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Comparison of Parenting Styles in Parents of 3-5-Year-Old Kindergarten Children with and without Developmental Delay

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Abstract

Background

Considering the effective role of the environment, family, and especially parents in the development of children, this study was conducted to compare parenting styles in parents of 3-5 year-old kindergarten children with and without developmental delay.

Materials and Methods: This descriptive cross-sectional study was performed on 280 children aged 3 to 5 years and their parents by multi-stage-cluster sampling (based on the division of the Welfare Organization) in kindergartens in Tehran, Iran, in 2019. Parents completed the following questionnaires to collect the data: a demographic, Baumrind's parenting styles, and the Ages and Stages Questionnaires (ASQ). The data were analyzed using SPSS software version 19.0.

Results: The mean age of children was 3.98± 0.71 years, and the rate of developmental delay was observed in 9% (n=25). The highest frequency of developmental delay was observed in the age group of 3 years and in the field of problem-solving and the lowest developmental delay was observed in the age group of 5 years and the personal-social domain. 95.7% of mothers and 91.1% of fathers had an authoritative parenting style, 1.4% and 3.6% had permissive parenting style and 2.9%, and 5.4% had authoritarian style, respectively. Mothers of children without developmental delays had higher levels of education ($P<0.05$). In addition, fathers who had an authoritative parenting style had a higher level of education ($P<0.05$). The results showed no significant difference between parenting style in parent's children with and without developmental delay.

Conclusion

According to the results of the present study, parenting styles show no differences between children with and without developmental delay. Further research is recommended.

Key Words: Child development, Parenting styles, Kindergarten.

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1- INTRODUCTION

Childhood is the most important stage of human development. In this period, development takes place in the areas of physical, social, cognitive, emotional, and language. During this period, the individual's personality is established and formed. Most behavioral disorders and maladaptation after childhood are due to a lack of attention to this sensitive period and lack of proper guidance in the process of growth and development (1). The experiences that the child gains in the first six years have impactful consequences throughout her/his life (2). The importance of preschool age has been emphasized by many child psychologists. They believe that a child reaches 80% of their development before the age of five and that his intelligence, talent, skill, temperament, and personality are formed during this period (1).

Children from the age of 5 to 6 are a small version of who they will be in the future; In other words, he places the greatest emphasis on the importance of preschool. Preschool is the best time for parents to raise and develop their children (3). Most behavioral disorders and maladaptation after childhood are due to a lack of attention to this sensitive period and lack of proper guidance in the process of growth and development (4).

Developmental disorders and behavioral problems after acute infection and trauma are the most common problems in pediatrics (5). Developmental disorders have a huge impact on a person's individual and social functioning (6). Developmental delay can be attributed to infants and children up to 5 years; this delay must be continuous for six months or more in two or more areas of different areas of development (7). Grantham McGregor et al. (2007) estimated that 200 million children under the age of 5 suffer from these disorders and do not reach their full potential (8). The prevalence of developmental disorders is 44.6% (9) in Ghana, 46.1% (10) in Colombia, 31.7% (11) in Brazil, and 46% in Canada (12) have been reported. In the United States, developmental delays range is from 15–20% in various areas (13), 30% of preschool children (from birth to 6 years old) have developmental problems in one or more areas, which shows the importance of diagnosing and treating developmental disorders at this time (14). In Iran, 3.69 to 4.31% in different developmental domains have been reported (15), and in different cities between 11.8% and 30% in different age groups has been reported (16-18).

The development of children is influenced by several factors. Studies reported factors such as genetic, biological, psychological, environmental, nutritional, infectious maternal diseases, maternal depression, and exposure to violence and toxins (13, 14, 19-21). The family is the first and most stable institution that builds the foundation of a child's behavior and personality. Studies on the role of the family in shaping children's behavior and personality show that the family is one of the most important factors affecting a child’s development. Many children, during their developmental process, acquire undesirable educational characteristics and develop behavioral problems (4). In the family, the child learns basic attitudes about the world; grows physically and mentally; learns speaking techniques; learns the basic norms of behavior, and eventually, the child’s attitudes, morals, and spirits are formed and socialized (22).

From the set of relationships between parents and children, we can mention parenting styles. Parenting styles are the practices that parents use to deal with their children. These practices have a great impact on the formation and development of their personality and behavior (23, 24). These practices show the emotional relationships and the quality of parents'

relationship with their children, which is very important in the process of learning and development of children (25). It is very important for parents to fully support the physical, emotional, social, and psychological development of their children and to provide a suitable environment for their growth and development (26). One of the factors that plays a role in children's development is parenting styles (27, 28).

