

Knowledge of Parents about Multi-Level Influences on Oral Hygiene Practice's in Pediatric Patients: A Qualitative Research

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Abstract

Aim of the Study: The purpose of the study was to assess the knowledge of parents in influencing as well as maintaining the oral hygiene practices of their children. **Methodology:** The parents were requested to complete a 25 - item questionnaire which was semi - structured and self - administered for obtaining the required data. The parents' questionnaire, which included questions on habits and beliefs, and some of the questions concerning attitudes. Also, questions related to the knowledge about the primary dentition, functions, tooth shedding, effects on permanent teeth, and importance of fluoride were also included in the survey. To find out the association between categorical variables, the Chi-square test was applied. $P < 0.05$ was considered statistically significant. **Results:** Of the parents, 42% of the respondents had the practice of changing the child's tooth brush every 6 months, 27.3% once in a month, 19.9% when the bristles fray out, and 13.8% were not particular. It was noted that 64% of the parents visited a dentist while having oral problems, whereas 6.2% of them had the good practice of visiting the dentist at least once in a year. 85.6% of the parents agreed that they would opt for the treatment and 14.4% of the parents would deny the treatment due to the factors such as time constraint (2.9%), expenditure (58.8%), and both time and money (35.3%). **Conclusion:** Good practices for maintaining child's oral health was less than satisfactory in some aspects. Education had a major role to play in their care of child's teeth. Hence, improving awareness among parents/caregivers is crucial in the care of child's oral health.

Keywords: Oral Hygiene, education, tooth brushing, socio-economic factors, parental care.

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INTRODUCTION

According to the American Academy of Paediatric Dentistry (AAPD), the guidance of eruption and development of the primary, mixed, and permanent dentitions are an integral component of comprehensive oral health care for all paediatric dental patients [1]. A complete set of primary dentition is an essential prerequisite in learning correct pronunciation, developing mastication, guiding the permanent dentition to a proper occlusion, and good aesthetics. Therefore, it is imperative that the primary dentition is maintained in good health and preserved until normal exfoliation [2].

Parents as well as the entire family plays a key part in children's environment influencing the development and establishment of oral health

behaviours. There is a significant growth in literature related to the association between caries experience in children and characteristics of the family, parental oral health behaviours and lifestyle.⁴ Routines like tooth brushing habits, dietary habits, and food choices of parents are directly associated with those of their children. Dental care professionals accept that the efforts intended to improve parental oral health behaviours could result in enhanced health in their children. However, many factors are identified which can indirectly influence the parent's health habits and in result their children's health. Some of these factors include parent's education, occupation, age, current knowledge, attitude, and behaviour relating to health. The importance of a parent's knowledge on health including oral health cannot be overemphasized

because most of their decisions with regard to the health of their children will be based on their knowledge [3].

Oral health-related quality of life (OHRQL) assesses the extent to which oral disorders disrupt an individual's normal function and quality of life (QL). Over recent years, the impact of oral health (OH) on QL has become an important focus for assessing the impact of a range of oral conditions on well-being, and the outcomes of treatment in improving QL. Nowadays, researches point out the need to consider the functional and psychosocial dimensions of oral health for the implementation and evaluation of public health dentistry interventions [4].

Considering that regular toothbrushing and flossing eliminate cariogenic bacteria and fermentable substances from the tooth surfaces, good oral hygiene habits help prevent some oral pathologies, such as periodontal diseases and dental caries, which are considered common public health problems. At different ages in childhood, toothbrushing habits should be introduced to children by their parents or care-givers, and practiced on a daily basis. Therefore, an educational approach targeting both children and their parents would help them to suffer fewer carious lesions, and to have better oral health and quality of life [5].

Parents' oral health behaviours have a direct influence on the number of decayed teeth of their children, indicating that oral health strategies should be focused not only on children but also on their parents [6]. Children of parents who control their children's toothbrushing and sugar intake have favourable oral health habits, demonstrating that parental attitudes have a positive impact on their children's oral health status [7]. In fact, the higher the parents' education level, the more favourable the oral self-care of their children [5].

