

## Attitude and Perceptions of Child Patients towards Dental Environment: A Questionnaire Study Origin

Vivek Padmanabhan<sup>1\*</sup>, Firas Najib<sup>2</sup> and Abdulrahman Ammar Hamwiah<sup>2</sup>

<sup>1</sup>Pediatric and Preventive Dentistry, RAK College of Dental Sciences, RAK Medical and Health Sciences University, UAE

<sup>2</sup>RAK College of Dental Sciences, RAK Medical and Health Sciences University, UAE

### Research Article

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#### \*For Correspondence

Vivek Padmanabhan, Assistant Professor, Pediatric and Preventive Dentistry, RAK College of Dental Sciences, RAK Medical and Health Sciences University, UAE.

**E-mail:** drvivekpadmanabhan@gmail.com

**Tel:** +971 527400018.

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#### ABSTRACT

Ever since the beginning of dentistry fear and anxiety have been consistently present. Stress usually increases in children when they are to visit dentists and this stress is preceded by fear and anxiety. The amount of stress may depend upon the number of visits these children have with the dentists. The present study was done to understand the attitude and choices of children towards dentistry in terms of their choice of attire and dental environment. A questionnaire study was conducted on children between the ages of 8-12 years. 50 children were included in this study. The observations were tabulated and evaluated for percentages. The results suggested that children prefer to be treated by female doctors, it was also seen that children preferred clinics which look more aesthetic and appealing.

### INTRODUCTION

Dental environment may be a source of stress for young children. Such stressful conditions may provoke fear and anxiety in children<sup>[1,2]</sup>. Stress factor is usually high in children visiting dentists and this response may increase or decrease in the subsequent visits dependent upon to what they are exposed to, during these visits<sup>[3]</sup>.

Anxiety is one of the commonest problems faced by dental patients and especially so in the pediatric population. It is considered to be a reaction of various systems together to a perceived threat or danger<sup>[4,5]</sup>. The presence of dental anxiety in pediatric dental patients is not a dilemma for the patients alone but also for the dental professionals themselves; and sometimes it renders the treatment more complicated and tedious to be accomplished successfully<sup>[6,7]</sup>. It has been accepted that fear and anxiety result in stress, this stress produces effects in many physiological systems and these responses of the physiological systems are similar to those produced when an individual is exposed to physical challenges<sup>[8]</sup>. It is widely recognized that colors also have a strong impact on our emotions and feelings<sup>[9]</sup>. Children had categorized colors based on several dimensions. In addition, they were able to connect colors and emotions such as pleasing effect or unpleasant effect<sup>[10]</sup>. There were evidences that suggested that distraction by using clown doctors could significantly improve the behavior of children, before many surgical procedures<sup>[11]</sup>. In some early studies, colors such as red, blue, yellow, green, black, and white were hypothesized to be associated with anger, happiness, sadness, surprise, disgust, and fear, respectively<sup>[10,11]</sup>.

It is important for the pediatric dentist to establish a friendly relationship with children to combat fears and deliver effective and efficient treatment. Creating a strong rapport with the child on the first visit helps create a comfortable atmosphere in which the child does not feel threatened<sup>[12,13]</sup>. The changing expectations of children can encourage pediatric dentists to develop a more child-friendly atmosphere in their clinics. Environmental elements that produce positive feelings can reduce anxiety<sup>[14]</sup>. In fact, the attractiveness of the physical environment in the dental operator has been shown to be significantly associated with higher perceived quality and satisfaction, higher reported positive interaction with staff and reduction in patient anxiety. Instead of adults choosing the dental environment for children, it is beneficial to accept preferences and choices of children as to what they enjoy as patients. Therefore, this study was carried out to determine the children's preferences and choices concerning a pediatric dental environment. The study also tried to understand if there is any gender preference, is there a predilection towards the clinical attire that dentists wear and also to know if the appearance of the pediatric dental clinics matter.

