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Evaluation of the Relationship between the Parenting Style and Dental Fear of Children Referring to Isfahan Dental Clinics in 2017

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Abstract

Introduction: Given the high prevalence of dental fear in children and its role in oral health, this research was conducted to evaluate the relationship between parenting style and dental fear of children. Methodology: In a cross-sectional study conducted in dental clinics in Isfahan in 2017, 130 children aged below 12 years were selected by multistage sampling method among 7 dental clinics in Isfahan. The parenting style was assessed by using Baumrind Parenting Style Questionnaire, completed by parents, and the fear of children was assessed by using CFSS-DS questionnaire and their relationship was determined. The obtained data were analyzed using SPSS-24 software and Pearson correlation, One-way ANOVA and independent sample T-test. P <0.05 was considered as a significant level in statistical analysis. Results: The mean of authoritarian, permissive, and assertive parenting styles was 1.46 ± 1. 08, 1.7 ± 1.14, and 3.6 ± 0.97, respectively. The mean score of fear in children was 36.84 ± 16.77. There was a direct and significant correlation between fear and authoritarian parenting style scores (0.54) (p <0.001), a direct and significant correlation between permissive parenting and fear scores (0.22) (p=0.12), and a significant and reverse correlation between fear and assertive parenting style (-0.51) (p <0.001). Conclusion: There is a correlation between child dental fear and parenting, style of parents and the use of assertive parenting style has a positive effect on reducing child fears. In contrast, the authoritarian and permissive parenting styles have a negative effect on children fear and the use of these styles is associated with increased dental fear**.**

Keywords: Dental Fear, Parenting Style, Child

Introduction

Dental anxiety is a common problem with a high prevalence in the community. It is more prevalent among children. The important issue is that the children's dental fear is rooted in way of their educating, so parenting is considered as an influential and important factor in this regard (Alammouri, 2006). Hence, one should not blame the child for fear and parents should not threaten the child. In contrast, the use of strategies reducing dental fear in children can improve their oral and dental health. Recognizing the cause of children's fear of dental examinations can be a major step in reducing the fear of referring to dentist. The children's fear is sometimes imitative, and may occur with the observation of the behavior of other children, while it is sometimes due to his previous experience of referring to a dentist (Chen, Dong and Zhou, 1997). In this regard, parents should talk with the child about the benefits of dentistry and to eliminate the conditions leading to fear in them using various ways. For example, they can talk about the characteristics of brave people and tell them stories whose heroes are brave children. The mentioned cases are some of the activities that parents can use them to reduce the dental fear of children by eliminating the conditions leading to fear in them. However, different psychological, social and cultural factors seem to be involved in children's fear level such as behavior of parents with their children at different stages of life, the level of individual freedoms of the children, their level of knowledge of individual and oral health, limitations in the child life, freedom of action in children's activities, etc. All of the mentioned factors are related to the parenting style of parents. To meet a dentist is stressful for many children, since this meeting is associated with several stressors such as seeing strange people, strange sounds and tastes, and coercion to lie on the dental chair, discomfort and even pain (Klingberg and Broberg, 2007).

Lack of cooperation and child reactions are resulted from fear of daily events occurring in dental office. Dental fear has been reported about 9% (Arnrup et al., 2004). Dental fear in children is a multifactorial and complex phenomenon. The main factors involved in the fear are personal factors related to puberty and age and the mood of child, external factors related to the child family, most importantly the mother, and the factors related to the dentistry group (Klingberg et al., 1995; Ten Berge, Veerkamp and Hoogstraten, 2002). Parents' parenting style is considered as one of the important factors in the behavior of children, which affects the relationship between the child and the dentist (Eaton et al., 2005). There are various parenting methods, including authoritarian, permissive, assertive styles (Alammouri, 2006). The children fear and inappropriate behavior resulting from dental care reduces the child cooperation with the dentist, leading to reduced quality of health care (Chen, Dong and Zhou, 1997). A research conducted by Amin Abadi et al. in 2008 on 72 children aged 4-6 years who referred to dentistry due to decay in their primary molar teeth. In this research, the authoritarian parenting style was used and the results showed that this style increases the

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child dental fear (Hubbs-Tait et al., 2008). A study was conducted by Hönstein et al. in 2015 to evaluate the relationship between parenting styles and demographic characteristics and the behavior of children in the first dental visit. The results of this study revealed that children under authoritarian parenting style had more appropriate behavior, less fear, and less decay than children underwent autocratic parenting (Buri, 1991). A study conducted by Gorgiwa et al. in 2016 to evaluate the effect of autocratic parenting on children's behavior in dentistry. The results of this study showed that authoritarian parenting has a negative effect on the behavior of children when working in dentistry (Minaei, 2017). Each of these patterns has completely different methods and has different effects on the behavior of children (Ago et al., 2011). Given the importance of children's fears in dental care centers about the quality of provision of services and the impact of child fear of parenting methods, this study was conducted to evaluate the relationship between parenting style and child dental fear. The null hypothesis of the study was that there was no significant relationship between parenting style and child fear.

