



# Influence of Early Family Nurturing Environment on Children's Psychological and Emotional Social Development

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## Abstract

**Background:** A good family environment and rearing mode play important roles in children's physical and psychological growth. This study aims to clarify the specific influence of early family nurturing environment on children's emotional and social development through longitudinal observation to provide theoretical reference for promoting the healthy development of children's bodies and minds.

**Methods:** Overall, 1320 parents of children aged 2 to 6 yr old in Xinyang City, Henan Province in 2021, were selected by stratified sampling. The children's physical and mental development, family rearing environment and emotional and social development were investigated by questionnaire.

**Results:** 58.03% family rearing environment is good, 27.95% normal, and 14.02% bad. There were significant differences in positive rates of adaptive ability, social behavior, language, developmental quotient score and emotional sociality among children in different families (all  $P < 0.05$ ). Language/cognition was significantly positively correlated with adaptive ability, social behavior, language and developmental quotient (all  $P < 0.05$ ), and social adjustment/self-care was significantly positively correlated with adaptive ability, social behavior, language and developmental quotient (all  $P < 0.05$ ). Emotional warmth/environmental atmosphere was negatively correlated with implicit behavior and disorder and positively correlated with ability (all  $P < 0.05$ ). Language/cognition was positively correlated with explicit behavior and ability (all  $P < 0.05$ ). Social adjustment/self-care was negatively correlated with explicit behavior and positively correlated with ability (all  $P < 0.05$ ); Neglect/punishment was significantly negatively correlated with explicit behavior, implicit behavior and disorder and significantly positively correlated with ability (all  $P < 0.05$ ).

**Conclusion:** The early family environment affects children's physical, mental, emotional and social development.

**Keywords:** Family nurturing environment; Children; Physical development; Mental development

## Introduction

Preschool children are in the rapid growth period and 2-6 years is an important period of children's physical and intellectual development. Family is the main place in preschool children's life. A good family environment and rearing mode play

an important role in children's physical and psychological growth. Emotional sociality is a kind of social characteristic that individuals acquire in life. Although the development of emotional sociality is a long-term process, the early school age,



as the enlightenment period of children's emotional and social development, plays a crucial role in the development of emotional sociality in adults (1). Although the influence of mental aspects on the development of children in the family has attracted the attention of various medical disciplines, few research results have been reported (2).

In the mid-20th century, some mental health workers proposed that parents' divorce and early death in the family were related to children's mental diseases. Parents' emotional abnormalities and personality characteristics would affect children's mental health (3-4). However, most previous studies took individual events or factors as the starting point and did not explore the relationship between the overall family mental environment (family upbringing environment) and children's mental health. With the emergence of evaluation questionnaires on parenting styles, such as the influential Questionnaire on the Evaluation of Parental Behavior Reported by Children (compiled by Schaefer) (5), more and more experts and scholars have observed in practice that parenting styles are closely related to children's personality health and social adaptability.

As early as the 1990s, Easterbrooks et al. (6) took 20-month-old children and their parents as research objects and prospectively studied the relationship between fathers' involvement in child rearing, parental characteristics and children's adaptability and found that fathers' involvement in education, parental characteristics and infant development were significantly related. The level of paternal involvement in education is related to the adaptive development of young children, and quality characteristics of parenting (attitude, behavioral sensitivity) are more important than quantitative characteristics (the amount of time parents spend with their children). Parcel (7) examined the determinants of the family environment provided by mothers to their young children, analyzed the influence of mothers' employment experience and family conditions on shaping children's family environment, and finds that the complexity of mothers' occupation will

have a positive effect on the family environment provided for children. The larger the family size, the less ideal the parenting environment will be. These findings explain how mothers' current occupational and family environments exert intergenerational influences. Wang et al. (8) explored the influence of family socioeconomic status and parenting style on children's academic development. They found that family socioeconomic status contributed to urban children's academic development through authoritative parenting style and believed that the influence of family upbringing environment on urban children and migrant children's academic development might be different. Sánchez-Núñez et al. (9) studied the relationship between parents and children's emotional intelligence perception and found that parents' perception of children's emotional intelligence would directly affect children's mental health and believed that family members had a significant effect on children's mental health. Esmaeelzadeh et al. (10) investigated the relationship between maternal emotional intelligence and children's motor development and found that maternal education level, family income, maternal emotional intelligence and children's motor development were significantly correlated. Childhood neglect from family members would distort and damage children's social adaptability (11). Children's early upbringing environment, social adaptability and self-regulation skills are significantly related to adolescent problem behaviors (12).

