Research Article

Evaluation of Mother's Knowledge & Beliefs About Oral Health of Their Preschool Children

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Access this article online

Website: www.healtalk.in

DOI: 10.4880/zenodo.5820810

Quick Response Code:

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Abstract

Background: Children in early ages, specially below the 4 years of age, spend their maximum time with parents especially mothers or guardians. Therefore, this study was conducted with the aim of assessing Mother's knowledge and beliefs about oral health of their preschool children. Materials &Methods: This was a cross sectional study which was conducted on mothers of preschool children of Lucknow city. A self-structured questionnaire in both Hindi and English language, was used to be filled by mothers as a tool to evaluate the knowledge and belief about their children's oral health. 'dmf' index in the oral cavity of children was recorded to know their dental caries status. Results: Out of those who were sent the survey form, total 324 mothers completed the survey. Children of only those mothers who completed the survey were examined. 87.7% children use toothbrush, 67.9% children brush their teeth once daily, 21% brush their teeth in night also. 18.5% children had experienced dental pain, 3.7% mother have gone to dentist for their child and only 9.9% of mother started brushing their child's teeth right after 1st tooth appeared in oral cavity. Approx. 67% mothers reported that their child had bottle at bed time, approximately 76% reported that they tasted food before feeding to the child with the same spoon, approx. 93% reported that they gave something like chocolate or toffee to calm the child, 51.9% of mother never clean child's teeth/gums after bottle feeding at night.34.5% children had<3 decayed teeth, 9.8% had 3-5 decayed teeth and 55.6 % children did not have any decay. Conclusion: The current study interprets that mother of preschool children have insufficient knowledge and attitude for oral health, the same is reflected in their oral health practices towards their children.

Key words: Mother's Knowledge, preschool children, oral health, Mother's risk behavior.

INTRODUCTION

An oral cavity deprived of healthy condition in early ages of a child is one of the most painful and expensive health problem in young children.[1] The major oral health problem among children is dental caries/tooth decay. Dental caries is a disease of calcified structure of teeth in which Streptococcus mutans plays the main role as an etiological agent.[2] Studies using phenotyping and/or genotyping methods have found strong evidences to indicate that mothers are the foremost source for children in regard to this transmissible infection. Usage of inappropriate feeding methods by mothers/caregivers make the infants and toddlers prone to develop early childhood caries, by endorsing the early establishment of S. mutans in the oral cavity of child.[2]

Parents, especially the mothers are usually the primary people who decide the actions taken for the children's health. Parental beliefs and thought process are also an important factor to consider in attempts made to improve children's oral health.[3]

Children in early ages, specially below the 4 years of age, spend their maximum time with parents especially mothers or guardians. The same continues even till the time they start attending pre-schools or nurseries. This initial period of their life encompasses the "primary socialization". This is the time when childhood manners and habits are developed,[4] which include eating habits and healthy lifestyle which becomes the normal daily routine in the homes but this depends on the knowledge and practices of elder siblings and parents.

Various studies in the past have proved that poor attitude of parents for oral health of their infants and young children may lead to

How to cite this article: Gupta Vinay et al., Evaluation of Mother's Knowledge & Beliefs About Oral Health of Their Preschool Children, HTAJOCD.2022; May-June(5):36-39.

higher prevalence of dental caries in future.[5]

Same way, If the attitude of parents for the oral health of their children is positive toward dentistry, the chances of good oral health condition of children will be higher.[6] The lack of knowledge about basic principles or oral health maintenance like, knowing and managing the risk factors responsible for dental caries, significance of the milk teeth etc, makes it difficult to employ effective preventive strategies for oral health.[7]

In India, there is insufficient data on the oral health conditions of children of pre-school age. Therefore, this study was conducted with the aim of assessing Mother's knowledge and beliefs about oral health of their preschool children.

Materials & Methods

This was a cross sectional study which was conducted on mothers of preschool children of Lucknow city. Lucknow is the capital of Uttar Pradesh which is India's most populous state. A self-structured questionnaire in both Hindi and English language, was used to be filled by mothers as a tool to evaluate the knowledge and belief about their children's oral health. The questionnaire was administered only after the aim and objectives of this survey were explained to the participants and informed consent was obtained.

A cluster sampling technique was used to have a representative sample of schools. Firstly, a list of all preschool/play school of Lucknow city was prepared. At the second stage, the schools were selected randomly. In selected schools, all mother of 2-4 years of age were invited to participate in the survey.

The questionnaire was attached to the students' school diary after achieving permission from the principal. Individual confidentiality of mother was ensured to make the subjects free to fill the correct information. 'dmf' index in the oral cavity of children was recorded to know their dental caries status, after obtaining written consent by the parents.

