

# Parental Perception on the Effect of Various Factors in a Dental Clinic Affecting Child's Behaviour

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## Abstract

**Background:** Societal, professional views and parenting styles have evolved tremendously over the years. Thus, it is important to understand the parental perceptions on the various factors influencing child behaviour in the dental clinic.

**Aim:** To record and evaluate the parent's views regarding the various factors that influence child behaviour in a dental clinic.

**Materials and methods:** A cross sectional study was conducted among 164 parents who were asked to complete a close-ended questionnaire divided into 4 categories- dentist, dental clinical settings, dental treatments and child related factors. This data was analyzed using descriptive statistics.

**Results:** According to the study results, the parents perceived that the dental treatments and dental settings played a significant role ( $p < 0.05$ ) that affected the child's behaviour in a dental clinic. There was no significant differences between the "yes" and "no" responses for the dentist and child related factors.

**Conclusion:** The parental attitudes and styles are constantly changing as the society evolves. Thus it is important to understand and reassess their beliefs and update our way of managing the dental setup and treatments regularly.

**Keywords:** child, behaviour, dental care, parent, perception

## Introduction

Dental fear prevails to be a major source of problem while managing and treating children in the dental setup [1]. While adult patients tend to develop their own anxiety coping strategies throughout the years, this task often becomes the responsibility of the dentist in pediatric dentistry [2]. The origin of dental fear and uncooperative behaviour of children and proper understanding of it may aid in helping the pediatric dentists to plan and

adopt appropriate behaviour management strategies [3].

Dental fear and behaviour have a multi-factorial origin broadly divided into personal characteristics, environmental factors, or situational factors [4]. Dentists recommend various behaviour guidance methods based upon the child's health, special health care needs, dental needs, type of treatment required, consequences of no treatment, emotional and intellectual development, parents' preferences, dentist's preferences and skills. [5]

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The impact of dental atmosphere on child is a major aspect [6]. Every child is considered unique and a major aspect of behaviour management deals with understanding parental perceptions and determining factors that influence child's behaviour. Over the years, there has been a changing trend in the parenting styles, and societal and professional perceptions [5]. Dentistry always aims to place emphasis on the human aspect of

the dental professional- patient relationship [7].

Thus, it is important to understand the parental perceptions which will present an opportunity to work together and select the best method to provide a safe, effective and comfortable dental visit [5]. Studies related to environmental factors are few and most of the studies were conducted in European and South-East Asian regions [8]. Environmental and situational factors have been previously studied as potential causes of dental fear and behavioural problems but such results have been found to be inconsistent [5, 8-11]. Hence, the aim of this study was to understand parents' perception regarding the factors that influence child's behaviour in a dental set up in Chennai, India.

### Materials and Methods

The present study was a cross-sectional study conducted in the Department of Paediatric Dentistry, Saveetha Dental College and Hospitals. The study design was reviewed and approved by the Institutional Review Board (SDC/PEDO-1704/19/014).

#### Participant selection:

A total of 170 parents who visited the Department of Pediatric Dentistry for their child's dental treatment were included. Amongst that 164 parents agreed to participate in the study. The parents of children who required special needs or have associated systemic conditions were excluded. Thus, parents of children with normal developmental milestones and with at least one prior dental visit were included in the study.

A validated questionnaire [5] was provided to the parents and asked to complete within treatment hours. The questionnaire comprised of 16 close ended questions divided into 4 categories: dentist, dental setting, dental treatment and child related factors.

### Statistical Analysis

Based on the information collected, responses were recorded, processed and a descriptive analysis was followed.

## Results

The results of 164 participants were tabulated and analyzed accordingly. The majority of the parents who brought their child for dental treatment belonged to the age range of 31-40 years (52%) and the least belonged to 41-50 years (17%) with a distribution of 43% males and 57% females (Table 1)

**Table 1: Socio-demographic Characteristics of parents**

Variables	N	%
Age(years)		
21-30	51	31
31-40	85	52
41-50	28	17
Gender		
Male	70	43
Female	94	57

The major reason for bringing the child for dental visit (Table 2) was pain (40 %) followed by decay (24%), routine check-up (15%), trauma (11%) and other reasons (10%). According to responses recorded from parents in terms of yes or no (Table 3), the probabilities of the t- test for the four parameters under evaluation were dentist ( $p=0.0989$ ), dental settings ( $p=0.0187$ ), dental treatment ( $p=0.00018$ ), and child related factors ( $p= 0.17809$ ).

**Table 2: Parent's reason for their child's dental visit**

Reason	N	%
Decay	40	24
Pain	65	40
Trauma	18	11
Routine check-up	24	15
Others	15	10

**Table 3: Parent's perception on various factors affecting the behaviour of their child in the clinic**

	YES	%	NO	%
<b>DENTIST</b>				
Dentist attitude(friendly/stern)	115	70	49	30
Dentist attire(with or without lab coat)	99	60	65	40
Gender	92	56	72	44
Total	306	62	186	38
<b>DENTAL SETTINGS</b>				
Pleasantness of dental setup (colour, decoration, etc.)	117	71	47	29
Friendliness of staff	115	70	49	30
Total	232	70.5	96	29.5
<b>DENTAL TREATMENT</b>				
Duration of procedure	120	73	44	27
Type of procedure (filling, scaling, extraction, etc.)	122	74	42	25
Dental appointment timing(morning/afternoon)	99	60	72	40
Sound and noise of instrument	130	79	34	21
Absence/Presence of parent's during procedure	112	63	52	31
Behaviour of other children undergoing treatment	99	60	65	40
Total	682	69	309	31
<b>CHILD</b>				
Age of the child	84	51	80	49
Gender of the child	79	48	85	52
Previous dental experience of the child	96	59	68	41
Diet consumed by the child	61	37	103	63
Previous dental experience of peers/ and siblings	82	50	82	50
Total	402	49	418	51

According to the results, the parent's perception in respect to two parameters such as dentists and child factors, there was no significant difference noted between the two responses [Yes or No] ( $p > 0.05$ ), whereas there was a significant difference noted for the factors: dental settings and dental treatment ( $p < 0.05$ ).

