



# Empirical Study on the Influence of Nurturers' Personality Traits on the Contradiction between Doctors and Patients in Pediatric Clinic

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## ABSTRACT

At present, the contradiction between doctors and patients is widespread, especially for children's hospitals, and our research aimed to found the relationship between personality traits (neuroticism dimension, conscientiousness dimension, extroversion dimension, and agreeableness dimension), gender, age, waiting time and doctor-patient contradictions in the outpatient department.

## Methods

NEO Five Factor Inventory was used to carry out NEO Five Personality Test on the parents in the waiting area of outpatient department in Shanghai Children's Hospital. The self-made observation table was used to record whether there were conflicts between parents and health care workers among the whole waiting time and the general information (age, gender) of parents. Logistic regression were used to analyze the relationship between nurturers' personality traits, age, gender, waiting time and the conflicts between parents and health care workers in the outpatient department.

## Result

Among the total of 8 factors, 3 factors were the independent influencing factors of doctor-patient contradiction, that is, the age (OR=1.086, 95% CI 1.016~1.161 P=0.015), waiting time (OR=2.745, 95% CI 1.936~3.892 P<0.0001) and neuroticism (OR=1.108, 95% CI 1.055~1.162 P<0.0001) were the risk factors of doctor-patient contradiction. The result showed that nurturers' personality traits had an influence on the doctor-patient contradictions; high neuroticism nurturers were more likely to have doctor -patient contradictions. All in all, with longer waiting time, the older with higher neurotic scores were more luckily to have conflicts with health care workers.

## Conclusion

The hospital can start from the factors that affect the doctor-patient contradictions to seek benefits and avoid disadvantages, improving the quality and safety of consultation and providing good medical experience for children so as to enhance the overall competitiveness of the hospital.

## Keywords

Nurturer, Personality

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## Introduction

The doctor-patient relationship is essentially a kind of social relationship which can reflect the social economy and ideology, can be constantly adjusted with the change of social and economic conditions and ideology [1]. That is to say, medicine is nothing more than a multifaceted relationship between the physician and the sick, or the medical community and society.

The doctor-patient contradiction is the harmful or even the aggressive behaviors between the physician and the sick. Barron and Richardson define the aggressive behavior as: "The attack is all kinds of behaviors, which are to hurt the individuals who want to escape from the harm." This definition has been recognized by many researchers and almost every researcher agrees that the aggressive behavior is a kind of behavior, which is to hurt another person's body or psychology: hostility, injury or disruptive behavior towards others, and this includes the aspect of body, mentality and language, and this mainly includes physical aggressive behaviors: pat, grasp, pinch, kick, spit, bite, beat, push, damage and destruction; and verbal aggressive behaviors: threat, aggression, humiliation, gossip, shouting, abuse and bullying [2,3].

Outpatient department is a "window" into much of overall hospital activity, Outpatient services directly affect the quality of hospital and medical treatment order, and even affect the benefit of the hospital and reputation [4]. However, due to the inequitable allocation of health resources in China, the majority of sophisticated technical equipment and talent are concentrated in the tertiary referral center, Therefore, patients are concentrated here [5]. Then, dissensions are concentrated here. Children's hospitals are faced with "sick baby", the particular patient, which may lead to dissension between doctors and patients.

At present, the contradiction between doctors and patients has become an unavoidable social problem. According to incomplete statistics, there were 30 cases of injuries reported by the media in China in 2013, which was a harsh reality of doctor-patient conflicts. When referring to those "dangerous patients," are often described as difficult to communicate, a delusional, paranoid, sensitive, suspicious, irritable and other word, which actually reflects the personality traits of "dangerous patients" from a side view. Based on the investigation on the extreme doctor-patient conflicts it can be concluded that the tension

between doctors and patients is inseparable with the personality characteristics of patients.

