



REVIEW ARTICLE

KNOWLEDGE AND ATTITUDE OF PARENTS TOWARD ORAL HEALTH MAINTENANCE  
AND TREATMENT MODALITIES FOR THEIR CHILDREN

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ABSTRACT

The purpose of this study is to determine parental awareness of their children's oral health maintenance and their attitude toward dental treatment. The objective of this study attempts to evaluate and compare oral health awareness amongst parents from different socioeconomic groups and their attitude toward dental treatment. Health is a universal human need for all cultural groups. General health cannot be attained or maintained without oral health. The mouth is regarded as the mirror of the body and the gateway to good health. Oral health education begins from footsteps of awareness. Today, various dental health education programs have been conducted in schools and other settings; however, these efforts will not succeed until people are not aware of the importance of oral health and positive attitude toward treatment modalities. As the oral health of children depends on awareness of their parents, evaluation of need for implementation of oral health awareness programs is important.

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INTRODUCTION

Oral health education begins from footsteps of awareness. Growing children need proper guidance for healthy growth, upkeep and hygiene of their teeth. 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 such as malocclusions, dental caries and periodontal problems (Hilton *et al.*, 2007). The rationale of school dental health program is to improve and motivate the parents and children regarding their dental health and treatment needs. The parent's support and involvement in child's oral health are important in influencing the dental health of the child. Majority of the surveys reported in the literature are targeted at school going children due to easy accessibility (Chhabra *et al.*, 2012). The literacy level of the parents is considered important for assessing oral health status as it relates to the level of information about importance of oral health of children in the society. It is generally assumed that a well-educated person is generally more aware of the overall health but in the present study although the target population belonged to the well-

educated strata of the society, the lack of awareness regarding the importance of deciduous teeth was evident. In the present study, only 10% of parents responding for the first dental checkup program in the dental setup during the vacations explain the lack of information, education and communication about oral health status of children in the Indian society. Indians have been reported to have low level of oral health awareness and practice as compared to Western people (Gehshan, 2007) Western children have also been reported to be more aware of regular visits to a dentist because it is initiated either by their parents or dentists. Such an effort on the part of the parents is predominantly missing in Indian children (Grewal *et al.*, 2007). Similar findings were observed in our study that high socioeconomic status parents were also unaware of importance of timely treatment of primary teeth. Attainment of good oral health is based on awareness of good dietary habits and oral hygiene practices. The need for making parents aware of the brushing methods and importance of preventive measures for the children via school dental programs have been reported in the literature. Studies involving adults showed that there is strong correlation between general and oral health perceptions and parents make similar association when responding to their children. Parental assessments of the oral health of their children indicate parent's perceived risk of their children's susceptibility to dental disease (Gussy *et al.*, 2008).

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Understanding factors that affect parent's perceptions of their children's oral health can move dentistry closer to developing strategies to help overcome the barriers parents encounter in accessing oral health care for their children. Despite improved understanding of risk and protective factors, interventions designed to bring about changes in these factors have had limited success (Brown, 1994; Kay, 1998) Many studies assessing the effects of dietary counselling, dental health education and oral hygiene instruction have yielded disappointing results despite the acceptance that positive changes in target behaviors should reduce the risk of dental caries and periodontal diseases. Educational activities may use information grounded in quality evidence from controlled clinical trials but then prove ineffective when operationalized in community-based interventions because of a lack of consideration of the socio-cultural context of the setting. Strategies which are tailored to suit particular individuals or groups but are still evidence-based may be more effective than blanket or one-off approaches (Sprod *et al.*, 1996).

Additionally, many widely used approaches, such as dietary advice, may not be sufficiently powerful to overcome established and prevalent cultural norms such as infant bottle use (Khey, 2013). These disappointing results may reflect a lack of the use of theory in the development of oral health promotion initiatives. The development of an effective theory involves the identification of strategies with strong scientific evidence for effectiveness but also takes into account cultural and social norms and values that may facilitate or block the adoption of such strategies by individuals and groups (Mezirow, 1981). Hence this study aims to study is to determine parental awareness of their children's oral health maintenance and their attitude toward dental treatment. There is need to create more awareness about the knowledge and importance of first dental visit among the society. Even though many parents had good knowledge, but the same did not reflect in their attitude and practice. It is worthwhile to attempt regular oral health promotion education programs, with stress on attitude toward treatment modalities for their children. This review also emphasizes the need to initiate positive attitude toward treatment modalities for primary teeth in Indian society.

