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ORIGINAL ARTICLE

Evaluation of Awareness Among Muslim Parents of Preschool Children in Udaipur City of Rajasthan India, Regarding the Importance of Primary Dentition

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ABSTRACT

Aim: Little data is available on the initiative shown by the Muslim parents for dental health care of their children. This study was conducted to evaluate the awareness among Muslim parents of preschool children in Udaipur city of Rajasthan India, regarding the importance of primary teeth.

Material and Methods: A total of hundred Muslim parents of preschool children were included in the study with equal ratio of males and females. Self-administered questionnaire were given to the parents to be completed by holding interactive meetings with the help of respective community heads. Chi-square test was applied and significance level was calculated.

Results: The results showed that a high proportion of parents were unaware of their children's dental needs. It was surprising to note that the male parents (67.7%) were more aware as compared to the female parents (58.2%).

Conculusion: Parents lack adequate knowledge on importance of the primary teeth; hence, there is an increasing need to increase the knowledge of parents through effective strategies. Educational background appeared to influence the level of awareness of the importance of primary dentition.

Keywords: Awareness, Muslim, Parents, Importance, Primary dentition

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INTRODUCTION

A common misconception that milk teeth of children will exfoliate and there is a less need to seek expert dental advice may lead to various dental problems (1). The knowledge regarding oral health status in young children at least in Muslims is limited. Religious background has shown to be an indicator of caries risk in Muslim children (2). Thus, it is essential to explore parents' knowledge as it affects the dental care children receive (3-7). The aim of this study is to describe behaviors of Muslim parents towards their children's oral health with the help of a self-administered questionnaire.

MATERIAL AND METHODS

Samples of hundred parents of preschool children were selected to participate in this study with equal ratio of males and females. They were made to fill a self-administered multiple choice questionnaire, which was specifically related to their awareness regarding deciduous dentition.

Self-administered questionnaire:

The questions were formulated based on the literature review and the objective of the study (3-8). Pre testing of the ques-

tionnaire was carried out on 10 parents who were involved in the calibration exercise to check for ease of understanding, clarity and their sequential flow. Any ambiguity and inadequacies detected were rectified to ensure the reliability of the questionnaire.
The first part of the questionnaire included demographic information regarding parent's gender, nationality and child's age. The second part had questions to describe parental beliefs, attitudes and behaviors towards their children's oral health, indicating different risks for dental disease among children. The questions were designed to collect information on the knowledge of parents regarding importance of deciduous teeth and their premature exfoliation; their children's age of onset and frequency of tooth brushing habit; role of fluorides, transmissibility of caries, and parental choice of dental treatment for decayed deciduous teeth and reported dental attendance pattern of their children. These constitute a proxy measure of the parental perception on the importance of the deciduous dentition.

Data Management and Analysis

Data collected was checked for completeness. The findings obtained were coded and entered into the computer. Chi-square tests were used on each question for examining differences between answers of males and females. The significance level was set at $p<0.05$. Finally, the percentage of awareness was calculated between males and females.

RESULTS

It was surprising to note that the male parents (67.7%) were more aware as compared to the female parents (58.2%) regarding the importance of deciduous dentition (Figure 1 and Table 1). The results showed that a high proportion of parents were unaware of their child dental needs. 15% of them believed that primary teeth don't hold any importance as they are going to fall anyways. While 85% of parents agreed that milk teeth needs dental care like permanent teeth.

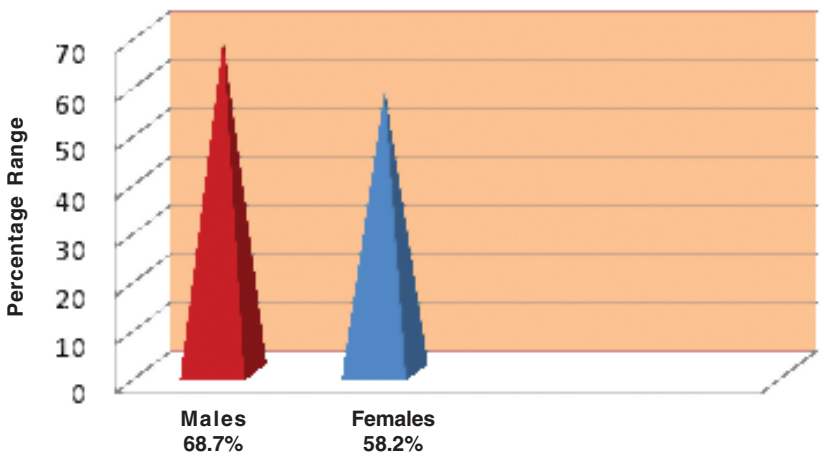

Figure1: *Graph representing the percentage of awareness among males and females*

Reported practices of dental visit- Majority of parents (64% males and 68% females) were unaware of dental visit within six months of eruption of the first primary tooth. There was quite high percentage (81%) of parents who had never attended any school or any other dental health program camp.