Methodology

In this cross-sectional study conducted in Isfahan dental clinics in 2017. The research population was children aged 4-8 years old who referred to dental faculty.

The inclusion criteria of research included children aged 4 to 8 years old, referred to dental clinics in Isfahan, parents' consent to participate in the study, lack of hospital records, no history of intra-oral injection, and no history of dental pulp inflammation. Moreover, non-completed questionnaire and lack of necessary cooperation in treatment were considered as an exclusion criterion. The sample size required by the study was calculated 128 people using the sample size estimation formula used for correlational studies, taking into account the 95% confidence level and the 80% test power (Pong, Johnston and Chen, 2010). The sampling method was multi-stage method. In the first stage, 7 clinics were selected among all dental clinics in Isfahan. In the next stage, 20 patients were selected from 5 clinics and 15 patients were selected from 2 clinics randomly and included into study. The data were collected through a Baumrind Parenting Style Questionnaire determining the parenting style and CFSS-DS questionnaire determining the child fear.

In this study, the relationship between parents parenting style and children fear in dentistry was evaluated. Children dental fear was assessed by CFSS-DS questionnaire. The parent parenting style was also evaluated through a Baumrind Parenting questionnaire. The questionnaires were completed by parents. After completion of treatment, the child fear level was measured by the CFSS-DS questionnaire, which is an indicator for measuring the child fear (Javadinejad, Farajzadegan and Madahain, 2011) and it was completed by the researcher. The CFSS-DS questionnaire is a standard questionnaire containing 15 questions. There have five options ranging from "I have not fear at all" to "I have very much fear". Its questions include all dental conditions, such as fear of injections, examination, drill sound, drill appearance, and so on. The general score is between 15 and 75. Based on the scores, the children are divided into two groups increasing a high fear group who received a score of 37 and above and a low-fear received a score of 25 or lower. Researches have shown that the CFSS-DS questionnaire has high reliability and validity for measuring children dental stress, and since all dental conditions have been included in this questionnaire, it has high precision in measuring dental stress in children. Cronbach's alpha coefficient of this questionnaire was obtained 0.913. In the Greek samples, the internal reliability of the questionnaire was reported 0.85 and the test-retest reliability of the test was reported 0.74 (0.11). The primary form of the Baumrind Parenting Styles Questionnaire included 30 items designed and developed by Diana Baumrind in 1973 (Hubbs-Tait et al., 2008). This questionnaire measures parents' parenting styles in three factors.

The questionnaire measures parenting practices in three dimensions. Each of permissive, authoritarian, and assertive parenting styles included 10 questions. In front of each question, five columns (I strongly agree, relatively agree, relatively disagree, disagree, I strongly disagree) scored from 0 to 4. By summing up of questions in each style and dividing by the number of the questions, separate score is obtained. Accordingly, Baumrind Parenting Styles Questionnaire has a score range of 0 to 120. By dividing the scores by the number of questions, the score range is obtained between 0 and 4.

The validity and reliability of this questionnaire was confirmed. In order to examine its validity, discriminant validity method was used. It was found that authoritarian style has a negative relationship with permissive and authoritative styles, and permissive style has no relationship with authoritative style. Buri used test-retest method to calculate the reliability. It was obtained 0.81 for the permissive style, 0.86 for authoritarian style, and 0.78 for the authoritative style. He also calculated internal consistency using the Cronbach's alpha formula and obtained it 0.75 for permissive style, 0.85 for authoritarian style and 0.82 for authoritative style (Buri, 1991). The reliability of the Persian translated version of this questionnaire in the study conducted by Minaei was obtained 0.89 in 2016 (Minaei, 2017). Data were analyzed by SPSS24 software and using descriptive statistics and statistical tests of Pearson correlation coefficient, Independent sample T test and One-way ANOVA. In statistical analysis, values less than 0.05 were considered as significant level.