Previous literature has shown that the relevant factors in the family upbringing environment are not only closely related to children's physical development but also directly affect their mental health. Family factors are an inevitable topic when focusing on children's mental health and emotional and social development. Most studies on the correlation between family environment and children's physical and mental health development focus on children's intellectual development (8, 13). There is a lack of systematic exploration of the relationship between family upbringing environment and children's physical, emotional, and social development. The literature on the influencing factors of children's emotional

and social development is mostly cross-sectional surveys (14).

Hence, to understand the influence of early family rearing environment on children's development and emotional and social development, this paper will further clarify the specific influence of early family rearing environment on children's development and emotional and social development through longitudinal observation by summarizing the existing literature to provide theoretical reference for promoting the healthy development of children's bodies and minds.

## **Materials and Methods**

### ***Research object***

Stratified random sampling method was adopted. Two municipal districts were selected as survey sites based on the administrative division of Xinyang City in Henan Province and the proportion of the urban population. One street was randomly selected from each district, and questionnaires were distributed to parents of children aged 2-6 years in the selected districts. The parents or main caregivers of the research object filled in the scale and questionnaire on the spot. Before issuing the questionnaire, the trained investigators used unified guidance to explain to ensure that the parents or caregivers of the child understood the meaning and method of filling in the questionnaire and can fill in the questionnaire correctly and truthfully.

A total of 1451 questionnaires were distributed from April to October 2021, and 1320 valid questionnaires were collected with an effective recovery of 90.97%. Among 1320 children surveyed, 673 were male and 647 were female, with an average age of  $(4.05 \pm 2.41)$  years. All children had no history of congenital disease, chronic wasting disease, metabolic disease, mental retardation, or family history of short stature.

The parents were long-term residents of the Xinyang urban area, gave informed consent to the study, and voluntarily cooperated with the survey. This study has passed the Ethics Review of Xinyang University (No. Z2021003).

## ***Methods***

### ***Assessment of the home-rearing environment***

The Cronbach's  $\alpha$  coefficient, Guttman's half-reliability and retest reliability of the Early Childhood (0-6 years old) Family Parenting Environment Evaluation Scale were 0.887, 0.875, and 0.714, respectively (15). The reliability and validity of the scale were good, and was suitable for evaluating the early family parenting environment of children aged 0-6 years. The scale involved 41 items in four dimensions: emotional warmth/environmental atmosphere, language/cognition, social adaptation/self-care, and neglect/punishment. Each item is scored on a five-point scale, ranging from 1 to 5 points from "never" to "always". The result was graded according to the overall score of the scale, the score of each factor and the percentile of each factor, including good environment (percentile of each factor  $> 80\%$ ), medium environment (percentile of each factor  $\leq 80\%$  but  $> 20\%$ ), and bad environment (percentile of each factor  $\leq 20\%$ ).

### ***Emotional and social assessment***

The standardized Emotional and Social Development Scale of Chinese Urban Children (16) was adopted. The retest reliability of the four domains of the scale was 0.78-0.86, the partial reliability was 0.82-0.90, the Cronbach's  $\alpha$  coefficient was 0.79-0.88, and the reliability and validity were good, making it suitable for the assessment of emotional and social development of urban children. The scale involves four dimensions: explicit behavior, implicit behavior, disorder, and ability. The dimensions of explicit behavior include aggression/resistance, activity/impulsiveness, and peer aggression. Implicit behaviors include anxiety, depression/withdrawal, compulsion, fear, separation anxiety, and withdrawal in the face of new things. Disorders include negative emotions and sleep, eating, and sensory sensitivity. Competencies include compliance, imitation/play, attention, empathy, mastery of motivation, and prosocial peer relationships. A three-level scoring method was adopted for each item of the scale, with 0 points for non-conformity/occasional conformity, 1

point for partial /occasional conformity, and 3 points for high /frequent conformity. The original total score of each dimension is calculated, then the average score is calculated and converted into the corresponding T score.

**Development assessment**

The Neuropsychological Development Scale for children aged 0 to 6 years old (17) was used for evaluation, with Cronbach’s  $\alpha$  coefficient of 0.814, retest reliability of 0.765, and partial reliability of 0.850, indicating good reliability and validity. The scale can be used as an effective tool to evaluate the neuropsychological development of children aged 0 to 6 years. The scale assesses the development of the five functional areas: fine motor, gross motor, adaptive ability, social behavior, and language. The scores of each functional area and development quotient are calculated according to the degree to which the tested children can complete the corresponding movements.