## Discussion

Getting to understand and learn about parents' perceptions regarding various factors in dental clinic and thereby making the parent understand about the influence of various factors in dental clinic play a major role in establishing a positive dental outcome [12].

As per the study results, 62% of parents agreed that the attitude, attire and gender of the dentist affect the child's behaviour in dental clinic. Amongst that, dentist's attitude (70%) and dentist attire (60%) were believed to play a role in child behaviour. There was no major difference in the results when the gender of the dentist was taken into criteria. Thus, to gain the trust of the children and parent, the dentist's attitude, body language, and communication skills play a crucial role in creating a positive dental experience for the child and parent [13].

Over the years, there has been a concern that the white coat and professional clothing worn by the dentist can increase anxiety in the children. The protective mask may also act as a stressor for the child and thus it is recommended to introduce the child to the dental environment without the mask [14]. It was found that 58% of parents preferred non-white coat attires and formal attires among dentists [15, 16]. In a study conducted in India, it was noted that children preferred their dentists to wear dental scrubs and white coat but were highly anxious on seeing their dentist with any protective wear [17].

American Academy of Pediatric Dentistry (AAPD) describes that the orientation of dental environment and atmosphere play an important role influencing the child's behaviour in dental clinic [13]. According to the present study, friendliness of staff and pleasantness of the dental set up such as colour, decoration etc. affects the child's behaviour according to 70% and 71% of parents respectively. Thus a cumulative of 70.5% parents agreed that the dental settings in general played a crucial role in child's behaviour in dental clinic. The results are in accordance with another study which exhibited the effects of the atmosphere and dental settings on the child's behaviour and emotions [18]. The children exhibited positive emotions towards bright colours (e.g., pink, blue) and negative emotions towards dark colours (e.g. black, brown) [19]. Thus the use of child

friendly colours like blue and yellow enhances a positive dental attitude in the child's mind [20].

Dental healthcare environment is getting more competitive everyday and patients are more demanding than before [21]. The results show that the dentists should pay attention to the dental settings in addition to focussing on the treatment which in turn will motivate the children to undergo the dental procedure in a well behaved manner [5].

According to our study results, 69% of parents agreed that the dental treatment has an effect on the child's behaviour. Amongst that, 73% agreed that the treatment duration affects the child's behaviour, which is similar to previous studies [5, 22]. The dental instrument's sound and noise influence the child's behaviour according to 79% of parents and the type of dental procedure was believed to have some effect on the child according to 74% parents. In a similar study, 77% of parents agreed that the type of procedures, such as drilling/ restoration and the sight of instruments cause fear and anxiety in the child; however, it is known that procedures like injection may produce a high level of anxiety [23].

63% of parents agreed that the presence of parents during treatment might influence the behaviour of the child. However, a study stated that the presence/ absence of parents did not have any effect on the child's behaviour [24]. When the timing of the dental appointment was taken into criteria, 56% of the parents in our study felt that early morning or afternoon dental appointments had some impact on the child's behaviour. Early morning appointments are preferable for young children as they are more rested and thus cooperative. The children may become tired or cranky from missing nap during afternoons or later periods of the day [25]. However according to a study by Lechner, timing of the day of the dental appointment had no significant effect on child's behaviour [26]. Thus, it can be stated that time scheduling for dental appointment should be more dependent on convenience than possible behaviour effect based scheduling [27].

49% of parents in our study stated that the child related factors such as age, gender, previous dental experience and diet of a child including the previous dental experience of the child's sibling had an influence on the child's behaviour. A longitudinal behavioural

study stated that the child undergoing dental care was directly influenced by the psychomotor development of the child [28]. 59% of parents agreed that previous dental experience of the child might have influenced the child's cooperation towards the dental treatment. It is said that a previous traumatic experience in a dental clinic or during hospitalization for any other reason can also provoke anxiety and fear in the child [29, 30].

Previous dental experience of the child's sibling and the gender of the child were considered to impact the child's behaviour according to 50% and 48% of the parents in this study. One study stated that girls are more willing to visit the dentist and cooperate compared to boys of the same age [23]. The diet consumed by the child is believed to affect the child's behaviour according to 37% of parents in the current study. Diet is proven to affect the cognitive ability and behaviour of children and adolescents [31].

This study is the first of its kind carried out in India for the evaluation of parental perception about various factors affecting the child's behaviour in a dental environment. One possible limitation of this study might be the small sample size. Thus, further research in a prospective intervention based method is required to ascertain whether understanding of parental perceptions can serve to be an effective tool in the prevention of child's behavioural problems; and also study the changing trends in various countries.

### Conclusion

Dental treatment and dental settings play a key role affecting the child's behaviour according to the perception of the parents in our study. The success of any paediatric dental practice not only depends on the skills of the dentist but also depends on the patients and their parents. Thus gaining a positive dental experience from both the child and the parent is necessary. This relies on the understanding and constant updating of the changing parental styles and attitudes of the society.

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