

Parental Awareness of Child Oral Health Maintenance in Rural Kannur District

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Abstract:

Background: Oral health is an integral component in the general health of an individual and has become a major public health issue with a substantial social impact. Oral health knowledge is essential for proper oral hygiene and better oral health. More than the child, it is the influence of the parents that will determine the future of their children's oral health. Therefore a study was conducted to have a better understanding of the parent's knowledge regarding oral hygiene maintenance in children and to educate them on proper brushing habits.

Materials and method: A Study was conducted in 800 parents of children who were between the ages of 0-9 years of which 760 completed questionnaires were included in the study. The questionnaire consists of 12 questions concerning parents awareness and practice of oral health maintenance in children.

Results: 98% of the children were using toothbrush and paste to clean their teeth. 72.5% were using adult toothpaste and only 24.5% were using children's toothpaste. Around 56% were choosing the toothpaste based on brand. 58% of children were brushing their teeth twice daily and 54% have spent 1-3 minutes for brushing their teeth. 51% were changing their children's toothbrush every 3 months.

Conclusion: Parent's knowledge and awareness of oral health among Kannur district parents were relatively good. It would be more fruitful to educate parents regarding oral health care and its maintenance so that next generation is handled in a systematic way.

Keywords: Children, Parents, Questionnaire, Kannur

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I. Introduction

Oral health is an integral component in the general health of an individual and has become a major public health issue with a substantial social impact¹. According to American Dental Association (ADA), "Oral health is a functional, structural, aesthetic, physiologic, and psychosocial state of well-being and is essential to an individual's general health and quality of life"². Studies on oral health awareness in rural areas shows the lack of awareness among them³.

Oral diseases constitute a significant public health problem in developing countries due to their high prevalence, economic consequences, and negative impact on the quality of life of affected individuals⁴. Children who have dental caries in their primary dentition are more likely to have dental caries in permanent dentition⁵. Growing children need proper guidance for healthy growth and hygiene of their teeth⁶. According to the most recent surveys conducted⁷ an increase in cavities in pre-schoolers has been seen. Studies have reported that increase in knowledge on oral health promotes good oral health practice⁸.

Early intervention helps in providing an opportunity to educate parents in many areas such as good oral hygiene, the form of proper tooth brushing, use of dental floss, prevention of dental injuries, prevention of nursing caries, reinforcing the importance of dental visits at regular intervals, and proper dietary practices⁹.

To maintain good oral hygiene in children, the American Academy of Paediatric Dentistry (AAPD) recommends that tooth brushing should be performed for children twice daily, using a soft toothbrush of age-appropriate size¹⁰. Young children are not capable of brushing their own teeth properly; therefore, it is parent's responsibility to take care of their child's oral hygiene¹¹. As a result, parental awareness of their children's dental needs may have an important role in preventing future oral health problems.

Against this background, the survey was conducted on Parents of Kannur district to evaluate the parent's knowledge regarding the maintenance of good oral hygiene for their children and to educate children the correct brushing technique.

II. Materials And Method

A cross sectional questionnaire study was conducted in Kannur district over a period of 3 months. Ethical clearance was obtained from the institutional ethical committee. A questionnaire was formulated for the parents to study their awareness about brushing habits in their children between the age group of 0-9 years. The participants were randomly selected and were willing to participate. A pilot study was conducted in the Department of Paediatric and Preventive Dentistry on parents of patients who attended clinics to test the validity and operational feasibility of the study.

The questionnaire consisting of a set of 12 questions was distributed to randomly selected parents who were willing to participate in the survey. Total of 800 questionnaires were distributed to the parents attending the Outpatient Department of Paediatric and Preventive Dentistry. On completion of the questionnaire, every parent was given an informative pamphlet explaining to them the importance of brushing and maintaining good oral hygiene. Data available was entered in Microsoft Excel and percentage frequency distribution was used to calculate the frequency of responses to each question.

III. Results

Of the 800 parents who were given the questionnaire, 760 questionnaires were returned with complete responses. Therefore the response rate is of 95%. The participants were in the age group of 18 to 55 Years. The demographic details of the participants are given in table – 1.

Table 1: Demographic details of the participants

Total No of Participants : 800 No of Completed Questionnaires : 760 Response rate : 95%	AGE	FREQUENCY	EDUCATIONAL STATUS
	GENDER Male 159 (21%) Female 601(79%)	18-30 years	586 (77%)
31-40 years		159 (21%)	Matriculation 401(53%)
	More than 40 years	15(2%)	Graduation 271(36%)
			Post Graduation and above 59(7%)

Table 2 gives the detailed questionnaire responses of the participant regarding the child oral health. The responses show that 98% of the parents use tooth paste and tooth brush, only 24.5% of children use children's tooth paste and the basis for choosing the paste was based on the brand of the paste for 56% of parents. 58% of children brushes twice daily and 54% brushes for 1-3 minutes. 51% of them changes tooth brush every 3 months. The responses also shows only 42% uses tongue cleaner and 8% dental floss. The study also shows 77% rinses their mouth after each meal.