Personality traits describe individual characteristics such as cognitive, emotional, and behavioral aspects that may play a role in psychological or an increased propensity to psychopathologic states including depressive symptoms [6,7]. Based on the Five-Factor Model (FFM or the Big Five), personality traits are hierarchically organized into five broad domains, consisting of extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. The FFM has accumulated a compelling body of empirical support and has been validated in many cultures and universally accepted as a basis for comparing, contrasting and integrating diverse sets of personality traits and it has become the most influential personality theory model in the world [8]. Although there are still controversies in some details, the scholars have confirmed the reliability and importance of Big Five Personality Structure Model in studying the relationship between individual differences and health [9]. Five traits have also been linked with behaviors, affective experiences and cognitive processes across the lifespan and cultures. Studies have found that neuroticism refers to the tendency to experience negative emotional states including anxiety, depression or anger [10,11], and higher neuroticism has been linked with increased negative feelings and maladaptive behavioral responses to stressful experiences. Extroverted personality trait is characterized by active and sociable characteristics [12]. Openness to experience is the tendency toward preferring unconventional ideas and experiencing diverse emotions [13]. Agreeable personality trait is good at communicating with others, easy to accept others' reasonable suggestions and explanations and easier to cooperate with others. With more sense of responsibilities, responsible personality trait is more inclined to take responsibilities when facing difficulties and strives to find solutions [14]. Different types of personality traits have different responses to stress, such as emotional regulation or the way of solving problems [6,15]. Neurotic people tend to show negative or inappropriate behavioral responses to stressful or unpleasant events. Extrovert people are more likely to see the positive side of things and reduce the negative effects of negative emotions or things [16]. Agreeable people tend to experience less social stress by avoiding conflicts between people more easily [17]. Responsible people are

relieved of their stress by solving problems more efficiently and effectively, so different personality traits produce different behaviors and emotions in the face of adverse events or stressful events. Therefore, we have reason to speculate that these people with different personality traits will make different attributions in the face of adverse life events such as family diseases. Since recent studies have shown that treatments can modify personality traits, developing interventional strategies should take into account personality factors. For example, efforts to intervene in changing neuroticism might have beneficial effects for the health care system [18]. NEO-FFI is a simplified version of the Big Five Personality Questionnaire (NEO-PI) [19], characterized by conciseness and effectiveness. And NEO-FFI consists of 5 dimensions of neuroticism, extraversion, openness, agreeableness and conscientiousness. Each dimension has 12 entries respectively, so there are 60 entries in total. With five-stage scoring, positive entries have positive scores, and negative entries have reverse scores to calculate the total score of each dimension. The questionnaire in the group testing of Chinese college students shows that it has better reliability and construct-related validity.

From a physiological or psychological point of view, the age of six is a very fast and critical period in the development of the child's nervous system and mental ability. The problems that arose during this period not only restrict children's development at that time, but also have a long-term effect on the intelligence level and social adaptability in the future [20,21]. Personality is mainly established in the living environment, and the preschool age is an important period for the formation of children's personality. As an important psychological characteristic, personality connotation is complicated. No matter in physical ability, and cognition, the good personality plays an important supporting role in the development of the individual, to a certain extent, influence or decide the external behavior of children. According to the psychodynamic theory, from birth to adulthood, people generally undergo 5 stages of personality development: trust and distrust stage from 0 to 1.5 years old, the stage of autonomy and doubt from 1.5 to 3 years old, active and guilt stage from 4 to 5 years old, diligence and inferiority stage from 6 to 12 year old and self-identity and role confusion stage from 12 to 17 years old. In particular, preschool aged children are in the "active-guilt" stage of personality development,

which is a period with great changes in children's personality development. Although personality development is influenced by its own biology (gender, age, etc.) and psychological traits (such as temperament), external environment and interpersonal interaction are more important factors. Especially the family environment, the disharmony of the family environment is the leading cause of all kinds of bad behavior in children [22], and the main members of a family are children's parents (guardian), parents are children's enlightenment teacher, his words and deeds as well as personality characteristics influence the formation of children's personality unconsciously. If parents often throw tantrums on their children or beat their children, the children will develop bad behaviors such as anger, rebellion or timidity.

Previous studies show that patient satisfaction in the clinic department is determined not only by the medical quality, but also by the waiting time [23-27]. But rare literatures report the influence of the personality traits of pediatric patients' family members on doctor-patient conflicts in the clinic department, and what's more, words and deeds and personality traits of pediatric patients' family members influence the formation of children's personality unconsciously, and pediatric patients' medical consultations are part of their social behaviors. Good medical experience has a role in promoting their correct understanding of medical works and is beneficial to the physical and mental health development of pediatric patients. Children health care clinic is committed to protect the physical and mental health development of children, so good medical environment is particularly important. This study uses NEO Five Factor Inventory (NEO-FFI) in Chinese translation version to conduct personality tests on parents for medical consultations in pediatric clinic department and fill in the basic information such as age, gender, and observation method is used to understand the total waiting time of pediatric patients' family members and whether doctor-patient conflicts occur. This study tries to understand the influence of nurturers' personality traits on the doctor-patient conflicts in pediatric clinic department, so that the nurturers have an understanding of their own personality characteristics and they overcome their bad behaviors consciously that may affect children development under the guidance of doctors for children health care and optimize the parenting style constantly as much as possible

