

Children's Preferences for Different Kinds of Dental Attires: The Concept of Psychological Modulation of Children's Behavior by Different Kinds of Attires in Dental Clinics

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Abstract

Context: Psychologists highlight the importance of appearance and its effect upon first impressions and the development of interpersonal relationship. How a dental surgeon dresses may be important in determining the success of dental surgeon–patient relationship. Different dental attires may evoke different feelings according to their appearances. Knowing the children's preferences for different kinds of dental attire, a dental surgeon may determine the most child-friendly attire and the care provided by dental surgeons can be, further, improved. **Aims:** The aim of the present study was to assess children's preferences for different kinds of dental attire and to investigate and relate the influence of age, socioeconomic status, effect of media, and the previous exposure to a dental setup on children's preferences. **Materials and Methods:** A total of 2500 schoolchildren in the age group of 9–14 years were interviewed on their preferences individually for different kinds of dental attire followed by a questionnaire. Ten photographs of five male and five female dental surgeons in different modes of attire were shown to children and asked to give their preferences. The completely answered questionnaires by children were collected on the same day from the children and by parents the next day. **Statistical Analysis Used:** Collected data were compiled and analyzed. Statistical analysis was performed with SPSS (version 13, SPSS Inc., Chicago, USA) package. The statistical tests used for the analysis were Chi-square test, Fisher's exact test, and linear association. **Results:** The results obtained revealed that 35.6% of children preferred white coat the most followed by the attire-scrubs with cartoon (21.8%) for male dental surgeons while 38.2% of children preferred white coat followed by formal attire (28.4%) for the female dental surgeons. **Conclusion:** White coat is the most preferred attire by children followed by scrubs with cartoons and formal attire. Plain scrub was the least preferred. Age and socioeconomic status have definite influence on the preferences of children as lower class and higher age groups showed more inclination toward white coat. Past dental experiences and effect of media showed no significant effect on children's preferences.

Keywords: Children's preferences, dental attires, dental clinics, psychological modulation of children's behavior

INTRODUCTION

With the advent of new concepts and changing expectations of parents and societies, dental surgeons are encouraged to develop better “child-friendly” techniques.^[1] The patient–dental surgeon relationship is the foundation for all patient care in the form of adherence and construction of dental treatment. The first impression regarding a dental surgeon may be formed from many sources prior to verbal communication

including clothing, grooming, and cleanliness where attire is a prominent component.^[2] It has been shown that dental

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attire significantly affects the patient's perception of the dental surgeon.^[3] Psychologists highlight the importance of appearance and its effect upon first impressions and the development of interpersonal relationship.^[2] How a dental surgeon dresses may be important in determining the success of dental surgeon–patient relationship. Different dental attires may evoke different feelings according to their appearances.^[1] Knowing the children's preferences for different kinds of dental attire, a dental surgeon may determine the most child-friendly attire and the care provided by dental surgeons can be, further, improved. The aim of the present study was to assess children's preferences for different kinds of dental attire and to investigate and relate the influence of age, socioeconomic status, effect of media, and the previous exposure to a dental setup on children's preferences.

MATERIALS AND METHODS

Source of data: Data were collected from the students and their parents belonging to primary, secondary, and high school levels of government, semi-private, and private schools of Dharwad district.

Method of collection

Data were collected from 2500 students by personal interview method followed by a questionnaire. A separate questionnaire was kept for the parents, too.

Inclusion criteria

1. Children between 9 and 14 years of age
2. Children who were able to understand and communicate in an efficient way
3. Procedure: The total sample size of 2500 schoolchildren was divided into different age groups as given below:
 - Group I: 9–10 years old
 - Group II: 11–12 years old; and
 - Group III: 13–14 years old.

A total of ten photographs of five male and five female dental surgeons in different modes of attire were shown to children and asked to give their preferences.

1. Shirt and trousers with white coat and head cap for males (MA)
2. Salwar kameez with white coat and head cap for females (FA)
3. Shirt and trousers without white coat and with head cap for males (MB)
4. Salwar kameez without white coat and with head cap for females (FB)
5. Scrubs with cartoons on them with head cap for males (MC)
6. Scrubs with cartoons on them with head cap for females (FC)
7. Surgical scrubs and head cap for males (MD)



Figure 1: Photographs of male and female dental surgeons in different modes of attire.

8. Surgical scrubs and head cap for females (FD)
9. T-shirt and jeans with head cap for males (ME)
10. T-shirt and jeans with head cap for females (FE).