Table 2: Responses of the participants

SL NO	QUESTIONS	FREQUENCY (%)
1	Age of the child	
	0-3 years – 60 = 20%	149 (20%)
	4-6 years – 153 = 51%	390 (51%)
	7 – 9 years – 87 = 29%	221 (29%)
2	Gender of the child	
	Male	370 (49%)
	Female	390 (51%)
3	Aids used to clean your child's teeth	
	Brush	745 (98%)
	Charcoal	0 (0%)
	Finger	15 (2%)
4	What material is used to clean your child's teeth along with brush	
	Paste – 294 = 98%	745 (98%)
	Powder	15 (2%)
	Only brush	0 (0%)
5	Which type of toothpaste you use for your child	
	Children's toothpaste 22%	185 (24.5%)
	Adult toothpaste – 218 = 73%	551(72.5%)
	Whitening / sensitive toothpaste	24 (3%)
6	On what basis do you choose toothpaste for your child	
	Price	236 (31%)
	Brand	427 (56%)
	Taste	97 (13%)
7	How many times your child brush his/her teeth	

	Once	318 (42%)
	Twice	442 (58%)
8	Time spent for brushing	
	1-3 minutes	412 (54%)
	4-6 minutes	341 (45%)
	7-10 minutes	8 (1%)
9	How frequently do you change your child toothbrush	
	Every 3 months	390 (51%)
	3-6 months	290 (38%)
	Till bristles worn out	80 (11%)
10	Does your child use tongue cleaner	
	Yes	320 (42%)
	No	440 (58%)
11	Does your child use floss after brushing	
	Yes	60 (8%)
	No	700 (92%)
12	Does your child rinse his mouth after every meal	
	Yes	586 (77%)
	No	174 (23%)

IV. Discussion

This study evaluated parental awareness of their child's oral health maintenance and the associated factors. Parental opinion is considered a valuable tool in the assessment of the children's condition. It has been reported that the tooth brushing habits amongst children were significantly associated with the parental attitude towards importance in developing good oral hygiene¹².

In the present survey, the parent's children aged between the age group of 0-9 years were included. This was almost similar with the AAPD Guidelines which emphasize that parents should supervise their children's brushing until the age of 7-8 years. This is the age at which their fine motor skills develop. Children younger than 3 years are not developmentally ready to brush their teeth independently. Although they should be encouraged to brush their own teeth, parents are expected to perform brushing for them until age six¹³. For older ages, parents should supervise their tooth brushing, which can help the child to develop a proper tooth brushing habit. Parental supervision and active involvement in children's tooth brushing can result in their increased awareness of their children's oral health maintenance as well. Furthermore, parents should be educated about the importance of children's oral hygiene so that they truly believe in the significance of tooth brushing twice daily¹⁴. According to Attin T et al¹⁵, most patients do not achieve sufficient plaque removal. Therefore, brushing of teeth twice daily is recommended in order to improve plaque control.

In the present study about 98% of the parents use brushes to clean their children's tooth. Brushing is a preventive measure considered essential for the prevention of caries and periodontal diseases, and can be effectively increased by using toothpaste formulations containing antimicrobial agents. Toothpastes, has a wide range of chemical and antimicrobial agents, added to create a direct inhibitory effect on plaque formation¹⁶. Several clinical studies have shown the inhibitory effect of antimicrobial toothpastes on oral and dental bacteria¹⁷. When these agents are added to toothpastes, they eliminate microorganisms by destroying the cell wall and disrupting enzymatic activity.

Dentifrice is significant in preventing accumulation of dental plaque and therefore, selection of the best dentifrice is important especially for developing teeth. These dentifrices which, in adequate amount, can prevent dental caries. Almost majority of the children in our study use adult toothpaste and only few use Children's toothpaste and this shows that the parents are unaware about selecting the dentifrices for their children. 56% of the parents were persuaded by brand advertisements and 31% based on price. Studies conducted in Malaysia¹⁸ and teenagers in Sweden¹⁹ show that the taste was an important factor in selecting toothpaste for their children.

Brush used by some individuals show evidence of wear within two weeks of use; for some others, there is little wear over six months. If the toothbrush is getting worn out too early, it could probably be due to the application of a great amount of pressure while brushing and thereby causing damage to the enamel surface which cannot be regenerated or replaced, eventually causing abrasion. On the contrary, if it is still intact after 3 months, it is probable that brushing time is inadequate. The recommended duration for brushing is 2-3 minutes.²⁰ According to Hamasha et al the ideal duration of brushing teeth as recommended by the American Dental Association (ADA) is 2 minutes²¹.

Tongue cleaning was reported by very few parents who made their children practice it regularly. Most of the study group did not use tongue cleaning. It has been reported that tongue cleaning done by a toothbrush or a tongue cleaner provides an efficient reduction in Streptococcus mutans count and a significant reduction in plaque levels²².

Flossing and mouth washing is an important attribute to oral hygiene maintenance, and only very few parents said that their children flossed. In a study conducted by Walsh MM in San Francisco²³ 75% claimed to

use dental floss, at least once a day. However, in Saudi Arabia only 2.3% of the study population used dental floss²⁴ and in South India, floss was reported to be the least used cleaning aid.²⁵ This could be due to lack of awareness regarding the cleaning of all the surfaces of teeth with dental floss. It is imperative to educate the parents and children in our population regarding the importance and the technique of using the floss. It is also essential to practice mouth rinsing after every meal, to prevent food lodgement which provides a nidus for bacterial growth.

V. Conclusion

Parent's knowledge and awareness of oral health among Kannur district parents were relatively good. The role of parents in their child's oral hygiene has an important role, the enhancement of their awareness is very important. It would be more fruitful to educate parents regarding oral health care and its maintenance so that next generation is handled in a systematic way. This can be achieved by concentrating at the grassroots level by conducting various educational programs among parents to achieve a major goal.

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