



Perspectives and Preferences of Preschoolers and Their Parents Regarding Dentist's Attire and Gender

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Article Info

Article type:
Original Article

Article History:

Received: 22 Mar 2021
Accepted: 15 Dec 2021
Published: 22 Jan 2022

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ABSTRACT

Objectives: For decades, the white coat has been the uniform of medical professionals. Recently, medical professionals show interest to use alternatives. We aimed to evaluate the perspectives and preferences of children and their parents regarding dentists' attire and gender.

Materials and Methods: This cross-sectional study was performed on 4-to 6-year-olds and their parents referred to dental clinics of Tehran School of Dentistry in 2018. Parents completed a questionnaire on demographics and dental fear, and both parents and children were asked about their preferences regarding the gender of dentist and the color of the dentist's attire. Statistical analysis was performed by the logistic regression model.

Results: Totally, 148 children (mean age of 5.42±0.71 years, 48% girls) and their parents participated in the study. Most of the participants (81.2% of the children and 68.0% of the parents) preferred colored coats compared with white coat. More than half of the parents preferred a female dentist for their children (56.5%) while most children preferred a male dentist (54.8%). Boys preferred a male dentist as well (P=0.01). The children were reluctant to go for a dental visit and preferred to be visited by a dentist of the same gender as themselves (P=0.041).

Conclusion: Wearing colored coats by dentists and giving a chance to choose the gender of dentist in polyclinics may increase the children's cooperation in pediatric settings.

Keywords: Dental Care for Children; Surgical Attire; Color; Sex; Dentists

- **Cite this article as:** Mohebbi SZ, Razeghi S, Mizanian F, Kharazifard MJ. Perspectives and Preferences of Preschoolers and Their Parents Regarding Dentist's Attire and Gender. *Front Dent.* 2022;19:4.

INTRODUCTION

The white coat has been used by medical professionals for over 100 years. For most people, a physician's white coat is a sign of power, cleanliness, respect, and confidence. Most of the physicians tend to wear a white coat for many reasons such as easily being recognized by patients, keeping their clothes clean, and emphasizing their position as a doctor [1]. But white coats may bring back some

unpleasant or scary memories for some people. The term "white coat syndrome" is used to describe unrepresentative high blood pressure recordings showing the patient's anxiety upon visiting a doctor in a white coat [2].

In the recent years, there has been a tendency among the physicians to wear different types of attire rather than a white coat. Results of a study in the United States showed that the majority of pediatric ophthalmologists did not

routinely wear white coats during pediatric outpatient examinations [3]. A study conducted in Switzerland also showed that most of the patients were not interested in their general practitioners with white coats [4]. Researchers in the United States found that most of the patients had more confidence in physicians with a white coat [5]. The results of a systematic review by Petrilli et al, [6] on the effect of physician's attire on patient perceptions revealed that although patients mostly preferred ordinary attire for physicians, perception of attire is influenced by age, gender, settings, and context of care. In a research performed in England, people were asked to comment on dentists and lawyers with different attires. Male dentists and lawyers in normal clothes were further rated as more suitable [7]. Further research on patients' preferences regarding different types of dentists' attire, white coat or ordinary clothes, reported inconsistent results [8,9]; thus, further studies are required on this topic.

Dental and white coat fear is prevalent among children [10], which may serve as a barrier against the children's dental visits. Patr Münevveroğlu et al. [11] found that caries experience of children who were afraid of dentists was significantly higher than that of children who were not. Most of the children in the abovementioned study preferred their dentist to wear a colored coat instead of a white coat [11]. In another study in India on children's preferences regarding dentists' attire and usage of camouflage syringe for reduction of anxiety, it was shown that younger children preferred colorful attires and camouflage syringe over the conventional type [12].