The photographs included were with same background and with same stance of the models. All the other factors were kept similar in photographs except for the attire [Figure 1]. After a brief introduction and instructions about how to answer the questionnaire, a child was given the questionnaire with photographs of male and female dental surgeons in different dental attires. Children were asked to give preferences so as to answer a question "by whom you would like to get your treatment done?" Separate preferences for male and female photographs were recorded. Children were provided with the questionnaire for parents. The completely answered questionnaires by children were collected on the same day from the children and by parents the next day. The collected data were compiled and analyzed.

Statistical analysis used

Statistical analysis was performed with SPSS (version 13, SPSS Inc., Chicago, USA) package. The statistical tests used for the analysis were Chi-square test, Fisher's exact test, and linear association.

RESULTS

A total of 2500 children from different schools of Dharwad district aged between 9 and 14 years were interviewed and questioned individually for their preferences for different kinds of dental attires and were given the questionnaire. Out of those, 244 children failed to return the completed questionnaire meant for parents. A total of 568 completed questionnaires were rejected because of provision of incomplete information. The remaining 1688 completed questionnaires were analyzed critically using different statistical tests and the following results were obtained. The most preferred attire by children (35.6%) for male dental surgeons was found to be shirt and trousers with a white coat. The most preferred attire by children (38.2%) for female dental surgeons was, on the other hand, found to be salwar kameez with a white coat. Out of the five different kinds of dental attires, white coat was the most preferred attire for both male and female dental surgeons. For male dental surgeons, scrub with cartoon was the second most preferred attire by 21.8% children closely followed by the formal attire (19.7%). For female dental surgeons, the second most preferred attire was formal attire without white coat by 28.4% children followed by scrub with cartoon (18.9%). Nontraditional or casual attire such as T-shirt and jeans was less preferred by children as 14.5% children chose it for male dental surgeons whereas only 8.8% children chose it for female dental surgeons. Plain scrub was the least preferred attire as <8% of children preferred it both for the male and female dental surgeons [Table 1]. To check the influence of age group on children's preferences, they were divided into three age groups as 9–10, 11–12, and 13–14 years. All the age groups chose white coat ($P = 0.000$) as their first

choice, particularly the older age groups (13–14 years) as 44% children from this age group preferred it. Though other age groups, i.e., 9–10 and 11–12 years, also, preferred white coat the most, there was less difference in the frequency between the 1st and 2nd most preferred attire in these age groups. All the age groups preferred formal attire without white coat and scrubs with cartoon as the 2nd and 3rd most preferred attires, respectively, for the female dental surgeons. For male dental surgeons, the preferences were not clearly segregated for formal attire and scrubs with cartoon as almost a similar number of children preferred both the attires; however, still a slight inclination toward scrubs with cartoon in older age group was noted. Younger children showed more liking toward casual attire than older age group as about 16% of children from 9 to 10 and 11 to 12 years' age groups preferred T-shirt and jeans for the male dental surgeons while only 10% from 13 to 14 years' age group preferred it ($P = 0.0032$). Less number of children preferred T-shirt and jeans for female dental surgeons compared to that of male dental surgeons. All the age groups showed a strong negative response toward scrubs as only <9% of children preferred it for both the male and female dental surgeons ($P = 0.009$) [Table 2]. To check the

Table 1: Children's preferences for different kinds of dental attire

	Male dental surgeon (%)	Female dental surgeon (%)
1 st preference	Shirt and trousers with white coat (35.6)	Salwar kameez with white coat (38.2)
2 nd preference	Scrubs with cartoon (21.8)	Salwar kameez without white coat (28.4)
3 rd preference	Shirt and trousers without white coat (19.7)	Scrubs with cartoon (18.9)
4 th preference	T-shirt and jeans (14.5)	T-shirt and jeans (8.8)
5 th preference	Scrubs (8.5)	Scrubs (6)

Table 2: Age-wise children's preferences for different kinds of dental attire

1 st preference/ variables	Age group (years)		
	9-10 years (%)	11-12 years (%)	13-14 years (%)
MA	28.89	34.65	42.90
MB	23.11	16.47	20.86
MC	22.04	23.86	18.52
MD	9.20	8.80	7.41
ME	16.48	16.19	10.14
FA	28.68	39.48	44.85
FB	31.24	27.69	26.71
FC	24.18	19.17	13.65
FD	6.42	5.40	6.24
FE	9.20	8.23	8.38
Total frequency	466	704	512

