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Knowledge attitude and practices of mothers related to the oral health status of their pre-school children in the Jazan city of Saudi Arabia

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Abstract--Aim: The purpose of the present study was to assess the knowledge, attitude and practices of mothers in relation of

maintenance of oral health status of their pre-school children. **Methodology:** Survey was conducted in the form of questionnaire between November 2021 to February 2022 with mothers. First part of questionnaire contained a set of questions for collection demographic data of participants and second part contained a set of questions to assess knowledge, attitude and practice of participants related to the oral health status of their pre-school children. Descriptive statistics, frequency distribution tests, and chi-squared analysis were employed. Confidence was kept at 95% and p values ≤ 0.05 was considered to be statistically significant. **Results:** Around 66 mothers felt that milk teeth were also essential for chewing food properly and around 71 of total participants released the importance of milk teeth in totality. Regular dental visits were also strongly agreed by around 60 mothers. 101 mothers gave their children sugary food items between meals and 53 mothers usually take their children to dentist whenever the child complains of tooth pain (6.45 ± 2.70). **Conclusion:** The results show that the knowledge of mothers regarding oral health status of their little ones was adequate. However, attitude to oral health was not adequate. Moreover, few followed practices pertaining to oral health of their pre-school children.

Keywords--knowledge, attitude, dental caries, practice, schools, mothers.

Introduction

Oral health is an integral component of preschool children's health and well-being. Unfortunately, many children suffer from dental caries at an early age, even before they become 12 months of age.¹ Those affected often have a reduced oral health related quality of life as compared to their caries free counterparts.² Children with early childhood caries may also develop associated problems such as local infections, oral pain that also manifests as difficulty in eating and sleeping, reduced growth, psychosocial problems and increased risk of caries in permanent dentition.^{2,3} The primary dentition affected by dental caries at such a young age mostly has to be treated under sedation or general anesthesia, which carry its own risks.^{3,4} A number of risk factors have been cited in literature for early childhood caries that include; prolonged or at-will breast feeding, prolonged/ frequent/nocturnal bottle feeding, family size or the child's birth order, oral hygiene practices, dietary habits, and timing/reason for child's first dental visit.^{5,6} Parents' oral health knowledge and attitude influence their children's oral health.^{7,8}

The parents with appropriate oral health knowledge and attitude are likely to positively influence the oral health of their children.^{8,9} Mothers' oral health knowledge and attitude in particular influence oral health of their children at an early age.^{10,11} However, very few studies have gauged the knowledge and attitude of mothers about their preschool children's oral health. The AAPD supports the recommendations by the American Academy of Pediatrics regarding breastfeeding the child for at least one year. However, it mentions that frequent feeding at night

including bottle-feeding and breastfeeding on demand are associated with early childhood caries. The AAPD recommends that infants should not be put to bed with baby bottle and that breastfeeding at night should be avoided after the eruption of the first tooth. Night-time bottle feeding with juices, repeated use of a sippy or no-spill cup, and frequent in between meal consumption of sugar-containing snacks or sweetened/acidic drinks increase the risk of early childhood caries.¹²

Previous studies in Saudi preschool children have already reported nocturnal bottle feeding, bottle feeding with sweetened milk and soft drinks, and at-will breast feeding as major risk factors for early childhood caries.¹³⁻¹⁵ High sugar dietary practices are established early by 12 months of age, and are maintained throughout early childhood. The American Academy of Pediatrics has recommended that children 1-6 years of age consume no more than 4-6 ounces of fruit juice per day from a drinking cup (not from a bottle or covered cup) as part of snacks or main meal.¹² Parental knowledge, attitude, and beliefs have a significant effect on the child's oral health. Parents are the decision-makers for their children. Oral health status of the child is affected by mother's attitude towards dental health. A positive attitude of the mother will result in better oral hygiene of their children. Maternal attitude are likely to modify the child's behavior and thus play an important role in healthy oral hygiene practices.¹⁶

Aim of the present study

The purpose of the present study was to assess the knowledge, attitude and practices of mothers in relation of maintenance of oral health status of their pre-school children.

Methodology

For this study, data was collected from 128 mothers accompanying their pre-schoolchild (age 3-5 years) for dental checkup on OPD basis of College of dentistry in Jazan university. Survey was conducted between November 2021 to February 2022 with mothers; who gave an informed consent to participate in the study. Ethical approval was taken by the Institutional Review Board of our college in Jazan City of Saudi Arabia. A structured questionnaires (Table 1) consisted of two parts was handed out to participants. The nature and the objectives of the study was first explained to participants. The voluntary nature of the survey was emphasized and confidentiality was assured. First part of questionnaire contained a set of questions for collection demographic data of participants and second part contained a set of questions to assess knowledge, attitude and practice of participants related to the oral health status of their pre-school children. All the collected data was entered into the Microsoft Office Excel Sheet 2007 version. Also, the data obtained was analyzed using the SPSS (Statistical Package for the Social Sciences) version 25.0 for the descriptive analyses and statistical significance. Descriptive statistics, frequency distribution tests, and chi-squared analysis were employed. Confidence was kept at 95% and p value \leq 0.05 was considered to be statistically significant.