Parental perception on the cause of tooth decay- When asked to identify the most important cause of tooth decay in children, the majority of respondents selected either "not cleaning teeth everyday" (44%) or sweet snacks and drinks between meals" (40%). 83% parents thought that infection with bacteria was the primary cause and less (16%) believed that the use of bottles at night time was the most important factor.

Table 1: Percentage of correct responses given by male and female parents regarding the importance of deciduous teeth.

QUESTIONS	MALE (%)	FEMALE (%)	P'VALUE
1. Milk teeth needs dental care as permanent teeth	78	98	P<0.05
2. Child first dental visit- 6 months/at least 12 months of age	36	32	P>0.05
3. Cleaning the child's mouth- before tooth eruption is essential	24	34	P>0.05
4. Fluoride prevents tooth decay	62	32	P<0.001
5. Feeding milk at bedtime is main cause of early childhood caries	18	14	P<0.001
6. Rinsing mouth with water after drinking milk	60	28	P<0.001
7. Initiation of tooth brushing habit	10	28	P<0.05
8. Frequency of tooth brushing	78	58	P>0.05
9. Brushing before bed time	78	68	P>0.05
10. Commercial availability of toothpaste formulated for children	62	32	P<0.01
11. Premature exfoliation of primary teeth is harmful	48	40	P>0.05
12. Caries is a transmissible disease	30	4	P<0.01
13. Restoration as choice of treatment for decayed teeth	54	22	P<0.05
14. Dental health program attendance	10	28	P<0.05

Several items in the questionnaire sought information regarding the knowledge, beliefs and practices associated with fluoride as a protective factor. The majority of parents did not know that fluoride was helpful preventing tooth decay, however only 47 % agreed that fluoride prevented tooth decay.

Parental perception regarding the transmissibility of carious disease- Despite of knowledge regarding the role of diet and tooth cleaning, the relative role of other factors such as infection with S.mutans was virtually unknown in this group. Sharing foods with other individuals and pre-tasting food by adults has been associated with early infection with S.mutans in infants. Parents were largely unaware that the cariogenic bacteria could be transmitted from themselves to their children with only 17% agreeing with this idea and rest of them disagreed. Education of parents is required to reduce the risk of early transmission of cariogenic bacteria (9).

Initiation of tooth brushing habit- Only 19% of parents believed that they should begin cleaning their child's when or soon after the teeth first appeared as opposed to waiting until all the primary teeth were present. While 78% of parents started to brush their children's teeth at a very late age i.e. between 2-3years.

Frequency of tooth brushing- 68% of parents agreed that the brushing frequency should be twice a day but only 73% of parents made sure that their children brush their teeth before going to bed. Only half of the respondents (47%) were aware that toothpaste formulated for children were commercially available. Rests of the parents were using adult toothpaste for brushing their child's teeth.

Parental choice of dental treatment for their children's decayed primary teeth- 38% of parents preferred dental restoration for their children's decayed primary teeth and 17% preferred extraction not knowing about the deleterious effects of premature exfoliation of the primary teeth. While 39% of the parents ignored their children's decayed primary teeth thinking that they will ultimately fall or else preferred the dentist to monitor the situation, rather than providing some form of restorative treatment. 44% of parents were aware that premature exfoliation of the primary teeth could create some problem in future and would like to consult a dentist in this situation A high proportion (81%) of them did not clean their child's mouth before the primary teeth eruption.

DISCUSSION

Providing dental health care to children is a complex interaction between the child, the parent and the dentist. All parties influence the situation with their norms, values, and behavior. For young children, the impact from parent's beliefs and behavior is known to be strong. It is well known that belief and attitudes towards dental health of their children, and these mediating factors differ accordingly to family, cultural and ethnic backgrounds (5,10).

This study presents the results of a parental questionnaire designed to assess the oral health-related knowledge, attitude and reported behaviors of Muslim parents of preschool children living in Udaipur city of Rajasthan, India. Interaction with each parent regarding oral hygiene practices of the child was done and the results revealed that in Muslim society male parents (67.7%) are more aware as compared to female parents (58.2%). The questionnaire included in this study did not contain items on religion, but Muslim background was assumed for parents from countries that are predominantly Muslim. Variable 'religion' was based on the main official religion of the country of origin.