Baumrind (1966), mention parenting styles from the interaction of three characteristics: 1) acceptance and close relationships, 2) control, and 3) independence, which leads to three methods of authoritative, permissive, and authoritarian parenting (29). Authoritative parenting, as a parenting style, can be marked by high levels of nurturance, involvement, sensitivity, reasoning, and encouragement of autonomy. The authoritative parent tries to direct the activities and decisions of their children via reasoning and discipline.

Conversely, permissive parenting involves making few demands, displaying non-controlling behaviors, and employing minimal punishment. For example, parents with a permissive style do not establish rules and guidelines for their child's behavior. The other end of the continuum describes the authoritarian parenting characterized as parents display highly directive behaviors, high levels of behaviors that are restricted and rejected, and power assertive behaviors (30).

Family risk factors such as dysfunctional parenting can be strong predictors of the development and maintenance of emotional and behavioral problems in children and adolescents (31). Previous studies have shown that parenting styles may worsen the symptoms of attention deficit hyperactivity disorder (32). There is a link between different areas of social skills such as altruism, conversation with positive parenting practices, lack of negative parenting practices, and the existence of negative parenting practices (33). Authoritarian and authoritative methods of mothers have a positive and negative relationship with children's creativity, respectively, but mothers' permissive style has nothing to do with their children's creativity; while the authoritarian style can help increase children's creativity (25). Because many factors affect the development of the child and most studies in the field of parenting methods have been done after the age of 6 and in adolescence and the lack of research related to the development and styles of parenting in Iran this study was conducted to compare parenting styles in parents of 3-5 years old kindergarten children with and without developmental delay in 2019, in Tehran, Iran.

2- MATERIALS AND METHODS

2-1. Study Design and Subjects

This descriptive cross-sectional study was performed on 280 children in kindergartens and their parents in Tehran by multi-stage-cluster sampling (based on the division of the Welfare Organization), 10 kindergartens were randomly selected from all areas. According to the rate of developmental disorders, and previous studies in Iran (17, 18), the required number of samples was calculated using the following formula:

p=0.2, d=0.05
$\alpha = .05 \qquad z = 1.96$
n=240

$$n = \frac{p(1-p)z^2_{1-\alpha/2}}{d^2}$$

Taking into account the 10% sample loss, the minimum required sample of 265 parents and their children was calculated and finally 280 people entered the study. Samples were selected from the parents of children referring to kindergartens in the three regions of Tehran province who had

the characteristics of research units. The criteria for selecting parents for this study were Iranian citizenship, with literacy (at least elementary literacy), no obvious genetic problems, and no history of developmental problems in their children or close relatives. Inclusion criteria for children include no obvious congenital anomalies, no history of hospitalization due to head trauma or accidents leading to head injuries, and no history of chronic diseases such as asthma, allergies, anemia, nutritional problems, and other diseases that affect the process of development.

All children lived with both parents. If the questionnaires were not completed, they would be excluded from the study. The questionnaires were completed by the parents at home. In case of a face-to-face meeting between the parents and the researcher, the questionnaires were given to them by the researcher to complete at home and return to the kindergarten. Otherwise, it was given to the parents by the kindergarten teacher to complete the questionnaires.

2-2. Data Collection

Data collection tools were demographic information (age, gender, level of Parents' education, and employment), age and stages questionnaire (ASQ) to assess the developmental status of children aged 3-5 years (36-60 months), and Baumrind parenting styles questionnaire (PSI), to know the parenting style of each parent. The age and stages questionnaire contains 19 questionnaires for 19 different age groups from 4 to 60 months. Each questionnaire contains 30 questions in 5 domains: **1**- Communication (It means phonetics, listening and understanding), **2**- Fine motor (It means the skill of hand and finger movements), **3**- Gross motor (It means movements of the arms, legs and torso), **4**- Individual-social (It means social skills such as playing in groups, playing with toys and other children, paying attention to the human face, knowing the parents, distinguishing familiar people from the stranger, playing kindergarten games), and **5**- Problem-solving (It means learning skills and playing with toys). The answer "yes" is 10 points, the answer "sometimes" is 5 points and the answer "not yet" is zero points. Scores in each domain are calculated between zero and 30, and the total of 5 domains is between 0 and 300. ASQ is a reliable tool with Cronbach's alpha of 0.86 and reliability of 0.93 for Iranian infants (34). The children who score less than the cut-off point in any domain have a problem in that domain. The Ministry of Health and Medical Education determined the cut off point for Iranian children (35). The scores of the questionnaires were calculated by the researcher and compared with the cut-off points and if: Equal to or greater than (-1SD), the child has no problem at the moment. Equal to or less than (-2SD), developmental delay is considered and the child should be referred for follow-up and more accurate assessments, and if there is a standard deviation between the two, the test is repeated 2 weeks later.