influence of socioeconomic status for preferences for different kinds of dental attires, children were divided into five classes including the upper class, upper middle class, lower middle class, upper lower class, and lower class, and it was observed that upper class showed a definite preference for formal attire without white coat as 44.44% of children preferred it for the female dental surgeons whereas 27.5% of children preferred white coat to make it the second most preferred attire for female dental surgeons. Though higher percentage of children preferred white coat for male dental surgeons, there was very less difference in the frequency of children between the 1st, 2nd, and 3rd orders of preference in upper class. All the other groups showed a definite preference for white coat, with the highest response seen from lower class as 46.8% of children chose it for both the male and female dental surgeons. All groups chose scrub with cartoon and formal attire without white coat as the 2nd and 3rd most preferred attires, respectively, for male dental surgeons except for lower class which chose formal attire as the 2nd preference for male dental surgeons with a frequency of 28.8%. For female dental surgeons, formal attire and scrub with cartoon were the 2nd and 3rd most preferred attires, respectively, and responses obtained were found to be consistent for the female dental surgeons. Though children showed a kind of low response in total for casual attire, i.e., T-shirt and jeans, the percentage of children choosing it for male dental surgeons was on higher side than for the female dental surgeons. A scrub was invariably the least preferred attire by all classes [Table 3]. To check the effect of media on preferences, children were divided into two groups including the ones who had seen dental surgeons on television before and those who had not seen. After comparison, no significant differences were found between the two groups. Similarly, to check the factor of past dental experiences, children were divided into two groups including the ones who had visited dental clinic before and those who had not. Here, also, no notable difference was found [Table 4].

DISCUSSION

Pediatric dental surgeons attempt to develop a trusting, comfortable relationship with at least two people who are

widely discrepant in age, taste, and possibly values: a parent and a child. Communication is a vital and complex component of the dental surgeon–patient relationship. An ever-present part of nonverbal communication is appearance which can play a major role in any attitudes formed in relationships between patient and the practitioner. Professionalism can be portrayed through proper appearance based on dress codes and can increase patient's feelings of comfort and confidence, thus leading to an improved dental experience. Adult responses to various physician attires have been well documented although there has been little information on pediatric patients' response toward various physicians' attires. A commonly held belief that "white coats scare children" has not been proved or, disproved. With so many dress options available to pediatric dental surgeons under the upcoming concepts of child-friendly environment in clinics, there is a need for some information regarding what might constitute "best choices" in the view of children as well as parents. The present study tried to assess children's preferences for different kinds of dental attires and evaluate the influence of factors including age, socioeconomic status, effect of media, and past dental experiences on the preferences of children. The results of the present study confirmed the findings of recent studies conducted that in general, children's preference was toward traditional dental attires^[1,4-6] as white coat was the most preferred attire by children in case of both male and female dental surgeons. The present study, also, revealed that children strongly prefer formal attires in favor of informal attires or nontraditional attires including T-shirt and jeans and that plain scrubs were the least preferred attire by children. Similar findings were noted by Marino *et al.*, 1991,^[4] when they had suggested that although children had no strong positive preferences, they might feel negatively about the informal attires. Kuscu *et al.*, 2009,^[1] and Mistry and Tahmassebi, 2009,^[6] also, reported similar findings for informal attires. Perhaps children might have incorporated a stereotyped concept of the competent, compassionate, and caring doctor-dental surgeon as someone with white coat because of the media and parental influences and/or, an early encounter with doctors due to hospitalization. According to

Table 3: Children's preferences for different kinds of dental attire according to socioeconomic status

1 st preference/variables	Socioeconomic status				
	Upper class (%)	Upper middle class (%)	Lower middle class (%)	Upper lower class (%)	Lower class (%)
MA	33.33	32.90	33.18	36.69	46.87
MB	27.78	17.02	19.62	19.58	28.12
MC	27.78	24.11	20.46	22.42	9.37
MD	0.00	12.05	7.80	8.61	3.12
ME	11.11	13.47	18.78	12.73	12.50
FA	27.78	31.91	36.01	39.82	46.87
FB	44.44	27.65	30.38	27.10	34.37
FC	16.67	23.40	19.41	18.10	18.75
FD	5.50	5.83	6.31	6.13	0.00
FE	5.50	11.67	8.49	8.91	0.00
Total frequency	18	141	474	1022	32

Table 4: Children's preferences for different kinds of dental attire according to the effect of media and past dental experiences

1 st preference/ variables	Effect of media		Past dental experiences	
	Yes (%)	No (%)	Yes (%)	No (%)
MA	34.86	38.11	36.48	33.88
MB	19.06	19.24	20.48	18.69
MC	21.42	22.94	23.36	20.58
MD	8.26	9.25	7.04	8.33
ME	14.91	11.10	12.48	14.28
FA	37.45	39.96	37.12	36.82
FB	27.30	32.93	28.48	27.02
FC	18.97	17.76	18.88	18.06
FD	6.23	4.07	7.04	5.46
FE	9.03	6.29	8.64	8.30
Total frequency	1414	272	311	1368