Dental practitioners are expected to recognize and effectively treat childhood dental diseases that are within the knowledge and skills acquired during their professional education. Safe and effective treatment of these diseases requires an understanding of and, at times, modifying the child's and family's response to care. Behaviour guidance is the process by which practitioners help patients identify appropriate and inappropriate behaviour, learn problem solving strategies, and develop impulse control, empathy, and self-esteem. This process is a continuum of interaction involving the dentist and dental team, the patient, and the parent; its goals are to establish communication, alleviate fear and anxiety, deliver quality dental care, build a trusting relationship between dentist/staff and child/parent, and promote the child's positive attitude toward oral health care. Knowledge of the scientific basis of behaviour guidance and skills in communication, empathy, tolerance, cultural sensitivity, and flexibility are requisite to proper implementation. Behaviour guidance should never be punishment for

misbehaviour, power assertion, or use of any strategy that hurts, shames, or belittles a patient [8].

AIM OF THE STUDY

The purpose of the study was to assess the knowledge of parents in influencing as well as maintaining the oral hygiene practices of their children.

METHODOLOGY

A semi-structured, self-administered questionnaire was used to obtain the required data. The parents were requested to complete a 25-item questionnaire comprising of preselected questions adopted from previously validated questionnaires, related to parental knowledge and awareness about the oral health of children. The questionnaires were pretested for face validity among 500 parents of children below 14 years of age. Voluntary informed consent was obtained from the parents before the commencement of the study (Figure-1).

The parents' questionnaire, which included questions on habits and beliefs, and some of the questions concerning attitudes. Also, questions related to the knowledge about the primary dentition, functions, tooth shedding, effects on permanent teeth, and importance of fluoride were also included in the survey.

A score of 1 was recorded for all the answers of knowledge that were correct, while 0 for those incorrect. The attitude questions were designed, carrying both negative and positive statements. The responses were rated and were assessed from the following options: (1) agree, (2) disagree, and (3) uncertain. The statements in a question that have already been proven true, but has an unfavourable response given by the participants, a score of 0 is marked in the agree/disagree category.

The collected data were coded, tabulated, and analysed using IBM SPSS Statistics for Windows, Version 20.0. To find out the association between categorical variables, the Chi-square test was applied. $P < 0.05$ was considered statistically significant.

RESULTS

Of 500 parents who participated in the study, 34.6% were fathers and 65.4% were mothers. Majority of the participants had female child (54.9%). The mean age of parents in years was found to be 36.15 ± 6.07 , and the mean age of children in days was 2286.56 ± 1218.06 . Of the parents, 41% of the respondents had the practice of changing the child's tooth brush every 6 months, 27.3% once in a month, 19.9% when the bristles fray out, and 11.8% were not particular. It was noted that 63% of the parents visited a dentist while having oral problems, whereas 6.1% of them had the good practice of visiting the dentist at least once in a year. In a situation when a primary tooth requires an

extensive treatment with multiple appointments with the dentist, 85.6% of the parents agreed that they would opt for the treatment and 14.4% of the parents would

deny the treatment due to the factors such as time constraint (2.9%), expenditure (58.8%), and both time and money (35.3%) (Table-1).

Table-1: Factors associated with experience regarding taking adequate care of child's primary dentition among parents

Variables	Category	Good practice	Poor practice	P
Siblings	Children without siblings	77 (52.7)	69 (47.3)	0.476
	Children with siblings	184 (56.3)	143 (43.7)	
Parent age (years)	≤30	66 (55.5)	53 (44.5)	0.962
	31-35	72 (53.3)	63 (46.7)	
	36-40	74 (56.5)	57 (43.5)	
	≥40	49 (55.7)	39 (44.3)	
Child age (days)	≤1460	75 (52.8)	67 (47.2)	0.668
	1461-2190	64 (60.4)	42 (39.6)	
	2191-3285	71 (54.2)	60 (45.8)	
	≥3285	51 (54.3)	43 (45.7)	
Parent education	Above high school education	179 (59.3)	123 (40.7)	0.017*
	High school education or below	82 (48.0)	89 (52.0)	

