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ORIGINAL ARTICLE

A DIRECT CO-RELATION OF MATERNAL KNOWLEDGE ABOUT ORAL HEALTH ON DENTAL CARIES INCIDENCE IN CHILDREN: AN ORIGINAL STUDY

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ABSTRACT:

Introduction: Infants and young children are under obligation to spend their early life years with their legal guardians, and in most cases, the legal guardian and the primary caretaker is the mother of the child. Hence, it is easy to perceive a direct co-relation of maternal knowledge about oral health on dental caries incidence in children. The core aim of the article is to shed some light on this direct co-relation. **Aim**: To evaluate and analyze direct co-relation of maternal knowledge about oral health on dental caries incidence in children. Such a directed study will help develop and devise better medium to impart knowledge to the mothers regarding the oral health care of the kids. **Materials and Methods**: A cross-sectional study was conceded out on 2750children within the age group of 7 years. A well organized and meticulously structured questionnaire, cleared and approved by the ethical committee, was presented to the mothers. The questionnaire which was framed was poised of a set of 15 specific questions. **Results**: The investigation very markedly disclosed that there is staunch and direct co-relation of maternal knowledge about oral health on dental caries incidence in children. **Conclusion:** The study was attempted to perceive a direct co-relation of maternal knowledge about oral health on dental caries incidence in children. It is an issue of extreme precedence, and hence, the advancement and employment of sizable health education programs for pregnant mothers must be considered.

Keywords: Direct Co-Relation, Oral Health, Children, Questionnaire, Maternal Knowledge.

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INTRODUCTION:

The oral health of a child is an unblemished reflection of the general health. With dental caries emerging as the most imperative oral problems, the numbers signifying an increased incidence of caries rates in children is observed in most developing countries.[1] Indubitably, it is broadly accredited that the conduct of the mothers and their health beliefs have a profound effect on the child's health.[2]Most toddlers and pre-school child do have the dexterity to take care for themselves and are solely dependent on mothers for their oral and general health care.[3] Over a phase of time, they derive inspiration from the oral health habits attributed from their parents, especially mothers. This has been backed by research that demonstrated the reflective effect of mother's dental habits and understandings on the oral health of the child.[4] Hence, it is imperative to initiate appropriate basic oral health habits at the most early age possible.

Carelessness towards maintain an appropriate oral hygiene is broadly recognized as the foremost root of dental caries. Even though there is a presence of an extremely low number of microbes in a neonatal child, plentiful bacteria initiate their growth in their mouth in a short span of time. Such colonization of bacterial group, especially streptococcus mutans in the oral cavity of a young child exponentially exposes to the risk of dental caries. While streptococcus mutans might be primarily responsible for

causing dental caries, streptococcus sobrinus is directly linked to the advancement and expansion of carious lesions.[5] The maternal habits and daily deeds may encourage or escalate colonization of microbes in the oral cavity of a child.

It is astonishing to comprehend that while mothers try to protect the kid, they might infact be the foremost person to infect the child with bacteria leading to dental caries.[6] The DMFS and DMFT count of the mother is a significant indicator to the probable incidence of dental caries in the child.[7] The splurge in the number of streptococcus group in the oral cavity of the mother causes a tremendous rise in the chances of presence of streptococcus group in the oral cavity of the child.[8] Thereby it is important for the mothers to maintain their oral hygiene and dietary habits as well.

The basic influence on a kid's upkeep of oral hygiene comes from maternal awareness and opinions about oral health. Mothers who play the part of the chief protagonist model for the kids must have staunch health dogmata and assertiveness towards oral health care. A strong and positive maternal approach towards dentistry will enhance the oral health of the coming generations.

AIM: To evaluate and analyze direct co-relation of maternal knowledge about oral health on dental caries incidence in children. Such a directed study will help develop and devise better medium to impart knowledge to the mothers regarding the oral health care of the kids.

MATERIALS AND METHODS: A cross-sectional study was conceded out on 2750 children within the age group of 7 years. A well organized and meticulously structured questionnaire, cleared and approved by the ethical committee, was presented to the mothers. The questionnaire was presented at the parent-teacher meeting in various schools in the city of Ahmedabad. The questionnaire which was framed was poised of a set of 15 specific questions. A letter of consent was presented to the parents before they could fill out the questionnaire. Any child with a legal guardian in the form of a mother was included in the study, however, any child with systemic conditions and mental illness were not considered as part of the study. Following the collection of the questionnaire, an oral health examination and preliminary diagnosis was conducted on all the children participating in the study. Use of mouth mask, hand gloves, disposable apron, mirror, explorer, probe, and tweezer.

QUESTIONNAIRE: A meticulously structured questionnaire with the availability of multiple choiceswaspresented in Gujarati and English language to collect the information about the maternal knowledge about the maintenance of oral hygiene and thereby present a case to demonstrate the direct co-relation of maternal knowledge about oral health on dental caries incidence in children.