**Statistical method**

EpiData database was established for data entry, and SPSS 21.0 software (IBM Corp., Armonk, NY, USA) was used for processing. Counting data were expressed as a percentage (%), and  $\chi^2$  tests were conducted for data comparison. Measurement data were expressed as mean  $\pm$  standard deviation ( $\bar{x} \pm s$ ), analysis of variance or *t-test* was conducted for data comparison, and correlation analysis was conducted to determine the Pearson’s correlation.  $P < 0.05$  was considered to be statistically significant.

**Results**

**Present situation of a nurturing family environment, emotional sociality, and physical development**

Among the children surveyed, 58.03% had a good upbringing environment, 27.95% had a normal one, and 14.02% had a bad one. The scores of a nurturing family environment, emotional sociality, and physical development are shown in Table 1.

**Table 1:** Family nurturing environment, emotional sociality, and physical development

<i>Investigation item</i>	<i>Dimension</i>	<i>Score (<math>\bar{x} \pm s</math>)/case (%)</i>
Family nurturing environment	Emotional warmth/ambient atmosphere	40.25 $\pm$ 11.36
	Language/cognition	41.28 $\pm$ 10.35
	Social adaptation/self-care	22.96 $\pm$ 7.36
	Neglect/punishment	28.71 $\pm$ 8.84
Emotional sociality	Explicit behavior	48.96 $\pm$ 7.05
	Implicit behavior	50.47 $\pm$ 6.97
	misalignment ability	47.85 $\pm$ 8.44
Physiognomy	ability	29.87 $\pm$ 5.28
	Fine movement	94.54 $\pm$ 13.69
	Great movement	93.58 $\pm$ 11.74
	adaptability	95.28 $\pm$ 12.74
	Social behavior	94.36 $\pm$ 11.89
	language	94.36 $\pm$ 11.89
Family nurturing environment	Developmental quotient	93.39 $\pm$ 12.98
	good	766 (58.03%)
	In general	369 (27.95%)
	bad	185 (14.02%)

**Development of children in different home-rearing environments**

Statistically significant differences in children’s adaptability, social behavior, language, and developmental quotient scores were observed in different family-rearing environments ( $P=0.03, 0.03, 0.01, 0.03$ , all  $P<0.05$ ). At the same time, no statistically significant differences in children’s fine and great movement scores were observed in dif-

ferent family-rearing environments ( $P=0.69, 0.58$ , both  $P>0.05$ ). Among the three groups, the adaptive ability, social behavior, language, and developmental quotient score of the good environment group was the highest, while the adaptive ability, social behavior, language, and developmental quotient score of the bad environment group was the lowest (Table 2).

**Table 2:** Comparison of physical development of children in different family-rearing environments ( $\bar{x} \pm s$ )

Group	Number of people	Fine movement	Great movement	Adaptability	Social behavior	Language	Developmental quotient
Good environment group	766	94.61±12.62	93.20±13.84	96.32±11.86	95.37±12.69	96.58±13.60	95.60±12.74
General environment group	369	93.84±11.87	93.68±12.08	94.17±13.84	93.98±10.85	94.88±12.07	94.14±12.33
Bad environment group	185	94.28±13.68	93.18±14.97	92.01±12.66	92.84±11.58	93.30±11.08	92.96±10.57
F Value		1.62	1.33	9.62	10.24	11.84	8.75
P Value		0.69	0.58	0.03	0.02	0.01	0.03

**Emotional and social development of children in different family-rearing environments**

Statistically significant differences in children’s scores of emotional sociality in different family-rearing environments were observed ( $P<0.05$ ). The good environment group had the lowest ex-

PLICIT behavior, implicit behavior, and dissonance score and the highest ability score among the three groups. In contrast, the bad environment group had the highest explicit behavior, implicit behavior, and dissonance score and the lowest ability score (Table 3).