The Baumrind Parenting Styles Questionnaire (PSI) was used to diagnose the parenting style in this study. The initial form of this questionnaire has 30 items, which was designed and developed by Diana Baumrind in 1973. This questionnaire was translated by Sadr et al. in 2018 and was standardized for Iranian society (36). Parents' parenting styles are measured in three different ways, and out of these 30 questions, 10 separate questions are assigned to all three styles of authoritative, permissive, and authoritarian parenting. Questions 1, 6, 10, 13, 14, 17, 19, 21, 24 and 28 in a permissive style, and sentences 2, 3, 7, 9, 12, 16, 18, 25, 26, and 29 in an authoritarian style, and questions 4, 5, 8, 11, 15, 20, 22, 23, 27, and 30 are authoritatively style related. For each phrase, the 5 columns (strongly agree, somewhat agree, somewhat disagree,

disagree, and strongly disagree) are scored from 0 to 4 respectively, by summing the scores of the questions for each method and dividing it by the number of separate score questions. Is obtained and the method with the highest score is considered as the parenting method of those parents. The validity of this questionnaire has been done in various studies. Buri (1991) tested the reliability of the questionnaire using the internal consistency method in the group of mothers for authoritative, permissive, and authoritarian parenting styles, 0.75, 0.85, and 0.82, respectively, and for fathers 0.74, 87.7, and 0.85, respectively, calculated (37). Esfandyari (1995), based on the retest method, reported the reliability of the test on a group of 120 mothers with a time interval of one week for permissive, authoritative, and authoritarian styles, 0.73, 0.77, and 0.69, respectively (38).

2-3. Ethical consideration

All parents were explained about the objectives of the research and informed consent was taken from them to participate in the research. They were also fully assured that the information obtained would be confidential. If the child had a developmental delay, they were referred to a health center for further investigation. This research was conducted after obtaining the license and code of ethics of the ethics committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran.

2-4. Data Analysis

Findings were analyzed using SPSS software version 19.0. Kolmogorov-Smirnov test was used to evaluate the normality of the quantitative variable such as age of parents. To describe the information obtained from descriptive statistics and analyze data, inferential statistics, including independent t-test (quantitative variables), Chi-square test (nominal variables), and Mann-Whitney test were used (non-parametric, ordinal variables), and to determine the relationship between independent variable (parenting styles), and dependent variable (child development), Fisher's exact statistical test was used. A significance level of 0.05 was considered.

3-RESULTS

Out of 300 questionnaires given to parents, 93.33% (n=280) of questionnaires were completed and returned. The mean age of the children in this study was 3.98± 0.71 years. 55% (n=154) of children were girls and 45% (n=126) were boys and 55.4% of children did not have any siblings. The mean age of parents in the two groups of children with normal development and developmental delay was not significantly different. Mothers with children without developmental delays had higher levels of education (**Table.1**).

Table-1: Demographic characteristics of parents in two groups of children with developmental delay and without developmental delay.

Variables		With developmental, delay, n= 25	Without developmental, delay, n= 255	P-value
Mother age, year Frequency (%)	20-30	8 (32%)	68 (26.7%)	P= 0.94 Independent t test
	31-40	14 (56%)	171 (67.1%)	
	41-50	3 (12%)	16 (6.3%)	
Mean± SD, year		33.44± 5.17	33.51±4.51	
Father age, year Frequency (%)	25-35	9 (36%)	92 (36.1%)	P= 0.51 Independent t test
	36-45	13 (52%)	143 (56.1%)	
	46-55	3 (12%)	20 (7.8%)	
Mean± SD, year		38.16 ± 5.48	37.47 ± 4.95	

