitive to different cultures and that encourage the healthy psychological development and resilience of children. To get a better understanding of the role that parenting styles and mediators, such as cognitive flexibility, play in improving the developmental outcomes of children, future research should concentrate on the longitudinal impacts of parenting styles and mediators.

Implications and Suggestions

This study enhances developmental and child psychology by showing that cognitive flexibility influences parenting styles and self-esteem. How authoritative parenting creates self-esteem and adaptive cognitive and emotional processes in children is explained. Integrating cultural aspects like filial piety and expanding understanding of parenting and child development in non-Western cultures makes psychology theories more applicable across sociocultural situations. Cognitive flexibility increases children's mental health and capacity to face obstacles. Educational programs may teach problem-solving, adaptability, and emotional regulation. Based on the study, parents should practice authoritative parenting with warmth and responsiveness. Parenting programs teach parents how their actions impact their kids' self-esteem and cognitive flexibility. The findings can assist child psychologists in creating personalized therapy programs that boost cognitive flexibility and self-esteem for children and their families. Teachers may teach cognitive flexibility to assist students in handling difficult social and academic settings. Research suggests that health professionals should encourage cognitive and emotional development through educating effective parenting behaviors. Pediatricians, mental health specialists, and family counselors can help parents exercise authority and understand its effects on children.

Limitation

It is important to recognize and thoughtfully assess the constraints inherent in this study. The quantitative design and survey approach, although providing useful insights into broad patterns, may have oversimplified participants' distinct experiences, perhaps resulting in overgeneralized findings. A qualitative approach may enhance the comprehension of cognitive flexibility's mediating function. The study's cross-sectional approach limits its capacity to determine causation, rendering the temporal links among authoritative parenting, cognitive flexibility, and self-esteem unclear; longitudinal research is required to elucidate these dynamics. The dependence on self-report measures adds possible response biases; since participants may have offered socially desired responses, notwithstanding the validity of the techniques used. The cultural uniqueness restricts the study's generalizability since it exclusively examined Chinese children, omitting perspectives from many cultural or ethnic contexts where parenting methods and developmental results may differ. Moreover, the study failed to consider external contextual factors, such as socioeconomic positions, educational possibilities, or peer influences, which might substantially impact self-esteem and cognitive flexibility. Rectifying these shortcomings in future researches may yield a more thorough comprehension of the interaction among parenting styles, cognitive flexibility, and self-esteem.

Conclusion

The results of this cross-sectional study indicated a notable positive correlation between authoritative parenting, self-esteem, and cognitive flexibility, while a significant negative correlation was found between authoritative and authoritarian parenting styles. Furthermore, cognitive flexibility was shown to fully mediate the relationship between authoritative parenting and self-esteem. These findings present an intriguing overview, suggesting that certain psychological factors, such as authoritative parenting and cognitive flexibility, could enhance children's likelihood of developing self-esteem. This research offers valuable insights for parents, educators, policymakers, and future researchers regarding the crucial role of authoritative parenting and cognitive flexibility in fostering children's self-esteem. Additionally, the findings may help raise awareness among the public and professionals about risk factors associated with children's behavioral problems, facilitating the development of effective intervention programs.

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Conflict of Interest
None.

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