**Table 3:** Comparison of emotional and social scores of children in different family-rearing environments ( $\bar{x} \pm s$ )

Group	Number of people	Explicit behavior	Implicit behavior	misalignment	Ability
Good environment group	766	39.57±8.48	41.69±7.84	39.84±10.45	39.65±6.33
General environment group	369	46.96±7.05	48.47±6.97	45.85±8.44	32.87±5.28
Bad environment group	185	62.65±10.28	61.87±6.74	59.05±7.82	20.36±4.58
F Value		13.25	9.65	12.01	15.01
P Value		0.00	0.00	0.00	0.00

**Correlation between family nurturing environment and emotionality level**

After controlling the effect of children’s age, gender, and other factors, a partial correlation analysis was conducted between the parenting

environment and children’s emotional and social levels. The results showed that emotional warmth/environment atmosphere was negatively correlated with implicit behavior and disorder and positively correlated with ability ( $P=0.00$ ,

0.01, 0.00, all  $P < 0.05$ ) but not significantly correlated with explicit behavior. Language/cognition was positively correlated with explicit behavior and ability ( $P = 0.02, 0.01$ , both  $P < 0.05$ ) but had no significant correlation with implicit behavior and disorder ( $P > 0.05$ ). Social adjustment/self-care was negatively correlated with explicit behavior and positively correlated with ability

( $P = 0.00, 0.01$ , both  $P < 0.05$ ) but had no significant correlation with implicit behavior and disorder. Neglect/punishment was significantly negatively correlated with explicit behavior, implicit behavior, and disorder and significantly positively correlated with ability ( $P = 0.00, 0.00, 0.02, 0.01$ , all  $P < 0.05$ ) (Table 4).

**Table 4:** Partial correlation analysis results of parenting environment and emotionality level

<i>Family nurturing environment</i>	<i>Explicit behavior</i>	<i>Implicit behavior</i>	<i>Disorder</i>	<i>Ability</i>
Emotional warmth/ambient atmosphere	- 0.092	- 0.202*	- 0.218*	0.242*
Language/cognition	0.261*	- 0.051	- 0.073	0.218*
Social adaptation/self-care	- 0.215*	- 0.083	- 0.136	0.238*
Neglect/punishment	- 0.203*	- 0.208*	- 0.214*	0.206*

Note : \* $P < 0.05$

**Correlation between parenting environment and developmental level**

After controlling the effect of children's age, gender, and other factors, a partial correlation analysis was conducted between the family-rearing environment and children's development level. The results showed the absence of a significant correlation between emotional warmth/environmental atmosphere and physical development indicators. Language/ cognition was positively correlated with adaptive ability, social behavior, language, and developmental

quotient ( $P = 0.00, 0.00, 0.00, 0.01$ , All  $P < 0.05$ ) but had no significant correlation with gross and fine motor. Social adjustment/self-care was positively correlated with adaptive ability, social behavior, language, and developmental quotient ( $P = 0.01, 0.00, 0.01, 0.00$ , All  $P < 0.05$ ) but was not significantly correlated with gross and fine motor development. No significant correlation between neglect/ punishment and fine motor, gross motor, adaptive ability, social behavior, language, and developmental quotient was observed (Table 5).

**Table 5:** Partial correlation analysis results of family-rearing environment and physical development level

<i>Family nurturing environment</i>	<i>Fine movement</i>	<i>Great movement</i>	<i>Adaptability</i>	<i>Social behavior</i>	<i>Language</i>	<i>Developmental quotient</i>
Emotional warmth/ambient atmosphere	0.023	0.078	0.113	0.064	0.092	0.133
Language/cognition	0.125	0.098	0.274*	0.277*	0.260*	0.392*
Social adaptation/self-care	0.062	0.100	0.258*	0.238*	0.210*	0.299*
Neglect/punishment	0.054	- 0.004	0.079	0.032	0.036	0.079

Note : \* $P < 0.05$

**Discussion**

Table 1 shows that 58.03% of the preschool children surveyed had a good family-rearing environment, 27.95% had a normal family-rearing

environment, 14.02% had a poor family-rearing environment, and their physical development was generally good. The findings are consistent with the results of previous study (18), indicating that the early family-rearing environment of children

in Xinyang City is generally good. However, some children had family-rearing environments that need to be improved. The main parenting problems in such families include excessive spoiling and over-protection of children, generational parenting, insufficient parental companionship, noisy parental market, and a disharmonious family atmosphere. With the improvement of people's material living standards, families are paying more attention to children's physical development. Children have sufficient nutrition intake, and thus, their physical development is in good condition.