Table 1: Questionnaire to collect information about the maternal knowledge about the maintenance of oral hygiene

Q.1 Do you believe that there is a direct relation between a sound general health and good oral health? A) Yes B) No
Q.2 Are you of the opinion that the presence of primary teeth is temporary and hence does not require extreme care? A) Yes B) No
Q.3 Are you aware of the current number of primary teeth present in the mouth of your child? A) Yes B) No
Q.4 Have you attended any seminars or health talks in relation to maintaining the oral hygiene of a child? A) Yes B) No
Q.5 Has the child ever been under the observation of a dentist since birth? A) Yes B) No
Q.6 How is the oral hygiene of the mouth of the child maintained? A) Self-cleaning without supervision B) Self-cleaning with supervision C) Cleaning by mother
Q.7 Mention the number of times the teeth of the child are brushed daily. A) Once B) Twice C) Multiple times
Q.8 Mention the brushing material used for maintaining the oral hygiene of a child. A) Paste B) Powder
Q.9 Mention the brushing equipment used for maintaining the oral hygiene of a child. A) Manual Brush b) Powered Brush C) Index Digit
Q.10 Mention the time phase for which a child's toothbrush is used. A) 2 months B) 3 months C) Over 3 months
Q.11 Is the oral cavity of the child subjected to cleaning and wiping after every meal? A) Yes B) No
Q.12 Is the child provided with ample amount of sugar in the form of sweets and candies? A) Yes B) No
Q.13 With what frequency is the child provided sweets daily? A) every 3 hours B) every 6 hours C) every 12 hours D) Not applicable
Q.14 Are you aware that floss is an important cleaning aid? A) Yes B) No
Q .15 Do you floss on daily basis? A) Yes B) No

ORAL HEALTH SURVERY: Total number of 2750 children participating in the study had to undergo the oral health examination by a team consisting of several dentists, dental assistants, and dental hygienists. By the appropriate use of dental armamentarium, the deft score of each patient was recorded on the basis of the criteria devised and approved by the WHO.

RESULTS: The 2750 subjects were divided into two groups: the group with the presence of either decayed, extracted or filled teeth and the group without the presence of either decayed, extracted or filled teeth.

Table 2: The division of the group based on findings

Positive DMFT score	Zero DMFT score
780	1970

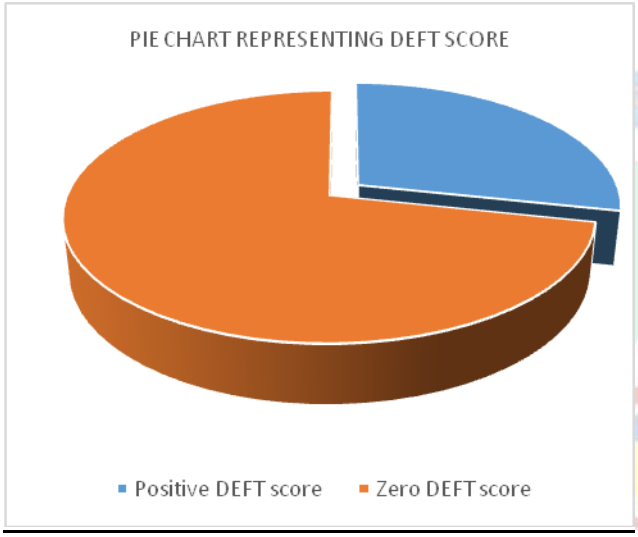

Figure 1: Pie chart representing the Deft score

The health beliefs, attitudes, and practice of the mothers can be determined by the questionnaire presented. Table 3 shows the direct comparison of maternal knowledge about oral health on dental caries incidence in children.

Table 3 shows the comparison of maternal knowledge about oral health on dental caries incidence in children

Knowledge	DMFT Score	
	Positive DMFT score	Zero DMFT score
appropriate maternal knowledge (1890)	90	1800
Inappropriate maternal knowledge (860)	690	170

DISCUSSION: Indubitably, a suitable oral health has a significant role in the broad-spectrum well-being of children. Since there is a direct effect of oral health behaviors on the general health, endeavoring to build good oral health conducts can significantly improve the general health of individuals. Certainly, the implementation of decent oral health habits in infantile takes place with mothers.[9] The study has shown that the cases with appropriate maternal knowledge were 1890 and with inappropriate maternal knowledge were 860. Out of 1890 cases with appropriate maternal knowledge, 95.23% of the children had excellent oral condition while 4.77% of the children had a poor oral condition. Out of 860 cases with inappropriate maternal knowledge, 80.23% of the children had a poor oral condition with an incidence of caries while 19.77% of the children had an acceptable oral condition.

An ideal time to schedule the first dental visit for a child is at the age of 6 months when the first tooth erupts. Unfortunately, a lot of parents neglect to take the kid to the dentist until 3 years of age. A study performed by Moulana and his associates suggest that former a child visits a dentist, there is a superior chance of being caries-free.[10] The findings our study exhibited that nearly 96% of the kids did not schedule a visit for the child's oral examination to the dentist.

An astonishing finding that nearly 83.56% of the mothers believed that the presence of primary teeth is temporary and hence does not require extreme care while only 16.44% gave utmost importance to maintaining the primary dentition. Most mothers would brush the teeth of the kids with the help of toothpaste and manual brush, however, the brush was changed only once every three months. About 91.76% of the mothers were uninformed about the number of deciduous teeth and merely 08.24% of them know the precise number of primary teeth.

CONCLUSION: The implementation of reliable and appropriate oral hygiene maintenance habits in childhood commences at one's own household, with the supreme role played by the mother. Mothers must be adequately conversant and educated that their daily oral health habits have a profound influence on the child's dental health, and subsequently, their general health. The study was attempted to perceive a direct co-relation of maternal knowledge about oral health on dental caries incidence in children. It is an issue of extreme precedence, and hence, the advancement and employment of sizable health education programs for pregnant mothers and mothers with newborns must be considered.

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