Religious background has been shown to be an indicator of caries risk in Muslim children. Bedi and Elton (1991) reported poor oral cleanliness to be more strongly associated in persons with Muslim background than those with non-Muslim background (11). Regarding unfavorable 'Attitude to Diet' it was more frequently associated to Muslim parents. High-sugar diet is reported to be associated with children of Muslim background (12,13).

The gap between the dental needs of a community and the demand made for treatment can be divided into two separate parts. First, there is a disease in the population of which the individuals concerned are unaware and, secondly, there is a fraction which is known to be present but for which either no treatment has been sought or treatment has been rejected (3). Majority of the surveys reported in the literature are targeted at school going children due to easy accessibility, which is not possible in preschool children (2,14,15). This study highlights increased demand to initiate dental awareness programs aiming at the preschool setups.

Knowledge and awareness are necessary prerequisites for changes in behavior, including behaviors related to health and disease prevention (6). It is generally assumed that a well-educated person is generally more aware of the overall health but in the present study the targeted population did not belong to well-educated strata of the society (2,16). According to census 2001 Literacy rate of Muslims in India is 56.6% and 21% of Muslim population in India is under 6 years (17-19). So, the lack of awareness regarding the importance of deciduous teeth was evident.

Greater parts of the population (64% males and 92% females) were not known about the concept of transmissibility of carious disease, who answered inadequately the questions regarding this subject in the present study. Dental caries is a transmissible infectious disease in which mutans streptococci are generally considered to be the main etiological agents which is a key step towards childhood caries that should be arrested by preventive methods. This mode of transmission of cariogenic bacteria appears to be contact, either direct or indirect. Direct contact is commonly by kissing, so that oral flora is transmitted in the saliva. Indirect contact occurs via objects- a cup, utensil, toothbrush or even a shared toy – that are contaminated with cariogenic bacteria. Removal of active caries with subsequent restoration is important to suppress maternal mutans streptococci reser-

voirs and has the potential to minimize transfer to the infant (7,9).

Though Udaipur city being in the high fluoride belt, a consistently weak knowledge regarding fluoride role in caries prevention was observed among both the groups (62% males and 32% females).Optimal exposure to fluoride is important to all dentate infants and children. The role of fluoride for prevention and control of caries is documented to be both safe and effective. Caution is indicated in the use of all fluoride containing products. Fluorosis has been associated with cumulative fluoride intake during enamel development with severity dependent on the dose, duration and timing of intake (20).

High risk dietary practices appear to be established early, probably by 12 months of age, and are maintained throughout early childhood. Frequent night time bottle feeding, ad libitum breast feeding is associated with early childhood caries. 44% of parents' breast fed their child for more than a year and only 29% cleaned their child's mouth before eruption of the first permanent tooth. Oral hygiene measures should be implemented no later than the time of eruption of the first primary tooth. Cleaning the infants' teeth as soon as they erupt with either a washcloth or soft tooth brush will help reduce bacterial colonization (7,20,21). This showed that majority of the parents were ignorant of the benefits of starting to clean their child's mouth at an early age. It may be because tooth cleaning in the targeted group is related to social norms than to considerations of health benefits arising from it.

There was quite high percentage (81%) of parents who had never attended any school or any other dental health program camp. AAPD recommends that the child be seen within six months of eruption of the first primary tooth and no later than 12 months of age. Traditionally, the developmental age for initial dental visit was thought to be 3 years. The rationale at this age was children are more manageable at this age and the treatment will be more efficient, but early interventions are needed to educate parents on oral hygiene, prevention of dental injuries, and early childhood caries (7,20). Beliefs regarding the cause or risk factors for disease may influence the adoption of health protecting behaviors. Aspects such as the impact of parental priorities or beliefs related to the importance of dental health and care in a framework of other motivations have not yet been thoroughly investigated (5). Several studies elsewhere have found that the parental perception of deciduous dentition was associated with the dental caries incidence among children (1,3,4,6-8). Hence this study was undertaken to ascertain this relationship in the local scenario.

Parents' knowledge regarding the risk importance of deciduous teeth was incomplete. The results of this study cannot be extrapolated and studies of same design need to be conducted on large samples so as to evaluate which strategies will be effective and efficient in bringing about a behavior change in parents.