The results from Table 2 show significant differences in children's adaptive ability, social behavior, language, and developmental quotient scores in different family-rearing environments. However, no significant differences were observed in the fine and gross motor scores. Adaptive ability, social behavior, language, and developmental quotient scores were higher in the good environment group than in the bad environment group. Similar to the conclusions of previous study (19), the results of this study show that a nurturing family environment can promote children's adaptive ability, social behavior and language development. Family environment factors are important for children's physical growth and development. In a nurturing family environment, children are more willing to take the initiative to express themselves and communicate with their parents, which positively promotes the development of their language and social behavior. Different family-rearing environments have no significant influence on children's gross and fine motor development, which may be because, in the early stage of parenting, children's height, weight, and motor ability are the focus of parents or their main caregivers. Under the guidance of obstetricians and pediatricians, most parents can master the methods of cultivating children's gross and fine motor development. Compared with cognitive and language guidance, motor ability guidance is relatively easy, and the effect of motor ability training can be shown quickly. Most parents can patiently cultivate motor ability in early childhood; even in different family-rearing environments, children's

gross and fine motor levels are not that much different.

The results from Table 3 show significant differences in the scores of emotional and social dimensions of children in different family-rearing environments. The good environment group had the lowest scores of explicit behavior, implicit behavior, and dysregulation and the highest ability score; the bad environment group had the highest scores of explicit behavior, implicit behavior, and dysregulation and the lowest ability score. Courtney et al. (20) pointed out that 7% to 24% of children aged 12 to 36 months had emotional and social problems. At the same time, relevant reports in China showed that child's emotional and social problems were higher, ranging from 10% to 20%, indicating that emotional and social problems were relatively common among preschool children (21-22). According to the study (23), children's emotional and social development will be affected by factors, such as family upbringing style, parents' degree of civilization, family structure, etc., and the results of this study are consistent with them. The results indicate that early family upbringing environment has an important effect on children's emotional and social development. The adverse family upbringing environment is more likely to make children exhibit explicit, implicit and dysregulated behavior and is not conducive to the development of children's attention imitation, compliance, and other abilities.

The results from Table 4 show that each dimension of family upbringing environment is significantly correlated with each dimension of emotional sociality. This is finding is consistent with Ha (24) that a good family upbringing environment can reduce depression, aggression, social withdrawal, attention deficit, and the degree of somatization of adolescents. The sociological theory holds that individuals' bad behaviors are acquired through acquired learning. Children have a strong ability to imitate in early childhood. During this period, bad family-rearing environment, such as noisy parents, tense family atmosphere, lack of parental companionship, parental neglect of children's reasonable needs, excessive

protection or spoiling of children, and no attention to the guidance of children's cognition, causes children to easily acquire bad behaviors under the osmotic influence and produce impulsivity, high activity, aggression, anxiety, cowardice, withdrawal, and other emotional and social problems.

On the contrary, a good family-rearing environment, such as a harmonious husband and wife relationship, relaxed family atmosphere, high-quality company, adequate parent-child communication, timely response to children's reasonable requirements, encouraging children to do what they can, and consciously guiding children to understand things, can make children grow up in a relaxed and pleasant family environment. Under the scientific and rational education guidance and cultivation of parents, it can promote the healthy development of children's bodies and minds. Meanwhile, the better the family nurturing environment, the lower the chances of parents neglecting, punishing, or over-protecting children and the stronger the autonomy of children, which is conducive to reducing their emotional behavior problems and improving their social ability.

Table 5 shows that language/cognition is significantly positively correlated with adaptive ability, social behavior, language, and developmental quotient. In contrast, social adjustment/self-care is significantly and positively correlated with adaptive ability, social behavior, language and developmental quotient. This result is consistent with the results reported by Lee et al. (25), which indicate that children's adaptive ability, social behavior, and language development are affected mainly by language/cognitive and social adjustment/self-care factors in the family rearing environment because children with low language/cognitive scores have less time for their parents to accompany their children in early childhood. Inter-generation education is limited because of the limited educational level, which could easily lead to insufficient early education of children, which in turn can affect the development of children's language and social behavior. Parents pay too much attention to children's height; weight and motor development in the ear-

ly years but still neglect the development of children's language, social adaptability, and other aspects.

## Conclusion

Children's physical, mental and emotional social development will be affected by the early family upbringing environment. Thus, creating a good family upbringing environment is of positive significance to reducing emotional and social problems and promoting the healthy development of children's bodies and minds. Most parents must reflect on their family education problems and actively correct them, as far as possible, to provide children with a good family upbringing environment that can promote the healthy growth of children's bodies and minds.

## Journalism Ethics considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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## Conflict of interest

The author declares that there is no conflict of interests.

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