Chi-square test, *Statistically significant

Fig-1: Survey questionnaire used in this study

Survey Questionnaire
Knowledge
1. What are milk teeth/primary teeth/deciduous teeth?
2. How many milk teeth are there?
3. Role of the fluoride in the toothpaste?
4. Food items that leads to tooth decay?
5. Which of the following prevents the tooth decay?
6. Does all the permanent teeth replace their respective milk tooth?
7. Will all primary teeth shed?
Attitude
8. Good oral health is related to the good general health
9. Milk teeth do not require good care
10. The child needs regular dental visits
11. Child to be guided and supervised while brushing
12. It is unnecessary to treat a decayed milk tooth
13. Primary teeth has no significant role on functions
14. Healthy primary teeth acts as natural space maintainers
15. It is ok for child to sleep with milk bottle in its mouth
16. Bacteria from cavities are transmissible
Practice
17. How often you take your child to visit the dentist?
18. How many times do you brush your child's teeth?
19. How often do you change your child's tooth brush?
20. When is it best to give sweets and chocolates?
21. Does your child rinse the mouth after eating/drinking?
22. If child's primary tooth is infected, what will you do?
23. If an infected primary tooth in your child's mouth needs extensive treatment, requiring a few visits and some expenditure, will you agree for treatment or not?
24. If an infected primary tooth requires extraction which is the only possible treatment option, will you agree for treatment or not?
25. What do you do if your child has a toothache?

DISCUSSION

Parents influence their child's behaviour at the dental office in several ways. Positive attitudes toward oral health care may lead to the early establishment of a dental home. Early preventive care leads to less dental disease, decreased treatment needs, and fewer opportunities for negative experiences [9]. Parents who have had negative dental experiences as a patient may transmit their own dental anxiety or fear to the child thereby adversely affecting her attitude and response to care [10]. Long term economic hardship and inequality can lead to parental adjustment problems such as depression, anxiety, irritability, substance abuse, and violence. Parental depression may result in decreased protection, caregiving, and discipline for the child, thereby placing the child at risk for a wide variety of emotional and behaviour problems [11].

An evaluation of the child's cooperative potential is essential for treatment planning. No single assessment method or tool is completely accurate in predicting a patient's behaviour, but awareness of the multiple influences on a child's response to care can aid in treatment planning. Initially, information can be gathered from the parent through questions regarding the child's cognitive level, temperament/personality characteristics, anxiety and fear, reaction to strangers, and behaviour at previous medical/dental visits, as well as how the parent anticipates the child will respond to future dental treatment. Later, the dentist can evaluate cooperative potential by observation of and interaction with the patient [8].

Retnakumari and Kuriakose *et al.*, reported an association between caries incidence and education status of parents. A study among the sub-urban Nigerian families by Folayan *et al.*, reported that the odds of the child using fluoridated toothpaste increased by over 39 folds, when the mother uses fluoridated toothpaste. Thakare *et al.*, observed in their study that the majority of the parents were aware of the importance of primary teeth. On contrary, Wong *et al.* observed the cultural belief among the Chinese parents that the primary teeth were not considered as important as the adult teeth. Parents who held a strong belief to this declined dental treatment for their children, and those parents who recognized its importance chose to bring their children for dental treatment [2].

Although the study population had a good knowledge that sweets, chocolates, and bakery items can lead to tooth decay, ambiguity was observed regarding the time of intake of sugars. This result was in concurrence with the study done by Jain *et al.*, which throws light on the restricted knowledge among the respondents regarding the frequency of snacking and tooth decay [12].

In our study, very few parents (below 15%) viewed dental treatment for primary teeth as

unimportant and the most common reason for unwillingness was deemed to be a waste of time and money on temporary dentition. A similar reason was observed by Mounissamy *et al.*, among the study population (79.2%) in Chennai, for not treating the primary teeth [13]. In our study, majority of the participants belong to rural areas, who lacked knowledge on the importance of oral health in children. The plausible elucidation for such high percentage of poor knowledge could be due to the paucity of oral health-related information for young children among the parents and the recommendations on how to competently translate that information into daily routines.

CONCLUSION

Good practices for maintaining child's oral health was less than satisfactory in some aspects. Education had a major role to play in their care of child's teeth. Hence, improving awareness among parents/caregivers is crucial in the care of child's oral health.

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