To increase oral health awareness of the mothers as well as children, an oral health education program was also conducted in these school after the completion of survey/examination. The study was initiated after obtaining ethical approval from Institutional Ethics Committee.

Data Analysis

The data was analysed using SPSS version 21. Descriptive statistics was carried out to calculate responses of all questions.

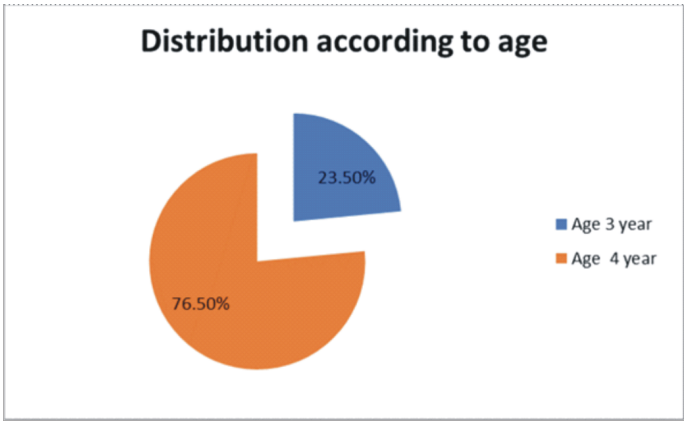

Figure – 1; Distribution according to age

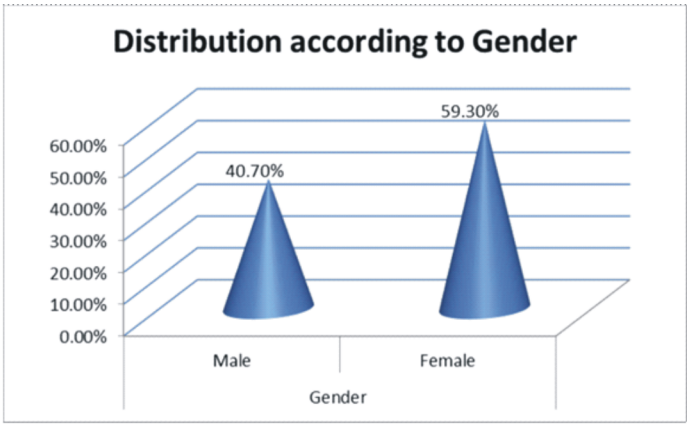

Figure – 2; Distribution according to Gender

Results

Out of those who were sent the survey form, total 324 mothers completed the survey. Children of only those mothers who completed the survey were examined.76.5% children belong to age group of 4 yr. and 23.5 % were in the age of 3 years **(Figure 1)**. 59.3 % of children were girls and 40.7% were boys **(Figure 2)**.

Oral Health Practices

Table 1 shows that, 87.7% children use toothbrush, 67.9% children brush their teeth once daily, 21% brush their teeth in night also. 18.5% children had experienced dental pain, 3.7% mother have gone to dentist for their child and only 9.9% of mother started brushing their child's teeth right after 1st tooth appeared in oral cavity whereas others started when many or all the teeth had appeared in oral cavity.

Table – 1; Oral Health maintenance Practices

Question	Responses	Frequency (%)
Tooth Cleaning Material	Finger	40 (12.3)
	Tooth Brush	284 (87.7)
Frequency of tooth cleaning	Once	220 (67.9)
	Twice	104 (32.1)
Brushing at night	Yes	68 (21.0)
	No	256 (79.0)
Past dental pain experience of child	Yes	60 (18.5)
	No	264 (81.5)
Visited dentist	Yes	12 (3.7)
	No	312 (96.3)
Time of starting tooth brushing	First tooth come	32 (9.9)
	1 to 2 yr	208 (64.2)
	2 to 3 yr	84 (25.9)

Mother's Risk Behaviour

Table 2 shows that approx. 67% mothers reported that their child had bottle at bed time, approximately 76% reported that they tasted food before feeding to the child with the same spoon, approx. 93% reported that they gave something like chocolate or toffee to calm the child, 51.9% of mother never clean child's teeth/gums after bottle feeding at night.