Results

In this study, 130 children aged 4-8 years were referred to dental clinics in Isfahan. In 67 (51.5%) cases, the questionnaires were completed by the father, and in 63 (48.5%) cases, questionnaires were completed by the mother. The mean age of the children was 5.56 ± 1.42 years, the mean age of the mothers was 31.93 ± 4.84 years and the mean age of the fathers was 36.62 ± 5.44 years. A total of 54 children were male and 76 children were female (58.5% versus 41.5%). Most of the children (56.9%) were the first child of the family. Fathers had higher mean age than mothers and their fathers' education level was higher than that of

mothers, so that 65.4% of fathers and 46.9% of mothers had academic education. The total mean score of Baumrind Parenting Styles in samples was 6.22 ± 1.27 with a range of 8.8. The mean authoritarian child parenting score was 1.46 ± 1.08, the permissive child parenting score was 1.7 ± 1.14, and assertive parenting score was 3.6 ± 0.97. According to Cochran's test, the mean parenting score in three domains was significantly different (P <0.001).

The mean score of fear in children were 36.84 ± 16.37 with a range of 15-66. According to Pearson correlation test, there was a direct correlation between the scores of fear and authoritarian parenting (0.54), which was statistically significant (P<0.001). There was a direct and significant correlation between permissive parenting style and fear score (0.22) (P = 0.012). Based on the mentioned test, a reverse and significant relationship was found between fear score and assertive parenting score (-0.51) (P<0.001).

According to the results of the study, authoritarian parenting was dominant in 25 (19.2%) of the subjects, permissive parenting was dominant in 26 (20%) of the subjects, and assertive was dominant in 79 (60.8%) of the subjects. The mean scores of children fears in the three groups are shown in Table 1. According to one-way ANOVA, the mean scores of fear showed significan difference in terms of dominant parenting (P <0.001). Results are shown in Table 1.

Table 1- Mean and standard deviation of children dental fear scores based on parenting style

Parenting style of parents	Mean fear score of children	SD	P
authoritarian	56.48	21.4	001.<0
permissive	38.47	45.13	
Assertive	34.29	29.15	

Table 2 shiws the mean and standard deviation of parenting score in terms of the severity of fear of dental care. One-way ANOVA showed that children with high fear of dental care had higher authoritarian parenting scores. However, there was no significant difference between the mean scores of negligent childbearing in three groups of children with low, moderate and high fears. On the other hand, child-rearing scores for children with high fears were higher than those with low fears. However, the mean score of permissive parenting score had no significant difference among three groupa of children with low, moderate, and high fear. In addition, the assertive parenting score in children with high fear was higher than that in children with low fear.

Table 2- Mean and standard deviation of parentig score based on fear of dental care

Parenting style of parents	Childre fear severity			P
	low	moderate	high	
authoritarian	24.0±76.0	32.0±88.0	12.1±06.2	001.<0
permissive	53.0±46.1	93.0±93.1	44.1±84.1	16.0
Assertive	0/16±67.3	34.0±43.3	1.1±56.2	001.<0
Total (Baumrind score)	0/54±89.5	93.0±24.6	61.1±46.6	05.0

The correlation between demographic characteristics and fear of dental care showed a significant correlation between the age of the child and the fear score (0.4) (P <0.001). Additionlly, there was a direct and significant relationship between the scores of fear and the maternal age (0.48) (P <0.001). In addition, there was a direct correlation between the child fear score and father age (0.29), which was statistically significant. Table 3 shows the mean and standard deviation of children fear score based on other demographic characteristics. Based on the results, the mean score of children fear in terms of age of the child, sgender and education of the parents showed a significant difference, so that the 4 years of old children had the highest fear score and the 7 years of old children had the lowest fear score. The mean score of fear in males was higher than that of females, and children with mothers eith high school and fathers with academic level of education had the lowest fear score.

Table 3- Mean and standard deviation of fear scores based on demographic characteristics

Variable		Mean score of fear	P
Child age (year)	4	9.15±9.39	001.<0
	5	2.15±8.37	
	6	9.15±5.41	
	7	1.12±8.22	
	8	2.15±43	
gender	male	7.14±9.40	018.0
	female	17±34	
Birth rank	first	2.17±8.34	25.0
	second	7.14±1.40	
	third and higher	7.15±6.38	
Mother education	elementary	4.13±6.46	001.0
	secondary	2.16±31	
	academic	7.15±6.38	
Father education	elementary	3.10±6.46	001.<0
	secondary	8.13±1.45	
	academic	4.16±1.32	

Discussion

Based on the results of this research, there was a significant relationship between the dental fear and the parenting style (the null hypothesis was rejected). Dental fear is one of the new problems in the treatment and performance of dental care in children, and in many cases, high level of fear in child prevents the provision of services and leads to the progress of oral and dental diseases. In addition, the dental fear in children increases

the use of invasive methods such as general anesthesia, associated with other problems and complications in children. Investigating the causes of dental fear in children has shown that the root of this problem is in the child family. In fact, child educating process improves the level of fear of dental care. The objective of this research was to evaluate the relationship between parenting styles and the fear of dental care in children.