Barrett and Booth, 1994,^[2] children considered physicians with formal attires as competent but not friendly. Surprisingly, scrubs with cartoon, in spite of being a nontraditional attire, was the 2nd most preferred choice for male dental surgeons and the 3rd most preferred choice for female dental surgeons, and the percentage of preference was nearly the same being around 20.8% for both, revealing the fact that children did not completely refuse the concept of child-friendly attires. Similar findings were observed in the study conducted by Kuscu *et al.*, 2009,^[1] who had proposed that child-friendly attires might be more appropriate for anxious children and enhance an easy-first communication. In case of female dental surgeons, formal attire without white coat was the 2nd most preferred attire. Very few children preferred nontraditional attires such as T-shirt and jeans for female dental surgeons compared to the male dental surgeons. For male dental surgeons, T-shirt and jeans was chosen by 15% children while only 8.8% chose it for the female dental surgeons. This might be because, in India, traditionally, physicians have been predominantly males, so the image inculcated by parental and cultural influences into the minds of the children, in spite of the rapidly modernizing society, still remains the dominance of males in professional fields. The role of females in the society in the mind of a child as a passive personality in traditional attires might take a while to change. Thus, the acceptance of a contradictory Westernized active female aspirant as a dental surgeon is less as was shown in the present study. The results found by Mistry and Tahmassebi, 2009,^[6] however, were contradictory to the above findings, as in their study, female dental surgeons were favored almost four times greater than the male dental surgeons for T-shirt and jeans and pediatric white coat. They, also, found that formal attire was more preferred for the male than the female dental surgeons, which was found to be contradictory to the results obtained in the present study. The present study, also, confirmed that age has a definite influence on the preferences as older age groups showed a strong preference for traditional

white coat compared to the younger groups ($P = 0.000$). Younger groups showed more inclination toward casual attires and scrubs with cartoon. The said findings were similar to the results of the studies conducted by Keenum *et al.*, 2003^[7] and Mistry and Tahmassebi, 2009.^[6] Gjerdingen *et al.*, 1987,^[8] also, stated that older patients viewed traditional dress more positively and casual appearance of physicians more negatively than the younger patients. Similarly, in the present study, younger age groups showed preference for T-shirt and jeans than the older age groups ($P = 0.032$). Older children gave a strong and clear preference for white coat whereas preferences of younger children were not distinct between traditional and nontraditional attires. According to Kuscu *et al.*, 2009,^[1] older children might be expressing a learned, observed response rather than demonstrating a personal preference. Furthermore, lower class showed the strongest preference for traditional attires both for male and female dental surgeons than all the other classes. However, the 2nd preference for attire for the male dental surgeons was an exception by the lower class as they chose formal attire without white coat whereas all the other classes preferred scrubs with cartoon. Lower class showed the strongest negative response for T-shirt and jeans and scrubs. The results of the present study imply that exposure to changing society and the financial and educational background of the family could have definite influence on the psychology and behavioral standards of the children, and in a narrower context, it might strongly affect the perception of the image of doctors or, dental surgeons in the mind of growing children. Belonging to a lower socioeconomic group makes it difficult for children to immediately accept newer modifications in the culture imbibed in their mindset since birth. The attributable factors for this could be lack of proper education, newer facilities, and cultural restrictions in this class of the society. On the contrary, upper class gave 1st preference (44.44% children) to the formal attires without white coat and 2nd (27% children) to white coat for the female dental surgeons. Their choices although were not clearly distinct for male dental surgeons as the same number of children (27% children) preferred scrubs with cartoon and formal attire without white coat. This might be because this group is trying to get out of that age-old concept due to more exposure to modernized society and facilities and they are not hesitant to accept the child-friendly concepts compared to the other groups. Zwart and Kimpen, 1997,^[3] questioned the effect of medical experience on children's preferences and their findings revealed that the more extensive the medical history, more the preference shifted to an informally dressed doctor. The present study, though, did not confirm this finding as very less difference between the choices of the groups which had previous dental experience and which did not was observed. Similarly, the effect of media did not have any significant influence, suggesting that more than the media, it is still the parental influence, peer influence, and to a certain extent, own experience play major role in creating the image of the doctor or, the dental surgeon in children's minds. The possible

limitation of the present study in this aspect could be that it did not consider other forms of media available through which an image of a doctor can reach a child. In the present study, the only form of media considered was television. Furthermore, consistency and the impact of that medium which is reaching the children have to be considered.

CONCLUSION

The popular belief that a white coat scares children is soon waning. On the contrary, it has been shown that children accept the white coat followed closely by their acceptance of scrub with depictions of cartoons and formal attire. This might indicate an influence of more thoughtful education and changing concepts of professionalism; however, further research with larger samples would confirm this statement.

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Conflicts of interest

There are no conflicts of interest.

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