The gender of dentist is another point that has been studied in the literature. The results of studies in India and Saudi Arabia showed that children preferred to be visited by dentists of the same gender [13,14]. Based on the results of an Indian study, anxious 9-12-year-old children preferred to be visited by dentists of the same gender [15]. Dentists' attire and gender may affect the children's dental fear level and

consequently their treatment acceptance. There are several types of studies performed on patients' perspectives regarding the physicians' attire and gender, but only a few have assessed preschool dental patients [10,13,14]. Considering the different results obtained from various studies and regarding the age group, and cultural and geographic differences of the participants, the purpose of this study was to assess the perspectives and preferences of preschool children and their parents regarding the dentists' attire and gender, and the associated factors.

MATERIALS AND METHODS

In this cross-sectional study, 4 to 6-year-old children and their parents referred to the Pediatric Dentistry Clinic, Tehran University of Medical Sciences, were recruited. Sampling was performed during the second semester of 2018. Parents completed a questionnaire, and children were asked about their preferences regarding the gender of their dentist and his/her attire color. The questionnaires were completed via an interview in the waiting room of the Pediatric Dentistry Clinic before the participants' appointments. Two sets of coded questionnaires, for parents and children, were used as data collection instruments. Based on a previous study [14], the questionnaires were developed to assess the perspectives and preferences of the preschoolers and their parents regarding the attire and gender of dentists and the associated factors.

Moreover, some researcher-made questions were added to the main questionnaires. The questionnaires of the study were assessed for face and content validity by a qualitative approach. To determine the content validity of the questionnaire, an expert panel of 5 community oral health specialists, a psychologist, and a pediatric dentist evaluated the questionnaire. They were requested to review each item and write their corrective comments and views on wording, grammatical points, and allocation of items in detail. The questionnaire was then revised accordingly.

To determine the face validity, face-to-face interviews were conducted with 10 mothers and children, to evaluate the questionnaire for wording, difficulty in understanding, and the possibility of misunderstanding of items. The time to answer the questions was also estimated at this stage. In this study, we evaluated the internal consistency, reliability, and repeatability of the questionnaires by the test-retest method. The Cronbach's alpha coefficient was above 0.7 for the constructs of the questionnaires. The results of the test-retest method on 10 children and their parents with a 2-week interval revealed the actual agreement to be more than 85% for all questions. Ethics approval was obtained from the Research Ethics Committee of Tehran University of Medical Sciences (code IR.TUMS.DENTISTRY.REC.1397.143). The questionnaire was accompanied by an informed consent form, and an informative sheet explaining the purpose of the study and providing a promise of confidentiality. Participation in the study was voluntary.

The parents' questionnaire had 11 questions. The questions were about gender and age of the child, age of the child at the time of first dental visit, history of children's hospitalizations, level of parents' education, level of parents' dental fear, parents' preferred gender of child's dentist, and parents' preferred color of dentist's attire. Children's questionnaire had four questions on the history of dental visits, whether they liked the dental visit, their preferred gender of dentist, and their preferred color for dentist's attire. The children's questionnaire was accompanied by two sets of photographs of female and male dentists with different attire colors but with the same head-cover, hairstyle and facial expression (Fig. 1).

Before the main study, some children (n=30) were asked to color an animated image of a dentist as they wish. This was done to decide about the colors included in the study questionnaire for the dentists' attire. Furthermore, literature was reviewed and two of most favorite children's colors were added to the selected colors of the study questionnaire [16]. One photograph from a female and one from a



Fig. 1. Photographs used in the questionnaire of the study to show the sets of dentist's gender and attire

male dentist was taken and a graphic designer prepared two sets of images of female and male dentists with attires in children's most favorite colors, including white, yellow, pink, purple, green, blue, and cartoon character/blue. Two previously calibrated operators asked children the questions and completed the questionnaires. Parents were asked to complete the self-administered questionnaire. At the same time, children were asked to point to only one of the images of their desirable dentist using their finger.

Considering the young age of children participating in this study, their parents' consent was obtained. Completed patient questionnaires were collected, and data were analyzed by SPSS version 24 for Windows (SPSS Inc., Chicago, IL, USA). The logistic regression model was applied to analyze the data. The level of significance was set at $P < 0.05$.

