DOI: https://doi.org/10.53350/pjmhs22167510

ORIGINAL ARTICLE

Knowledge of Mothers Towards Infant's Oral Healthcare in Lahore

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ABSTRACT

Objective: The objective of current study is to assess the knowledge of mothers regarding oral health maintenance of infants.

Method: This descriptive crossectional study was conducted in a tertiary hospital of Lahore after getting the approval from intuitional ethical committee. The sample size of the current study was 238 mothers with an age ranges between 21years to 35years. Data was collected using convenient sample technique. For data collection, a questionnaire was adopted from a previous study conducted in India on the similar topic.[9] SPSS version 25.0 was used to analyzed data. For age of mother and child, mean and standard deviation were calculated whereas for educational level and other questions based on knowledge of maintaining oral health among infants, frequencies and percentages were calculated.

Results: Majority of mothers 178(74.79%) reported that transmission of cariogenic bacteria is not possible from mother to infant. Majority of mothers 189(79.41%) reported that bottle feeding during night is not the major reason of dental caries among infants. Majority of mothers 160(67.21%) reported that regular and persistent nighttime breast feeding is not a cause of caries development among infants. Majority of mothers 130(54.62%) reported that they are not sure about importance of oral health maintenance for infants' general health

Conclusion: In conclusion, there is a need to plan an awareness program to educate mothers about the importance of maintaining oral health status of infants to avoid dental caries.

Keywords: Dental Caries, Oral Health, Cariogenic bacteria

INTRODUCTION

It is very common to diagnose dental caries among infants. The process of developing dental caries starts as the major contributing bacteria called S. mutans, starts to colonize in the oral region of infants after the primary teeth eruption. Literature has supported the inheritance of dental caries from mother to infant due to S. mutans colonization at the age of 26months.[1,2] Prior development of bacterial colonization negatively affect the frequency as well as the level of caries among children in terms of high score on decayed, missing or filled teeth surface.[3]

The level of caries development among children is based on bacterial colonization in mother at the time of bacterial transmission from mother to children.[4,5] So, the knowledge of mother about maintaining the oral health of infant is an important aspect. Among children with less than 3years of age are more prone to developing severe level of dental caries.[6] Results of a meta-analysis reported that prevalence of dental caries among children is about 60% in Pakistan.[7] This prevalence rate is very high among children causing the high burden, even though the disease is controllable. Reason of this high burden of disease is lack of oral health management knowledge among mothers.[8] Majority of studies reported in literature are based on the prevalence of dental caries but focus of studies are not based on the mothers' knowledge to maintain oral health of children. So there is a dire need to assess the knowledge of mothers in terms of maintain oral health of infants to prevent dental caries. Therefore, the objective of current study is to assess the knowledge of mothers regarding oral health maintenance of infants.

METHODOLOGY

This descriptive cross-sectional study was conducted in a tertiary hospital of Lahore after getting the approval from intuitional ethical committee. The sample size of the current study was 238 mothers with an age ranges between 21years to 35years. The age of infants was between 9months to 18months. The level of education of mothers was graduation and below. Mothers of the coming to pediatrician for infants' checkup were requested to participate in the study while giving brief introduction of the study. Written consent forms were get signed by all the participants of the study. Data was collected using convenient sample technique. For data collection, a questionnaire was adopted from a previous study conducted in India on the similar topic.[9] First section of questionnaire was based on demographic variables, i-e., mother age, child age, and educational level whereas rest of the questions were based on knowledge of maintaining oral health among infants.

The collected data was entered in SPSS for further analysis. For age of mother and child, mean and standard deviation were calculated whereas for educational level and other questions based on knowledge of maintaining oral health among infants, frequencies and percentages were calculated.

RESULTS

The mean age of infants was 12.5±1.91months ranging between 9months to 18months. The mean age of mothers was 26.8±2.56years. Mothers having graduate degree were 92(38.66%), intermediate degree were 68(28.57%) and matriculation degree were 54(22.69%). Mothers who studies till middle school were 24(10.08%).