**Evolution of dental care:** The past fifty years have witnessed a reduction in the severity and prevalence of oral disease among the population of the developed countries (Downer, 1991; Burt, 1994; Marthaler, 1996) Dental care has been systematically organized to improve dental health attitudes among children and the young (Holst *et al.*, 1997). This development has improved children's dental health and changed the dental caries patterns affecting them. It also resulted in more adults being able to keep their natural dentition functional into a later age. In a study done in Hiroshima, 296 pairs of parents (mother or father) and their children at an elementary school, the child's dental examination was performed using the World Health Organization (WHO) caries diagnostic criteria for decayed teeth (DT) and filled teeth (FT). The Oral Rating Index for Children (ORI-C) was used for the child's gingival health examination where, children's oral health behavior affected their DT through its effect on gingival health level. Parents' oral health behavior also had a significant direct effect on their children's DT ( $P < 0.05$ ). Children's grade affected both DT and their oral health behavior (Okada *et al.*, 2002).

Importance of deciduous teeth many of the parents said that cavities in baby's teeth do not matter, and are not able to identify common dental problems like dental caries and gingivitis (Okada *et al.*, 2002). In a study done, there is a significant difference between the three categories of questionnaires. Most of the mothers had good knowledge about diet, but knowledge of oral hygiene and importance of primary teeth was very poor. This suggests a need for pediatricians and the primary health workers, who come in contact with new mothers, to play an active role in oral health promotion and to draw mother's attention to the need for their child to be seen by a dentist (Shonkoff *et al.*, 2012).

Dietary knowledge is mostly influenced by the dietary tradition of a specific area, which is also clear from the results that knowledge about the diet and dietary practice does not depend upon with mother's educational qualification or the demographic inhabitation. In addition to this, as the main source of information were the elders in the family, the dietary tradition was inherited. This also speaks of the inefficiency of the dentist and dental organizations in educating the masses. This result is not in accordance with that of William *et al.*, who stated that parents coming from the deprived areas and with lower educational level have low level of oral health knowledge (Chan *et al.*, 2002)

**Oral hygiene practices:** In a study done in government district hospitals in Moradabad, the knowledge regarding the oral hygiene practice which includes brushing, sharing of utensils, especially feeding spoon, and knowledge about fluoride was not satisfactory, as nearly 294 (72.8%) of the mothers had only inadequate or partial knowledge. Majority of the mothers had inadequate knowledge about the fact that sharing of utensils can transmit *S. mutans* which can cause caries in children, which is similar to that reported in a study by Sakai *et al.* (2013) the 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 saliva; indirect contact occurs via objects such as a cup, utensils, toothbrush, or even shared toys, which are contaminated with cariogenic bacteria (Sakai *et al.*, 2008).

The concept of dental caries as an infectious and transmittable disease was convincingly demonstrated by Keyes (1960). (Fejerskov, 2004) Another aspect of oral hygiene practice was brushing. Most of the parents felt that they should brush their child's teeth when all the primary teeth have erupted. Contrary to our result, 95% of the parents in rural Australia believed that they should start brushing when the first tooth erupts, as reported in a study done by Gussy *et al.* (2014).

**Awareness among the parents on oral hygiene measures and maintenance:** In a study done in Chennai, a majority of the 100 participants were aware of and have been following good oral hygiene practices. Various studies have shown that the difference in oral health status among people from both higher and lower socioeconomic status has increased markedly. The concept of socioeconomic inequalities can possibly be described as obvious differences in the occurrence of oral health problems between higher and lower socioeconomic status. (23) Tooth brushing and flossing being the most common practices of most of the people, are the two most important ways of controlling the occurrence of plaque worldwide. The maintenance of oral hygiene is the correct way

to prevent plaque, which is due to infectious agents in the oral cavity that further lead to many dental diseases (Marsh, 1992)

**Effect of parent's attitude on the oral hygiene maintenance of the child:** Oral health of the children is associated with oral health knowledge of their mothers/guardians, as oral health related habits (such as those related to oral hygiene and diet) are established during infancy and maintained throughout early childhood (Villalobos-Rodelo *et al.*, 2007). Parents, especially mothers, function as role models for their children. In a study conducted in India, with the use of questionnaire that particularly focus on the knowledge of mothers about relevant risk and protective factors that are likely to have influence on oral health of infants, and also, the influence of socio-demographic factors on mothers' knowledge, this study provides important new data to the evidence base related to knowledge of mothers toward oral hygiene of infants.