Level of Mother's education Frequency (%)	Primary	1 (4 %)	5 (2 %)	P=0.037 Mann-Whitney test
	High school	8 (32%)	50 (19.6%)	
	Diploma	3 (12%)	26 (10.2%)	
	Bachelor's degree	11(44%)	116 (45.5%)	
	Master degree	2 (8%)	58 (22.7%)	
Level of Father's education Frequency (%)	Primary	1 (4 %)	12 (4.7 %)	P= 0.19 Mann-Whitney test
	High school	7 (28%)	55 (21.6%)	
	Diploma	5 (20%)	27 (10.6%)	
	Bachelor's degree	8 (32%)	96 (37.6%)	
	Master degree	4 (16%)	65 (25.5%)	
Mother's employment Frequency (%)	Unemployed (Housewife)	18 (72%)	126 (49.4 %)	P=0.09 Chi-square test
	Manual worker	1 (4%)	24 (9.4 %)	
	Employee	6 (24%)	125 (41.2%)	
Father's employment Frequency (%)	Self-employed	11 (44%)	93 (36.5%)	P= 0.46 Chi-square test
	Manual worker	4 (16%)	28 (11%)	
	Employee	10 (40%)	134 (52.5%)	

The study of the developmental status of children shows that the highest frequency of developmental delay was observed in the age group of 3 years and the field of problem-solving and the lowest developmental delay in the age group of 5 years and the personal-social domain (**Table.2**).

Table-2: Developmental status in 3- 5 years old kindergarten children, n=280.

Domains of Development	Normal Development, n= 25	Delay Development, n= 255
	Frequency (%)	Frequency (%)
Communication	275 (98.2 %)	5 (1.8 %)
Gross Motor	271 (96.8 %)	9 (3.2 %)
Fine Motor	274 (97.9 %)	6 (2.1 %)
Problem-Solving	268 (95.7 %)	12 (4.3%)
Personal-Social	279 (99.6 %)	1 (0.4 %)
Total	255 (91.1 %)	25 (8.9 %)

Results showed that 95.7% of mothers and 91.1% of fathers had an authoritative parenting style, fathers who had an authoritative parenting style had a higher level of education (**Tables 3, 4**). The results showed no significant difference between parenting style in parents' children with and without developmental delay (**Table. 5**).

Table-3: The status of parenting styles.

Parenting styles	Mothers	Fathers
	Frequency (%)	Frequency (%)
Permissive	4 (1.4 %)	10 (3.6 %)
Authoritarian	8 (2.9 %)	15 (5.4 %)
Authoritative	268 (95.7 %)	255 (91.1 %)

Table-4: Baseline characteristics of parents by parenting styles.

Variables		Permissive n=4	Authoritarian n=8	Authoritative n=268	Results
Mother's age/year Frequency (%)	20-30	2 (50%)	1 (12.5%)	73 (27.2%)	P= 0.82 Kruskal–Wallis test
	31-40	1 (25%)	7 (87.5%)	177 (66%)	
	41-50	1 (25%)	0	18 (6.7%)	
Level of Mother's education, Frequency (%)	Primary	0	0	6 (2.2%)	P= 0.66 Kruskal-Wallis test
	High school	1 (25%)	3 (37.5%)	54 (20.1%)	
	Diploma	1 (25%)	0	28 (10.4%)	
	Bachelor's degree	2 (50%)	337.5%)	122 (45.5%)	
	Master degree	0	225%)	58 (21.6%)	
Mother's employment, Frequency (%)	Unemployed (Housewife)	2 (50%)	450%)	138 (51.5%)	P= 0.96 Fisher's exact test
	Manual worker	0	1 (12.5%)	24 (9%)	
	Employee	2 (50%)	3 (37.5%)	106 (39.6%)	
Father's parenting style		Permissive n=10	Authoritarian n=15	Authoritative n=255	Results
Father's age, Frequency (%)	25-35 years	6 (60%)	4 (26.7%)	91 (35.7%)	P= 0.16 Kruskal-Wallis test
	36-45 years	4 (40%)	9 (60%)	143 (56.1%)	
	46-55 years	0	2 (13.3%)	21 (8.2%)	
Level of Father's education, Frequency (%)	Primary	0	2 (13.3%)	11 (4.3%)	P=0.022 Kruskal-Wallis test
	High school	2 (20%)	7 (46.7%)	53 (20.8%)	
	Diploma	3 (30%)	1(6.7%)	28 (11%)	
	Bachelor's degree	1 (10%)	4 (26.7%)	99 (38.8%)	
	Master degree	4 (40%)	1 (6.7%)	64 (25.1%)	
Father's employment, Frequency (%)	Self-employed	5 (50%)	9 (60%)	90 (35.3%)	P= 0.34 Fisher's exact test
	Manual worker	1 (10%)	1 (6.7%)	30 (11.8%)	
	Employee	4 (40%)	5 (33.3%)	135 (52.9%)	

Table-5: Compare parenting styles in parents of 3-5 year old kindergarten children with and without developmental delay.