Majority of mothers (130(55.62%) reported that after 6 months of birth, first tooth erupts. 88(36.97%) mothers reported after 1year of birth, first tooth erupts, whereas 20(8.40%) mothers were not sure about this. Majority of mothers (181(76.05%) reported that first dental visit is based on the requirement. 35(14.71%) mothers reported first dental visit after eruption of all primary teeth and only 22(9.24%) mothers reported that it should be at the time of eruption of 1st tooth. Majority of mothers (220(92.44%) reported use of tooth brushing after eruption of all primary teeth. 15(6.30%) mothers were not sure and 3(1.26%) reported it should be started after the time of eruption of 1st tooth. Majority of mothers (179(75.21%)) reported use of tooth paste after eruption of all primary teeth. 59(24.79%) mothers were not sure and 0(0.0%) reported it should be started after the time of eruption of 1st tooth.

Majority of mothers 178(74.79%) reported that transmission of cariogenic bacteria is not possible from mother to infant. Majority of mothers 189(79.41%) reported that bottle feeding during night is not the major reason of dental caries among infants. Majority of mothers 160(67.21%) reported that regular and persistent nighttime breast feeding is not a cause of caries development among infants. Majority of mothers 130(54.62%) reported that they

are not sure about importance of oral health maintenance for infants' general health.

Table 1: Knowledge of mothers related to infant's oral health management

	After 6months	After 1year	Not sure
Age of child when first tooth erupt	130(55.62%)	88(36.97%)	20(8.40%)
	At the time of 1st tooth eruption	After eruption of all primary teeth	As per need
Suitable time to have first visit to dentist	22(9.24%)	35(14.71%)	181(76.05%)
	At the time of 1st tooth eruption	After eruption of all primary teeth	Not sure
What is the suitable time to start tooth brushing?	3(1.26%)	220(92.44%)	15(6.30%)
What is the suitable time to start the use of toothpaste?	0(0.0%)	179(75.21%)	59(24.79%)
	Yes	No	Not sure
Transmission of cariogenic bacteria is possible from mother to infant	25(10.5%)	178(74.79%)	35(14.71%)
One of the major reason of dental caries is bottle feeding during night	38(15.97%)	189(79.41%)	11(4.62%)
Is regular and persistent nighttime breast feeding, a cause of caries development?	45(18.91%)	160(67.21%)	33(13.87%)
Do you think oral health maintenance is important for infants' general health?	31(13.03%)	77(32.35%)	130(54.62%)

DISCUSSION

General health of an infant is based on the oral health maintenance[10] for which mothers or the primary caregivers are responsible.[10] It is very important to manage a proper diet as well as maintenance of oral hygiene from the period of infancy till early childhood. So, assessment of managing good oral health of infants, knowledge of mothers should be assessed as significant part of guiding new mothers to prevent dental caries among children.

The findings of current study revealed that majority of mothers (130(55.62%) reported that after 6 months of birth, first tooth erupts which are in line with the findings revealed that 52.5% informed that it erupts after 6 months.[9] This proposes a disparity in the period of teeth eruption which showed the requirement of population-specific research on tooth eruption time as the recommend time of dentition of 1st tooth should be with 6 months to 12months.[11] The early visit to the dentist can be less costly with higher chances of preventive intervention application.[12,13] Unexpectedly, 9.24% of mothers reported that first visit to dentist should be at the time of eruption of 1st tooth which is very low and pointing out the need of awareness programs.

Majority of mothers (220(92.44%) reported use of tooth brushing after eruption of all primary teeth. 15(6.30%) mothers were not sure and 3(1.26%) reported it should be started after the time of eruption of 1st tooth. Majority of mothers (179(75.21%)) reported use of tooth paste after eruption of all primary teeth. 59(24.79%) mothers were not sure and 0(0.0%) reported it should be started after the time of eruption of 1st tooth.

It is well-documented in the literature that S. mutans transmits from mother to the infant[14] responsible for the development of dental caries in children due to the increased level of S. mutans in mother's saliva.[15] Oral hygiene of mother as well as eating habits also affect the colonization of S. mutans which is responsible for caries developemeny.[16] Unfortunately, majority of mothers 178(74.79%) reported that transmission of cariogenic bacteria is not possible from mother to infant, again showing lack of knowledge. This results are very high as compared to the reported finding of previous literature, i-e., 27.2% to 41% mothers reported disagreement to the statement that S. mutan transmits from the mother to infant.[17] Majority of mothers 189(79.41%) reported that bottle feeding during night is not the major reason of dental caries among infants which is higher than the reported statistics, i-e., 53%.[9] Education of oral health maintenance as well as its assessment in childhood is the basis of dental caries free life which could be gained due to the maternal knowledge of maintaining it.

In conclusion, there is a need to plan an awareness program to educate mothers about the importance of maintaining oral health status of infants to avoid dental caries.

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