to create favorable conditions for promoting children's development. In addition, starting from the factors that influence the contradictions between doctors and patients, the hospitals take advantages and avoid disadvantages so as to improve the medical consultation quality and the medical consultation safety of hospitals, thereby improving the comprehensive competitiveness of hospitals.

This study was carried out in child health care clinic of Shanghai Children's Hospital, and in this study, the doctor-patient relationship includes doctors, nurses and medical workers in the hospital and children's caregivers in patients. In this paper, the connotation of the relationship between doctors and patients mainly includes the aggressive behavior of both doctors and patients during the waiting process in children health care clinic, including language attack and behavior attack.

## Materials and Methods

### ■ Participants

This research was part of a large project dedicated to improving current doctor-patient relationship. The data were collected from Shanghai Child's Hospital. The study was conducted with the approval of the university's ethics review board and the university's ethics review board and the targeted institution. Both naturalistic observation and survey method approaches were implemented.

The sampling frame covers all children parents of out-patient clinics in Shanghai Child's Hospital. From January to May 2017, with the help of health workers, all 600 parents of sick children completed the NEO personality Inventory. We gave an observation with the self-made observation table when they just came into the waiting room. We promised the participating parents that their responses would be confidential, would be used solely for research purposes and would not influence their income and promotion. When the parents were doing the personality scales, we would give them some introduction and reminded them to finished all the questions. The survey yielded a response rate of 98.6%. After deleting 33 incomplete questionnaires we obtained a final sample of 547 little patents' parents.

### ■ Research tools

#### ■ NEO personality inventory

To assess personality we used the Chinese version of the NEO-Five Factor Inventory

(NEO-FFI) which was revised by Yao Ruosong and Liang Leyao (2010), based on the Five Factor Model (Costa and McCrae, 1992). The scale consists of 60 items assessing five personality constructs. Extraversion comprises warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions. Conscientiousness denotes competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Neuroticism is characterized by anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability. Finally, Openness to Experience is characterized by fantasy, aesthetics, feelings, actions, ideas, and values. Respondents rate each item on a 5-point Likert scale (0=strongly disagree to 4=strongly agree). Responses to items on each subscale are totaled and averaged, yielding five subscale scores. A consistent factor structure, and good validity and reliability of the scale have been verified in a range of 1255 Chinese college students samples. Cronbach's alphas in the current study were 0.78 for Extraversion, 0.72 for Agreeableness, 0.63 for Openness, 0.74 for Conscientiousness, and 0.77 for Neuroticism, showing acceptable reliability.

### ■ Observation table

According to the definition of the aggressive behavior, the aggressive behavior is a kind of behavior, whose purpose is to hurt another person's body or psychology, which means hostility, injury or disruptive behavior towards others in the aspect of body, mentality or language, mainly including physical aggressive behaviors: pat, grasp, pinch, kick, spit, bite, beat, push, damage and destruction; verbal aggressive behaviors: threat, aggression, humiliation, gossip, shouting, abuse and bullying. *General Workplace Abuse (GWA)*, questionnaire and relevant literature [2,3]. the observation table is compiled.

### ■ Experimental procedures

Firstly, NEO Five-Factor Inventory was given out to pediatric patients' parents waiting in the waiting area of children health care clinic in Shanghai Children's Hospital, and the basic information should be filled in, including: parents' age and gender, and the timer is used to record the start time of waiting (from entering the waiting area) and the end time of waiting (from entering doctor's consulting room), and the observer is designated to record the whole observation on the tested parents to observe whether there are contradicts between doctors and patients (ask the medical workers who are in touch with them, which is regarded as a

Empirical Study on the Influence of Nurturers' Personality Traits on the Contradiction between Doctors and Patients in Pediatric Clinic

supplementary) and then it should be recorded in the observation table.