Table – 2; Mother's Risk Behaviour

Question	Responses	Number (%)
Sleeping with milk bottle	Never	104 (32.1)
	Sometimes	52 (16.0)
	Mostly	132 (40.7)
	Always	36 (11.1)
Taste food with same spoon	Never	80 (24.7)
	Sometimes	24 (7.4)
	Mostly	168 (51.9)
	Always	52 (16.0)
Give chocolate or toffee when child cries	Never	28 (8.6)
	Sometimes	172 (53.1)
	Mostly	88 (27.2)
	Always	36 (11.1)
Clean tooth after child had milk	Never	168 (51.9)
	Sometimes	56 (17.3)
	Mostly	68 (21.0)
	Always	32 (9.9)

Dental Caries Status of Children

As it can be seen in Table 3, it was found that 34.5% had <3 decayed teeth, 9.8% had 3-5 decayed teeth and 55.6 % children did not have any decay.

Table – 3; Dental Caries status

Number of Decayed Teeth	Number of children (%)
0	180 (55.6)
1	60 (18.5)
2	52 (16)
3	12 (3.7)
4	16 (4.9)
5	4 (1.2)

DISCUSSION

Health of the oral cavity of children is strongly linked with knowledge about oral health of their parents/guardians because habits related to oral health are established in infancy period and carried forward throughout early childhood.[8]

In this study, knowledge regarding role of fluoride was poor, the similar findings were found by Suresh et al[8] Jain et al [9] and Pullishery F et al[10] and whereas the same was found good in study of Al-Zahrani et al[11] and Oredugba F., et al[12]

More than 80% children in this study were reported to use tooth brush and tooth paste for cleaning their teeth. This was comparable to the other studies done by Jain et al [9], Moulana et al[13], Chan et al[14],Pasareanu et al[15] and many more studies. In present study 32% children were brushed their teeth twice daily whereas 68% were brushed only once; 21% mothers said that they brush their child's teeth in night also. It is almost similar to the finding of sehrawat P et al[16] in which 31 % did once and 53 % did twice, but dissimilar to the results of Pullishery F et al[10] Chan et al[14].

In this study, though 18.5% mothers mentioned that their child had experienced dental pain in past but only 3.7% mothers reported to take their child for dental visit which is similar to the study of Chan et al. Reasons for lack of visit despite pain experience by child could be due to lack of knowledge about importance of deciduous teeth, anxiety, fear of taking child to dentist, high costs of dental treatment. These obstacles need to be targeted to provide a painfree oral cavity to every child.

Majority of mothers in current study, started brushing the teeth of their children only when all primary teeth had erupted. Contrary to our result, Al-Zahrani et al[11] found that 89% parents in his study agreed on the fact that Babies need their mouths cleaned even before eruption of teeth[12] and in study of CHAN et al[14] 44 % mothers and caregivers agreed that cleaning of oral cavity should be started from birth.[14] This is an important information to be instilled in minds of young parents that cleaning of oral cavity is needed even before the eruption of teeth and after eruption of even first tooth it becomes more crucial.

In our study it was found that approx. 67% (40 % mostly, 11% always and 16% sometimes) mothers make their child sleep with milk bottle in child's mouth. It is in contrast to the study of Al-Zahrani et al[11]but almost similar to thestudy of Chan et al (56 %).This can make a child habitual of using nursing bottle, which may become difficult to discontinue by a child timely.[14] Majority of mothers in this study reported to taste the food with same spoon before giving to the child which is similar to the finding of study by suresh et al[8] and Sakai et al[17] in which majority of the mothers had insufficient knowledge regarding the fact that sharing of utensils can transmit Streptococcus mutans bacteria which can cause caries in children.[8] This is also one of the main factors responsible for early establishment of S. Mutans in the teeth of children.[8]

In present study, 93 % mothers accepted that they give toffee or chocolate to calm the child when he/she cries. It's a human tendency that we choose the easier way to find out the solution. Toffee or chocolates are liked by most of the children but the fact that slow dissolving (toffee) or sticky (chocolate) sugary items are the most dangerous as caries causing agents, is not realized by majority of parents. Therefore, while educating the parents about oral health, its always advised to render the above-mentioned fact as well as necessity to rinse the mouth of child after eating this kind of sugary food religiously.

A current definition of ECC, adopted by the AAPD, is the presence of 1 or more decayed (non-cavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any

primary tooth in a child under the age of 6 (AAPD, 2011b).[18]In current study it was found that 44.9 % had tooth decay/ECC, although percentage of affected children varied with number of decayed teeth 55.6 % children in this study were found to be caries free. This finding was almost equivalent to the prevalence of ECC in India i.e. 49.6% quoted by Ganesh A et al[19].

CONCLUSION

The current study interprets that mother of preschool children have insufficient knowledge and attitude for oral health, the same is reflected in their oral health practices towards their children. Findings of this study cannot be extrapolated because of small sample size and the study included only those mothers who were visiting the schools of their children. The target population and the specific content of oral health education needs to be identified and served so as to prevent the dental problems in young children which would aid in making their childhood pleasant.

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