RESULTS

Totally, 148 children with a mean age of 5.4 ± 0.7 years, including 71 girls (48%) and 77 boys (52%), participated in this study along with their parents. About 44.5% of mothers and 39.9% of fathers had academic education followed by high-school diploma (39.9% of mothers and 36.4% of fathers), high school education (4.1% of mothers and 8.8% of fathers), middle school education (6.1% of mothers and 10.1% of fathers), and elementary school education (4.7% of mothers and 4.1% of fathers); 0.7% of mothers and 0.7% of fathers were illiterate. Most of the fathers (63.2%) and half of the

mothers (50.0%) said they had no dental fear and few parents said they had very high dental fear (4.2% of fathers and 4.8% of mothers).

Table 1. Level of parents' dental fear, children's hospitalization history, children's age at the time of first dental visit, and children interest in dental visits

Variable	Category	N	%
Level of mothers' dental fear	Very high	7	4.8
	High	9	6.2
	Moderate	26	17.8
	Low	26	17.8
	None	73	50
Level of fathers' dental fear	Don't know	5	3.4
	Very high	6	4.2
	High	3	2.1
	Moderate	16	11.1
	Low	20	13.9
Children's history of hospitalization	None	91	63.2
	Don't know	8	5.5
	1-3 days	17	11.7
	4-17 days	6	4.2
Children's age at the time of first dental visit	None	122	84.1
	Never visited	5	3.4
	1-3 years	54	37
Children's interest in dental visits	4-6 years	87	59.6
	Yes	82	63.6
	No	33	25.6
	Don't know	14	10.8

Most of the children had no hospitalization history (84.1%). Among the children, 59.6% had visited a dentist for the first time when they were 4-6 years of age and 37% when they were 1-3 years of age. More than half of the children (63.6%) said they were interested in dental visits (Table 1).

Most of the parents preferred a female dentist for their children (56.5%) and almost one-third preferred a male dentist (28.6%); while 14.9% of parents said the gender of the dentist did not matter to them. Of the children, 54.8% preferred male- and 30.8% preferred female dentists (Table 2). The most preferred color of dentist's attire by parents was white (32.0%)

followed by cartoon character (22.4%) and pink/purple (18.4%).

Table 2. Perspective of children and parents regarding the dentist's gender

Variable	Category	N	%
Parents' preference regarding the dentist's gender	Female	83	56.5
	Male	42	28.6
	No difference	22	14.9
Children's preference regarding the dentist's gender	Female	45	30.8
	Male	80	54.8
	No difference	21	14.4

The most favorite color of dentist's attire selected by children was cartoon character (32.4%), followed by pink/purple (25.0%), and white (18.9%). For both parents and children, blue, green, and yellow were the least favorite colors; 12.9% of parents selected blue, 8.8% green and 4.1% yellow. Children selected colors as follows: blue (8.8%), green (8.1%) and yellow (6.8%) (Table 3). Most of the parents preferred colored coats (68.0%) for dentists, and children also showed a major tendency to colored coats for their dentists (81.2%).

Table 3. Preferences of children and parents regarding the color of dentist's attire

Color	Parents' preference		Children's preference	
	N	%	N	%
White	47	32	28	18.9
Green	13	8.8	12	8.1
Yellow	6	4.1	10	6.8
Blue	19	12.9	13	8.8
Pink/purple	27	18.4	37	25.0
Cartoon character/blue	33	22.4	48	32.4
Other colors	2	1.4	-	-

The logistic regression model, after controlling for the effect of dentist's attire, mother's education, father's education, level of mother's dental fear, and level of father's

dental fear revealed that the more the level of parents' dental fear, the more parents preferred colored coats for their children's dentist (Odds ratio [OR]: 1.47; 95% confidence interval [CI]: 1.03 to 2.09; $P=0.03$). The logistic regression model using children's gender, children's age, children's age at the time of first dental visit, history of children's hospitalizations, and children's interest in dental visits revealed that boys preferred male dentists almost three times more than female dentists (OR: 2.98; 95% CI: 1.26 to 7.04; $P=0.013$).