■ Data processing

SPSS 20.0 was used for statistical analysis. The qualitative data were expressed as a percentage. Chi-square test was used for comparison among groups. P<0.05 was considered as statistically significant. Logistic regression modeling was used and results were presented as odds ratio (OR) and 95% confidence interval (CI).

Results

■ Detection rate of doctor -patient contradictions

The survey has collected a total of 547 valid forms, among 547 parents, 57 have doctors-patient contradictions, and the incidence rate is 10.4%, of which 17 male, accounting for 29.8% and 40 female accounting for 70.2%. We divided all the parents into two group. The parents having contradiction with health workers are happen group and the others are non-happen group. The differences in socio-demographic characteristics and personality of the happen group and non-happen group parents were computed with independent t-tests (continuous variables) and Chi-square tests (categorical variables). To investigate the associations of personality dimensions, age, sex, waiting time between the happen group and non-happen group, logistic regression analyses were conducted.

■ Basic data and comparison of personality dimension score

The comparison results of parental basic data and personality dimension scores with and without doctor -patient contradictions is shown in Table 1. There was no notable difference between the two groups of gender and age (P>0.05), the waiting time of happen group is more than that of non-happen group and the difference was statistically significant (P<0.05). In the personality dimension score, the neurotic score of parents in happen group was significantly higher than that of non-happen group, and the difference was statistically significant (P<0.05), and there is no significant difference in the other four dimensions between the two groups (all P>0.05).

■ Logistic regression

■ Multi-factor analysis

After quantitative process of eight influencing factors including gender, age, waiting time, Neuroticism dimension, Conscientiousness dimension, Extroversion dimension, Agreeableness dimension and Openness to experience dimension of parents, use Logistic regression model (Table 2) (Figure1) to analyze and the results showed that among the total of 8 factors, 3 factors were the independent influencing factors of doctor-patient contradiction, that is, the age (OR=1.086, 95%CI 1.016-1.161 P=0.015, waiting time (OR=2.745, 95%CI 1.936-3.892 P<0.0001) and neuroticism (OR=1.108, 95%

Table 1: Basic data and comparison of personality dimension score.

	happen	no happen	z	P
sex (male/female)	17/40	191/299	1.816	0.1778
Age	33.54 ± 4.687	32.52 ± 4.746	1.537	0.125
Waiting time	3.61 ± 0.929	2.88 ± 0.103	5.734	< 0.0001*
Agreeableness	42.25 ± 4.560	43.03 ± 4.173	-1.324	0.186
Conscientiousness	42.61 ± 6.532	44.19 ± 6.115	-1.828	0.068
Extroversion	40.91 ± 6.066	41.50 ± 5.548	-0.755	0.451
Neuroticism	35.33 ± 10.193	31.30 ± 6.371	4.200	< 0.0001*
Openness to experience	35.84 ± 5.003	36.50 ± 4.893	-0.939	0.338

Table 2: Logistic regression analysis model.

	β	OR	95%CI	P
Age	0.082	1.086	(1.016, 1.161)	0.015*
SEX (male/female)	-0.742	0.476	(0.242, 0.936)	0.031*
Waiting time	1.010	2.745	(1.936, 3.892)	<0.0001*
Agreeableness	-0.025	0.975	(0.897, 1.060)	0.560
Conscientiousness	-0.009	0.991	(0.930, 1.055)	0.770
Extroversion	0.012	1.012	(0.948, 1.080)	0.719
Neuroticism	0.102	1.108	(1.055, 1.162)	<0.0001*
Openness to experience	.027	0.973	(0.912, 1.038)	0.406

CI 1.055-1.162  $P < 0.0001$ ) were the risk factors of doctor-patient contradiction.

**Correlation analysis**

Figures 2-4 shows the different waiting time, age, neuroticism on the incidence of contradiction between doctors and patients after the confounding factors are controlled respectively.

It can be seen from Figure 2 that there is a discrepancy between the incidence of contradiction between doctors and patients in the different waiting time, there are significant differences in the incidence of events between 4.1 to 5 hours and 2.1 to 3, and 1 to 2 h ( $P < 0.001$ ), there is no significant difference in the incidence of events between 4.1 and 5 h and between 3.1 and 4 h ( $P = 0.053$ ). Tip with the extension of waiting time, the rate of the incidence of doctor-patient conflicts is higher.