In this study, the fear of dental scare and the parenting style was investigated in 130 children and their parents. Based on the results obtained, more than half of the children aged 4 to 8 years have severe dental care. This level of fear can affect the dental care in children and increase the rate of general anesthesia in children. However, the fear of dental care is not limited to children, and it is also seen in adults. In a study conducted by Ghasem Pour at Babol University of Medical Sciences, 13.3% of dental and medical students had fear of dental care (Ghasempour and Hadadi, 2005). In a study conducted by Jabbarifar et al., the level of fear of children in two groups of outpatients and anesthesia were compared and the results of this study showed that the mean score of fear in children was 3.26 ± 2.19 before outpatient treatment and 9.37 ± 8.24 out of maximum score of 10 before anesthesia treatment (Jabbarifar and Rouzbahani, 2014). Based on the results of our study, the mean of score of parenting in three domains showed significant difference. In other words, the assertive style had a higher score. Cultural and social developments over the past few decades have caused parents to pay much attention to education of the children. Nowadays, most of parents, especially educated people, are aware of the impact of their behaviors on their children's spirits and their psych and the families pay much attention to assertive parenting styles. However, in many families, especially in rural communities, authoritarian parenting style has still a high prevalence. Based on the results of our study, all of the three parenting styles had a significant relationship with dental care, but this relationship was direct between authoritarian and permissive parenting styles and fear level and reverse between assertive parenting style and fear.

In other words, the use of authoritarian styles make children have always fear and concern from their parents, and this fear and concern extends to society, relatives and friends and the social environment. The permissive parenting style also cause fear in children owing to lack of supporter and guidance (Javadinejad, Farajzadegan and Madahain, 2011). In contrast, the use of assertive parenting style increases the sense of self-esteem and as children in this style have the right to express their opinions in the family, they always try to overcome their problems with the help of their parents. In addition, the presence of their parents will give them a sense of security, leading to reduced fear in them (Javadinejad, Farajzadegan and Madahain, 2011).

Several studies have been conducted on the relationship between fear and parenting so far. For example, in the study conducted by Amin Abadi et al., the relationship between autocratic and decisive parenting styles and child behavior during tooth surgery through voice, eye contact and motor scoring (SEM). The lowest SEM score was seen in children who had been educated and trained by autocratic style. The results of this study showed that the behavior of children in dentistry is influenced by their parents' parenting style (Aminabadi and Farahani, 2008). In a study conducted by Hönstein et al., 113 children aged 3 to 6 years were included in the study to evaluate the relationship between demographic conditions and children behavior in the first dental visit. The results of this research revealed that children under assertive style had better behaviors, less fear, and less tooth decay than children underwent autocratic parenting style (Howenstein et al., 2015). Moreover, in the study conducted by Gurgoria et al., the effect of autocratic parenting style on children behavior in dentistry was investigated. In this research, 300 children and their parents were evaluated. The results of this research showed that this parenting style has a negative effect on the behavior of children (Georgieva and Peneva, 2016).

Based on the results of our study, the level of fear of dental care showed significant relationship with most of demographic variables, including the age of the child and the age of parents, gender and education of the mother, and given the age range of the children studied, this relationship seems to be more related to parenting style of parents. In general, the fear and inappropriate behavior of children caused by dental care reduces the child cooperation with the dentist, leading to reduced quality of health care. The fear and behavior of children depends on factors such as the environment around the child and the age of the child. One of the most important factors affecting children's behavior and fear is parental parenting. According to Baumrind criterion, each of parenting styles uses different methods and has different behavior on children. In addition, given the current research limitations, including low sample size and non-complete filling out of questionnaires, it is recommended that other studies with higher sample size and at wider levels to be conducted considering the results of this research.

Conclusion

Based on the results of our research, there is a relationship between the child dental fear and parenting styles of parents, and the use of assertive parenting style has a positive effect on reducing children dental fears. In addition, the authoritarian and permissive styles have a negative effect on children dental fear and the use of these styles was associated by increased fear of dental care. Thus, it is necessary to increase the knowledge of families about the parenting style impact on fear and other dimensions of the lives of children.

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