In general, mothers' beliefs regarding the value of preventive health measures and positive feelings about the sources of health care have been found to be associated with preventive actions taken on behalf of their children. Preventive care for preschool children was necessary and important arranged more physician-child contacts (and were higher utilizers of preventive services themselves). Finally, it has been shown that "negative" attitudes can act as deterrents to well-baby care; mothers who did not accept the purposes of well-child supervision obtained fewer immunizing inoculations for their own infants (Slesinger, 1980). Parents with higher education have a better knowledge regarding the oral hygiene practice and importance of deciduous teeth. This is similar to a Polish study which reports that mothers with lower level of education also have low levels of oral health knowledge. It has been suggested that the parents with a general, improved level of education may be able to assess appropriate source of information and understand that information more completely. (Jackson, 2006).

One of the basic factors that may give some idea about oral health awareness among parents is the frequency of dental visits, and the mother with higher educational qualification does visit the dentist more often. Zavras *et al.*, (2002) have reported that 53% of well-educated mothers visited the dentists one or two times per year versus 19.6% mothers with basic education (Custodio-Lumsden, 2013). A randomized control trial in UK showed that visits to trained dental educator (dentist) by mothers of pre-school children at risk of caries increased the parental knowledge and improved the attitude toward dental health of their offspring's (Blinkhorn *et al.*, 2003).

**Methods of creating awareness among parents:** Wyne *et al.*, had reported that 34.2% of the Saudi population get the oral health information from dentist, followed by media, (Sistani *et al.*, 2013) whereas in the present study very few subjects got the information from dentist. This is due to low utilization of dental services by the pre-school children as the parents do not perceive that dental problem might exist in their child. (Gussy, 2008) Personnel, communal, cultural, and economic factors influence dental health behavior when families seek dental care (Mattila *et al.*, 2000). Conditions established in pre-school years provide a foundation for oral health condition and patterns for use of dental services later and in adulthood. Parents, especially mothers, need to be helped to realize that they are role models for their children and to be encouraged to

improve the child's dental health habit. Health professionals, who are the first to come into contact with expectant and new mothers, need to disseminate appropriate and accurate information about oral health care for infants, especially the use of nursing bottle at night, the value of tooth brushing and regular dental visits. A matter of high priority is therefore the development and implementation of wide-scale, long-term programs of health education and promotion for expectant new mothers (Komro *et al.*, 2011). Intervention program should be developed targeting parents, so that unnecessary loss of permanent tooth due to avulsion injury can be avoided and the tooth be retained in function for life. Integration of parental awareness can be achieved by different means. A lecture of 30-min duration was found to have significantly increased the knowledge level, yet it is also resource-consuming as the professional is required to visit the audiences personally (Loo *et al.*, 2014). A recent study (Wicks, 2004) has stated healthcare professionals as the most preferred sources of information by all population segments. Elderly preferred television as the source of information the most. On the contrary, younger generation and population with higher educational level have opted for internet as their most preferred source. Al-Asfour and Andersson (Al-Sane, 2011) have concluded that though it has its limitation in conveying the message for a complete understanding, a simple leaflet is able to raise the knowledge level of parents to 46%-74% by conveying important basic information. Majority of the interviewees were surprised when health educational leaflets were given and explained by the authors. Information about the important steps to be taken by parents as first-aid managements, including the type of transport media which are practically available, was recommended by the authors. Parents have shown great interest and were pleased to grab the opportunity to learn more about their role in saving an avulsed tooth of the child (Loo *et al.*, 2014). Within the limitation of present study, it was concluded that regardless of educational background and geographical locality, parental awareness concerning measures to be taken in the event of dental avulsion was markedly inadequate. Nonetheless, they exhibited positive attitude toward receiving more advice on emergency management of avulsed permanent tooth through television and internet. Enthusiasm and preference of source of knowledge was directly related to the level of education of parents. Further, the authors suggest to the school education department to include avulsion of tooth and its management as a part of curriculum, so that individuals have a knowledge about avulsion at a very young age (Chan *et al.*, 2001). Therefore, appropriate awareness programs must be implemented in both the developed and developing countries, to educate people on the importance of oral health (Ravikumar, ?).

## Conclusion

In conclusion, health care professionals other than dentists need support to provide information and promote confidence with regard to oral hygiene and its maintenance. Attention should also be given to initiate programmes about dental hygiene and various treatment modalities used to maintain oral hygiene in public forums and schools. It is necessary to create more awareness about the knowledge and importance of first dental visit among the society. Even though many parents had good knowledge, but the same did not reflect in their attitude and practice.

It is worthwhile to attempt regular oral health promotion education programs, with stress on attitude toward treatment modalities for their children.

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