Parenting styles		Child development		Result
		Developmental delay	Without developmental delay	
Mother's parenting style	Permissive	0	4 (100 %)	Fisher's exact test=3.674 P=0.416
	Authoritarian	1 (12.5 %)	7 (87.5 %)	
	Authoritative	24 (8.9 %)	244 (91.1 %)	
Father's parenting style	Permissive	0	10 (100 %)	Fisher's exact test=3.4 P=0.396
	Authoritarian	3 (20 %)	12 (80 %)	
	Authoritative	22 (8.6 %)	233 (91.4 %)	

4- DISCUSSION

This study was conducted to compare parenting styles in parents of 3-5 year-old kindergarten children with and without developmental delay. The rate of developmental delay was observed in 9%. The highest frequency of developmental delay was observed in the age group of 3 years and the field of problem-solving and the lowest developmental delay in the age group of 5 years and the personal-social domain. The results showed no significant difference between parenting style in parents' children with and without developmental delay. Vameghi et al.

(2016) reported the highest rate of developmental delay in the field of problem-solving (7.2%), and the lowest rate in the field of gross motor development (1.3%), (13). The rate of developmental delay of 3.69% to 4.31% in different developmental domains has been reported (15). Correia et al. reported 9.2% among children 2 months to 6 years of age (39). Authoritative parenting style was the most common style in both mothers (95.7%), and fathers (91.1%) in our study. Rangarajan et al. (2010) showed that 80% of parents with high-risk children had authoritative parenting style; they also reported that there was no difference in parenting styles between the two groups of high-risk and low-risk children (40).

Various studies have been conducted to investigate the relationship between parenting styles and various variables in their children, including the study of Mehrinejad et al. (2015) to examine the relationship between parenting styles and children's creativity. In this study, a significant positive relationship was found between the authoritative parenting style and a significant negative relationship between authoritarian parenting style and creativity, but no relationship was found between the permissive parenting style and creativity (25).

Knauer et al. (2018) showed that the quality of parenting in infancy (especially in the field of intimacy and parental responsibility) was significantly associated with the developmental status of children aged 3-5 years, and children in families whose parenting quality score was higher than 25%, scored higher in the developmental status (41). Matejevic et al. (2014), showed that mothers had a distinctly authoritarian parenting style with a high level of participation in school activities and more successful adolescents. Most fathers in this study had an authoritarian parenting style, which was correlated with the lack of sufficient time to participate in school activities (42). Shafipour et al. (2015) reported that the authoritative parenting style is inversely related to behavioral problems in children of these parents, but internalization problems have a significant positive relationship with the permissive parenting style. In this study, they did not find a relationship between authoritarian parenting style with any of the internal or external problems, although different results have been obtained in different studies, however, both authoritarian and permissive parenting methods seem to be ineffective educational methods, each of which causes different behavioral and emotional problems in the children of these parents (43).

Rinaldi and Howe (2012) examined the relationship between parenting styles and problems of internalization and externalization and adaptive behaviors of toddlers and concluded that mothers' careless parenting style and authoritarian parenting style by fathers is a good predictor of the problems of externalizing their toddlers, and fathers' authoritarian parenting style predicts appropriate adaptive behaviors for children. As a reminder the authoritative parenting style includes constructive parent-child interaction, granting independence, intimacy, and supportive behaviors that have been associated with positive outcomes in children's behaviors (44).

The results of Steele and McKinney's research in 2019 showed that girls 'perception of their fathers' parenting style as an authoritarian parent increases their internal and external problems (45). In this study, the data analysis results did not show a relationship between parents' parenting styles and the developmental status of their 3-5 year-old children. This difference in results may be due to differences in the age range of the study group in other studies related to the impact of parenting styles which were mainly

adolescents, or on the developmental status of children under the age of 2 years. Other possible causes include a variety of data collection tools, both for measuring the development of children and for parenting styles. Also, the impact of culture and environment around the study community cannot be ignored in various studies. Considering the important role of parents in children's development, it is therefore recommended that more extensive research be conducted with more samples in the three groups of parenting styles.

4-1. Study Limitations

The limitation of this study was that the information was self-reported by the parents and it is possible that the parents answered the questions in a socially acceptable way.

5- CONCLUSION

According to the results of the present study, mothers with children without developmental delays had higher levels of education. In addition, fathers who had an authoritative parenting style had a higher level of education. The results showed that parenting styles are no different between 3-5 years old kindergarten children with developmental delay and no developmental delay. Further research is recommended.

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7- CONFLICT OF INTEREST: None.

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