Moreover, the children who were reluctant to go for a dental visit preferred to be visited by a dentist of the same gender (OR: 1.8; 95% CI: 1.02 to 3.18; $P=0.041$).

DISCUSSION

In our study, we evaluated the perspectives and preferences of preschool children and their parents regarding the dentist's attire and gender and the associated factors. Most of the parents preferred a female dentist while most of the children preferred a male dentist. Both children and parents preferred colored attires. In the present study, most of the parents preferred colored coats for dentists for their children, and children also showed a major tendency to colored coats for their dentists. Similar results were obtained in a study performed in Minnesota, showing that parents preferred ordinary clothes and scrubs for their children's orthodontist rather than traditional white coats [9]. Another study in Switzerland revealed that participants did not prefer white coats for their physicians [4]. Jafarzadeh et al. [17] performed a study in Isfahan, Iran to assess 6-12-year-old children's preferences regarding dentists' attire and to determine the influence of its design, color, and other factors on treatment acceptance. The results showed that different types of dentists' attire (cartoon character or white coat) did not affect treatment acceptance but helped to establish a good relationship with pediatric patients in their first visit.

In contrast to our results, both children with a mean age of 12.3 years and their parents, in a study in India preferred traditional white

coats, compared with cartoon character scrubs [13]. Opposite results were reported in a study performed in Saudi Arabia which found that most 9-12-year-old children preferred white coats for their dentist [14]. The age difference might be one reason for different results. Another study in Belgium found that people felt more comfortable with doctors with normal clothes [18]. This is to some extent in line with our findings on the preference of colored coats by parents and children which seem to be more informal rather than the formal white coat.

The present study revealed that the more the level of parents' dental fear, the more the parents preferred colored coats for their children's dentist. The parents' unpleasant dental memories may lead to white coat fear. As mentioned before, we can see in the literature that people feel more comfortable with doctors' informal attire [18]. This might be the reason why parents who are afraid and are uncomfortable with dentistry, preferred colored coats to help their children feel more comfortable. In our study, boys preferred male dentists. A similar finding was reported in the literature. Studies conducted in India and Saudi Arabia reported that children wanted to be visited by dentists of the same gender [13,14]. We also found that children who were not interested to go to a dentist preferred to be visited by dentists of the same gender as themselves. Similarly, results of a study conducted in India showed that anxious 9-12-year-old children preferred to be visited by dentists of the same gender as themselves [15]. In our study, out of six colors, white coat was the most preferred color chosen by parents. It seems that parents still love white coats, seeking confidence. We found no relationship between hospitalization history and children's color preference. It shows that history of hospitalization and unpleasant hospital experiences did not create signs of white coat syndrome in participants of the present study. Moreover, children's gender, age, interest in dental visits, and age at the time of first dental visit did not affect their choice of color.

This study had a descriptive cross-sectional

design, and only associations can be found in such studies. Future longitudinal studies can provide more accurate results. Also, our sampling was limited to an academic environment. Further studies are recommended in private and public dental clinics on participants from different socioeconomic classes. Moreover, we had no separate area to ask questions from the children; thus, children's preferences could have been at risk of bias of their parents' opinion.

CONCLUSION

Pediatric dentists are recommended to use colored coats (cartoon character, pink) in dental offices especially when they visit very young children (under 6 years of age). Furthermore, whenever gender matching (child/dentist) is possible, it would be preferred to ask the children whether they want to be visited by a female or a male dentist. This may create a more pleasant dental visit for children.

ACKNOWLEDGMENTS

This study was funded and supported by Tehran University of Medical Sciences (grant no. 9423778003).

CONFLICT OF INTEREST STATEMENT

None declared.

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