CONCLUSION

Based on the results of this study, the following conclusions were arrived at:

- There is low level of adequate knowledge on importance of the primary teeth among parents of Muslim Society; hence, there is an increasing need to increase the knowledge through effective strategies and multi-sector approach. Owing to the low literacy level of females in Muslim society, they are needed to be educated as mothers are the primary caretakers of children. Although the male parents' knowledge was significantly better than the female parents, they need to be emphasized on certain aspects of children's oral health.
- The traditional model of dentistry, where the dentist treats the individual child, may not be adequate to solve the problem of early childhood caries. Perhaps more attention needs to be focused on family dynamics and behavior. Prenatal counseling of parents need to be encouraged both in the dental and medical schools.
- This lack of awareness of dental disease is, no doubt, a major factor in the gap between dental need and dental demand. Great stress must be laid upon the importance of primary teeth and regular visits to the dentist in order to diagnose lesions at the earliest possible opportunity. Education of parents and routine professional dental care for the mothers can help keep their oral health in optimal condition. It will in turn prevent early colonization of mutans streptococci in their infants thereby decreasing the risk of developing early childhood caries.
- According to AAPD, health care professional and all other stake holders in children's oral health should support the identification of a dental home for all infants at 12 months of age.
- It is evident that more research needs to be done to identify target populations and develop positive dental attitude. The knowledge may ultimately have a profound impact on the oral health of children and future generations.

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REFERENCES

1. Bhavneet K. Evaluation of oral health awareness in parents of preschool children. *Indian J Dent Res* 2009;**20**: 463-65.
2. Marit SS, Paul JR, Kristin SK, Ivar E. Parental risk attitudes and caries-related behaviors among immigrant and western native children in Oslo. *Community Dent Oral Epidemiol* 2006;**34**:103-13.
3. John FB, Dickson S. Parental awareness of the dental needs of 5-year-old children in the West Midlands, England. *Community Dent Oral Epidemiol* 1974;**2**:91-94.
4. Law CH, Razak IA, Saub R. Parental perception of the importance of the primary dentition and children's caries experience. *Annals of Dentistry University of Malaya* 2000;**7**:11-15.
5. Kristina A, Ulf B, Anders GB. Usefulness of a psychometric questionnaire in exploring parental attitudes in children's

dental care. *Acta Odontol Scand* 2001;**59**:14-20.
6. Gussy MG, Waters EB, Riggs EM, *et al*. Parental knowledge, beliefs and behavior for oral health of toddlers residing in rural Victoria. *Australian Dental Journal* 2008;**53**:52-60.
7. Shivprakash PK, Elano I, Baweja DK, *et al*. The state of infant oral health care knowledge and awareness: Disparity among parents and health care professionals. *J Indian Soc Pedod Prevent Dent* 2009;**27**:39-43.
8. Tickle M, Milsom KM, Humphris GM, *et al*. Parental attitudes to the care of the carious dentition. *British Dental Journal* 2003;**195**:451-55.
9. Vivien TS. Knowledge and attitude of parents or caretakers regarding transmissibility of caries disease. *J Appl Oral Sci* 2008;**16**:150-54.
10. Mattila ML, Rautava P, Sillanpaa M, *et al*. Caries in five-year-old children and associations with family related factors. *J Dent res* 2000;**79**:875-81.
11. Bedi R, Elton RA. Dental caries experience and oral cleanliness of Asian and white Caucasian children aged 5 and 6 years attending primary schools in Glasgow and Trafford, UK. *Community Dent Health* 1991;**8**:17–23.
12. Bedi R. Ethnic indicators of dental health for young Asian schoolchildren resident in areas of multiple deprivations. *Br Dent J* 1989;**166**:331–34.
13. Prendergast MJ, Williams SA, Curzon ME. An assessment of dental caries prevalence among Gujurati, Pakistani and white Caucasian five-year-old children resident in Dewsbury, West Yorkshire. *Community Dent Health* 1989;**6**:223–32.
14. Holm AK. Caries in preschool children: international trends. *J Dent* 1990;18:291-95.
15. Mahejabeen R, Sudha P, Kulkarni SS, *et al*. Dental caries prevalence among preschool children of Hubli: Dharwad city. *J Indian Soc Pedod Prev Dent* 2006;**24**:19-22.
16. Grewal N, Kaur M. Status of oral health awareness in Indian children as compared to western children: A thought provoking situation (a pilot study). *J Indian Soc Pedod Prev Dent* 2007;**25**: 15-19.
17. District specific Literates and Literacy rates. Available from: www.census 2010\District-specific Literates and Literacy Rates, 2001.htm
18. Indian Census and Muslim population growth. Available from: www.census 2010\Indian Census and Muslim population growth.htm
19. Religion demographics in India. Available from: www.census 2010\religion demographics.htm
20. Clinical guidelines on infant oral health care. *Pediatr Dent* 2004;**26**:67-70.
21. Ganesh M, Tondon S, Sajeda B. Prolonged feeding practices and its effects on developing dentition. *J Indian Soc Pedod Prev Dent* 2005;**23**:141-145.