It can be seen from Figure 3 that there is a discrepancy between the incidence of contradiction between doctors and patients in the different age there are significant differences in the incidence of events between  $< 31$  and  $31-40$ , and  $> 40$  ( $P < 0.05$ ), there is no significant difference in the incidence of events between  $31-40$ , and  $> 40$  ( $P = 0.942$ ). Tip with the extension of age (Over 30 years old), the rate of the incidence of doctor-patient conflicts is higher.

It can be seen from Figure 4 that there is a discrepancy between the incidence of contradiction between doctors and patients in the different score of neuroticism, there are significant differences in the incidence of events between 12-22 and 43-52 ( $P < 0.001$ ). Tip with the extension of the score of neuroticism, the rate of the incidence of doctor-patient conflicts is higher.

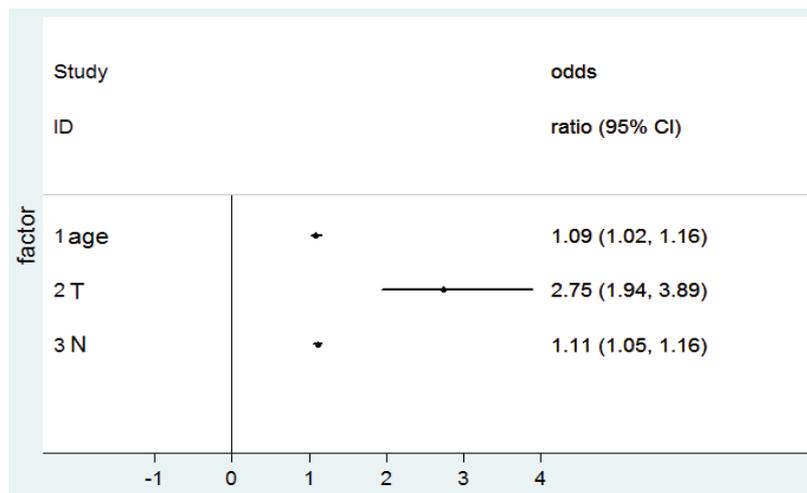


Figure 1: Logistic regression analysis model.

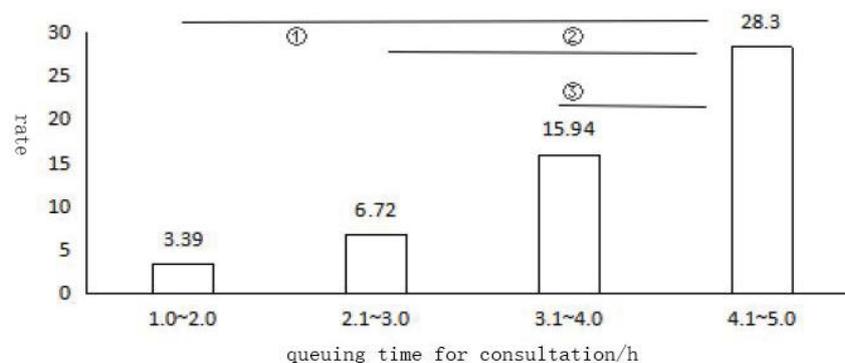


Figure 2: Different waiting time and incidence (○1  $P < 0.001$ , ○2  $P < 0.001$ , ○3  $P = 0.053$ ).

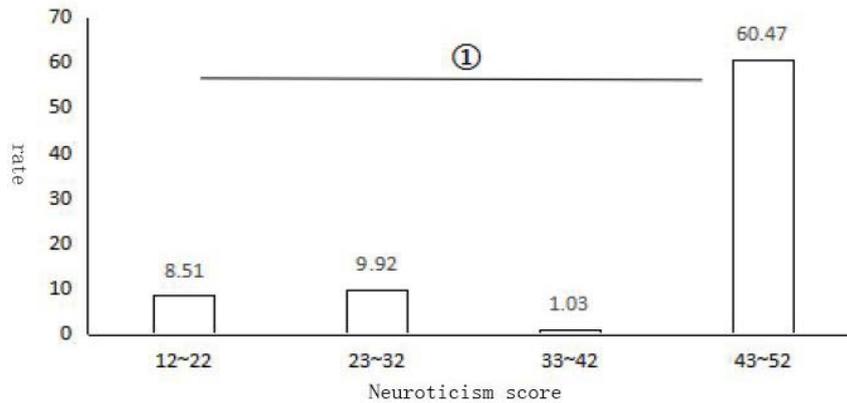


Figure 3: Different age and incidence.