## MATERIALS AND METHODS

A total of 50 patients attending RAKCODS pediatric dentistry clinics were included in this study based on the sample size calculation. A written consent was obtained from all the parents and assent was obtained from all the children. The sample was selected using Simple random sampling. Children within the age group of 8-12 years were included. Patients younger than 8 or Uncooperative patients were excluded from the study. The consent form and the questionnaire were prepared in both English and Arabic language to facilitate better understanding for children and the parents. The questionnaire consisted of questions about the children's preferences of the doctor's gender, what attire they prefer and what type of dental clinic they would like to be treated in. After the patients were recruited and the consent was obtained from the parents, they answered the questionnaire. The questionnaire was formulated into three parts. The first part focused on questions regarding what gender of doctor the children would prefer. The second part of the questionnaire dealt with the choice of attire on the same doctor. In the final part of the questionnaire the child was allowed to make a choice of the clinic, i.e., they were allowed to choose between a normal and a customized pediatric dentistry clinic. The completed questionnaires were used to collect data about children's preferences and the results were tabulated and statistically analyzed by chi-square test.

## RESULTS

This study included 50 children, 23 girls and 27 boys. Once the questionnaires were tabulated for the first part which focused on the gender preference of doctors, it was seen that of total children (n=50), female doctors were chosen by (n=27, 54%) 19 of them were girls and 8 were boys. while male doctors by (n=23, 38%) 4 of them were girls and 19 boys. The results are statistically significant as female doctors were preferred more than male doctors ( $p=0.047$ ) (**Table 1**).

**Table 1.** Gender preferences.

Groups	Male Doctor	Female Doctor	Don't mind	Chi Square ( $X^2$ )	P-value
Boys	15 (60%)	8 (32%)	2 (8%)	$X^2=0.41$	0.047
Girls	4 (16%)	19 (76%)	2 (8%)		
Total	19 (38%)	27 (54%)	4 (8%)		

The results of the second part of the questionnaire which focused on the kind of attire worn by doctors preferred by children, it was seen that the least favorite attire among children was the surgical gown with (n=8, 13.04%), scrubs was the most desired (n=18, 34.78%), followed by lab coats and casual attire with both chosen by (n=14, 26.09%). The results are statistically significant when compared between each other ( $p=0.035$ ) (**Table 2**).

**Table 2.** Attire preferences.

Groups	Scrubs	Lab coat	Surgical gown	Casual	Chi Square ( $X^2$ )	P-value
Boys	5 (21.74%)	6 (26.09%)	4 (17.39%)	8 (34.78%)	$X^2=0.41$	0.035
Girls	11 (47.83%)	6 (26.09%)	2 (8.7%)	4 (17.39%)		
Total	16 (34.78%)	12 (26.09%)	6 (13.04%)	12 (26.09%)		

A highly significant difference was shown between patients preference to the clinic. Pediatric clinic was preferred by (n=31, 62%) in compared to normal clinic (n=19, 38%). The results were statistically significant ( $p=0.034$ ) (**Table 3**).

**Table 3.** Clinic preferences.

Groups	Normal clinic	Pedo clinic	P-value
Boys	9 (36%)	16 (64%)	0.034
Girls	10 (40%)	15 (60%)	
Total	19 (38%)	31 (62%)	

## DISCUSSION

Earliest judgment of a dentist is made by the children based on his or her appearance, and often record and analyze their every word, movement and gesture during a dental appointment <sup>[15]</sup>. In order to make positive changes and adjustments that would make a pediatric dentist look more acceptable for the child, importance must be given to what form of attire will be more preferential. Psychologists/sociologists highlight the importance of appearance and its effect upon first impressions and interpersonal relationships <sup>[16]</sup>.

Of 50 children, (n=27, 54%) preferred female doctors and (n=19, 38%) preferred male doctors. Out of the 27 who prefer female doctors 19 were girls and 8 boys, the same gender preference was clear but in total patients' preferred female doctors. This is in accordance with previous studies that showed that pediatric patients prefer female doctors <sup>[17]</sup>. A reason for this kind of a preference towards female doctors could be due to the fact that women are considered to be more loving and affectionate usually when compared to males. Also that female doctor could be more compassionate and less strict as compared to male doctors.

However, it needs to be appreciated that times are changing now and male doctors are equally compassionate if not more but however for this to be reflected upon results may take time.

The present study showed that patients preferred scrubs the most, (n=16, 34.78%). The surgical gown was significantly the least favorite (n=6, 13.04%) out of the 50 preferring it. Studies agree that pediatric patients generally prefer colored attire [17]. However there are studies which favor surgical gowns to rest of the attire [17,18]. The scrubs being multicolored or of different colors could be a reason as to why it was chosen as the favorite.