Results

In the present study, we observed that most of the mother's (89/128) thought that good oral health is connected to general health of the child however only 54 of the total participants gave importance to cleaning their child's teeth after every meal. Around 66 mothers felt that milk teeth were also essential for chewing food properly and around 71 of total participants released the importance of milk teeth in totality. Regular dental visits were also strongly agreed by around 60 mothers. Encouraging fact which was observed that around 73 mothers championed regular dental visits of their children (6.15 ± 2.30). Tooth brush was used as a primary cleaning aid for their children by 113 mothers with up-down motion of brushing being favored by around 59 mothers and 58 mothers used fluoridated tooth paste with brush twice a day for the oral hygiene maintenance of their children. 101 mothers gave their children sugary food items between meals and 53 mothers usually take their children to dentist whenever the child complains of tooth pain (6.45 ± 2.70). (Table 2) The results show that the knowledge of mothers regarding oral health status of their little ones was adequate. However, attitude to oral health was not adequate. Moreover, few followed practices pertaining to oral health of their pre-school children.

Discussion

The oral health knowledge of parents/mothers stipulates the oral health and related habits of the children during infancy. Hence, it is maintained throughout the preschool years. Parents, especially mothers, play a major role for their children. There are very scarce data for the oral health of the children during the early childhood period in developing countries. A better understanding of mother's knowledge, attitude, and practices is necessary for the effective enforcement of oral health promotion efforts aimed at improving the dental health of preschool children (Chhabra & Chhabra, 2012). A study showed that Mexican, American, and Latino mothers had limited depth of knowledge about cariogenicity of sugary food. 85.6% mothers agreed that pain and loss of teeth due to dental caries in certain teeth can be prevented by sealing at an early stage. Similar findings were seen in a study conducted by Kawashita et al. (2011).

They concluded that dental caries is a curable disease, and it can be arrested and even potentially altered at its initial stages. Tooth brush was used as a primary cleaning aid for their children It was observed that most of the school children have practical perspective towards brushing their teeth twice daily with the help of tooth brush and toothpaste as a cleaning aid for cleaning their teeth. These results are consistent with other studies conducted in Sweden, Denmark, Germany, Austria, and Norway. However, they reported that about 73-83% of school children use to brush their teeth twice a day. 64.6% mothers used up down motion, 5.33% mothers used circular motions, whereas 5.3% mothers do not have any particular motion for brushing their child's teeth. Most of the students brushed their teeth in random direction (34.80%) along with a certain set of students using horizontal (27.20%) and vertical (18%) brush strokes. The students with knowledge of and practicing specific tooth brushing techniques amount to only 20% (Mohammed & Gheena, 2015). 53 mothers usually take their children to dentist whenever the child complains of tooth pain.

It was found in another study conducted in Sudan that 84.6% mothers claimed that their children did not complain, giving a hint that most Sudanese parents did not take their children to a dentist unless there is pain or trouble (Kowash, 2015; Begzati et al., 2014). According to AAPD, “the first dental visit should be with the eruption of the first primary tooth and no later than 12 months of age (AAPD, 2014). Thus, this is supported by studies done by Begzati et al and Ashkanani et al. On the contrary, a study done by Mirza et al showed that half of the study population i.e. 52% had never visited a dentist. So, there is strong need to spread awareness about the necessity of dental treatment among parents. The results of this study will help in determining whether mother’s oral health related knowledge, attitude, and practices have a significant influence on the oral health of their children. Awareness needs to be created among the mothers and caregivers as they are the role models for their children. Awareness should also be done in schools because the child spends most of his/her time in school. The data from the present study provides valuable information regarding the oral health status and associated risk factors.

Conclusion

Primary prevention by means of oral health education of mothers, children, and school caretakers by the public health authorities should be implemented to upgrade knowledge, reshape attitude, and to readapt the good practices, thereby improving the overall oral health of their children.

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Tables

Table 1
Knowledge, attitude and practice of mothers about their child's oral health

S.No.	Questions
1	Do you know your teeth are an important part of your body?
2	Do you think children should have their teeth brushed by an adult until they are in preschool?
3	Do you know that some toothpaste contains fluoride?
4	Do you know that using fluoridated tooth paste is good for your children's teeth?
5	Do you think that consumption of snacks like candies and cookies that stick to teeth will cause dental decay?
6	Do you think that pain and loss of teeth due to dental caries in certain teeth can be prevented by sealing at early stage?
7	Do you think that dentist play an important role in the prevention of oral diseases?
8	Do you think that is it necessary to go for dental check-up?
9	Do you think it is good oral health is related to the general health of your child?
10	Do you think that it is necessary to clean the child's teeth after every meal?
11	Do you think that cleaning of the child's teeth should be guided by mother?
12	Do you believe that milk teeth are essential for children to chew food

	properly?
13	Do you think that by brushing and flossing your child's teeth will help in preventing tooth decay?
14	Do you think that milk teeth do not require good care as it is going to fall away?
15	Do you think that is it necessary to take your child for regular dental visits?
16	Do you believe that visiting the dentist is only necessary only when your child experiences pain?

Table 2
Descriptive statistical analysis in the present research

	Age 3 (n = 17)		Age 4 (n = 58)		Age 5 (n = 53)		P value
	Mean	± SD	Mean	± SD	Mean	± SD	
Knowledge Score	5.82	0.95	6.33	1.19	6.26	0.94	0.225; NS
Attitude Score	6.35	1.87	5.90	2.48	6.36	2.23	0.532; NS
Practice Score	6.35	2.60	6.33	2.80	6.62	2.67	0.839; NS

* Student 't' test: NS: $p > 0.05$; Not significant