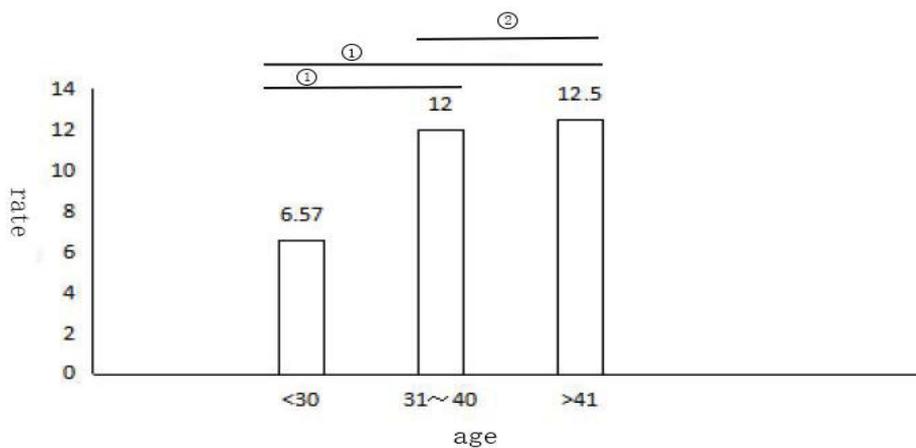


Figure 4: Different score of neuroticism and incidence (P<0.001).

### Conclusion

The research shows that the doctor-patient contradictions are widespread at home and abroad. The incidence rate in different countries of doctor-patient contradictions relations exist difference because of the level of economic development and medical treatment [1]. The results suggest that the incidence rate of doctor-patient contradictions in the children health care clinic at our hospital is 10.4%. Previous researches have shown that satisfaction degree of outpatient depends not only on the quality of medical treatment but also on the waiting time [19,21]. The research made a quantitative treatment of eight influencing factors including gender, age, waiting time, neurotic dimension, conscientiousness dimension, extroversion dimension, agreeableness dimension of parents and used Logistic regression model to analyses them. The results showed that among the total of 8 factors, 3 factors were the independent

influencing factors of doctor-patient contradiction, that is, the age (OR=1.086, 95%CI 1.016-1.161 P=0.015, waiting time (OR=2.745, 95% CI 1.936-3.892 P<0.0001) and neuroticism (OR=1.108, 95%CI 1.055-1.162 P<0.0001) were the risk factors of doctor-patient contradiction. That is to say, the incidence rate of doctor-patient contradictions is higher with the extension of waiting time and a large proportion of them is people over 30 years old with high neurotic scores. The shortcomings of the research don't involve parents of other pediatric surgery clinic, pediatric internal medical clinic and emergency treatment. The incidence rate of doctor-patient contradictions of the statistical results may be is lower than that of children hospital clinic. Previous researches have shown that the external environment has a big impact on children's development, especially the parental factors [27,28]. Parents taking children for medical treatment is a part of the

social behavior of children. In the meantime different languages and behaviors corresponding to different personality traits of parents are a microcosm of their parenting model. Parents' bad languages and behaviors will have a negative influence on children's physical and mental health, increasing children's prejudice of medical treatment and affecting the improvement of the doctor-patient contradictions in the future.

Therefore the research made the nurturers (parents) understand their own personality traits and suggested they conscientiously overcome the bad behaviors that may affect the children's development under the guidance of the children health care doctors for the healthy development of children's physical and mental health [3]. And it is continuous to optimize the parenting model and create favorable conditions for children to promote their development as far as possible. Therefore the research made the nurturers (parents) understand their own personality traits and suggested they conscientiously overcome the bad behaviors that may affect the children's development under the guidance of the children health care doctors for the healthy development of children's physical and mental health. And it is continuous to optimize the parenting model and create favorable conditions for children to promote their development as far as possible. In addition, the hospital can start from the factors that affect the doctor-patient contradictions to

seek benefits and avoid disadvantages, improving the quality and safety of consultation and providing good medical experience for children so as to enhance the overall competitiveness of the hospital. At the same time to provide a new perspective for the public to correctly understand the contradiction between doctors and patients, and to seek harmony between doctors and patients is always the pursuit of the society. How to strengthen the communication between doctors and patients and promote the harmony between doctors and patients is not only conducive to the rapid development of medical services, but also the key to achieving social harmony.

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