The present study also revealed that children had strong preferences regarding the dental operatory environment with 31 (62%) preferring the pediatric clinic over the normal clinic with only 19 (38%) preferring it. This also in accordance with previous studies where it was found that children preferred colorful and attractive clinics to otherwise [19]. It is understood that children will prefer less threatening environment and colors when compared to a smelly and threatening environment.

This study reflects that pediatric patients have their own preferences about the particular environment that they are treated in. It is to be understood that if the results of this study are used and implemented properly then it can aid in reducing fear and anxiety which is considered to be one of the biggest challenges in the field of pediatric dentistry.

## CONCLUSION

- Pediatric patients favored female doctors over male doctors, with (n=27, 54%) choosing female doctors and (n=19, 38%) for male doctors.
- Pediatric patients see the surgical gown attire as the least favourite with only (n=6, 13.04%) choosing it over scrubs (n=16, 34.78%), lab coat (n=12, 26.09%) and casual clothes (n=12, 26.09%).
- Pediatric patients favored pediatric clinics (n=31, 62%) over normal clinics (n=19, 38%).

## REFERENCES

1. Pinkham JR and Berg JH. The Practical importance of pediatric dentistry. In: Pinkham JR, Casamassimo PS, McTigue DJ. Pediatric dentistry – Infancy through adolescence. (5th edn), Saunders. 2012;3-4.
2. Wright GZ. Behavior management in dentistry for children. Philadelphia: W.B. Saunders Co.
3. Gunnar MR, et al. Salivary cortisol response to stress in children. *Adv Psychosom Med.* 2001;22:52-60.
4. Milgrom P, et al. Treating fearful dental patients. A patient management handbook, continuing dental education, University of Washington, Seattle, Wash, USA. (2nd edn).
5. Gothi J, et al. Anxiety level in Indian basketball referees at different levels of officiating. *J Adv Dev Res* 2011;2:84-86.
6. Cooper CL, et al. Job satisfaction, mental health, and job stressors among general dental practitioners in the UK. *Br Dent J.* 1987;162:77-81.
7. Taani DQ. Dental attendance and anxiety among public and private school children in Jordan. *Int Dent J.* 2002;52:25-29.
8. King SL and Hegadoren KM. Stress hormones: how do they measure up? *Biol Res Nurs.* 2002;4:92-103.
9. Hemphill M. A note on adults' color-emotion associations. *J Genet Psychol.* 1996;157:275-280.
10. Umamaheshwari N, et al. Child friendly colors in a pediatric dental practice. *J Indian Soc Pedod Prev Dent.* 2013;31:225-228.
11. Vagnoli L, et al. Clown doctors as a treatment for preoperative anxiety in children: A randomized, prospective study. *Pediatrics.* 2005;116:e563-567.
12. Terwogt MM and Hoeksma JB. Colors and emotions: Preferences and combinations. *J Gen Psychol.* 1995;122:5-17.
13. Mathewson RJ and Primosch RE. Behavioral and physical assessment. *Fundamentals of pediatric dentistry.* Carol Stream, IL: Quintessence Books. 1995;7-23.
14. Park JG. Color perception in pediatric patient room design: Healthy children vs. pediatric patients. *HERD.* 2009;2:6-28.
15. Kleinknecht RA, et al. Origins and characteristics of fear of dentistry. *J Am Dent Assoc.* 1973;86:842-846.
16. Bersheid E and Gangestad S. The social psychological implications of facial physical attractiveness. *Clin Plast Surg.* 1982;9:289-296.
17. Asokan A, et al. A survey of the dentist attire and gender preferences in dentally anxious children. *J Indian Soc Pedod Prev Dent.* 2016;34:30-35.
18. Ellore VPK, et al. Children and Parent's Attitude and Preferences of Dentist's Attire in Pediatric Dental Practice. *Int J Clin Pediatr Dent.* 2015;8:102-107.
19. Trophimus GJ, et al. Preferences and choices of a child concerning the environment in a pediatric dental operatory. *Dent Res J.* 2017;14:183-187.