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## Assess the level of knowledge on oral hygiene and dental carries among mothers of preschool children

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**Abstract**

**Background:** Protecting our teeth is an important as any aspect of our health and regular visits to the dentist are essential for taking care of our smile. Dental hygiene or health should begin in the childhood as even babies are susceptible to cavities. The extended contact with sugar increases the rate of tooth decay, having potential to destroy child's entire set of teeth. Oral health is an integral part of the general health and well-being of an individual. Oral diseases continue to have high prevalence despite the decline in dental caries in developed countries. Children even with good oral hygiene, in present study, the overall caries prevalence were 65.6%. In developing countries like India there has been marked increase in the incidence of dental caries. Prevalence of dental caries was higher in urban than rural school children.

**Objectives**

- To assess the level of knowledge regarding oral hygiene and dental carries among mothers of preschool children.
- To determine the effectiveness of video assisted teaching regarding oral hygiene and dental carries among mothers of preschool children.
- To determine the effectiveness of pre and post test of knowledge regarding oral hygiene and dental carries among mothers of preschool children.
- To find out the association between pre and post test levels of knowledge regarding oral hygiene and dental carries among mothers of preschool children with selected demographic variables.

**Methodology:** A Quasi-experimental research design with a purposive sampling technique was adopted to conduct a study among 60 Mothers of preschool children, children age around 3 to 6 years. Data was gathered by using a structured questionnaire. Confidentiality was maintained throughout the procedure. Collected data were analyzed by using descriptive and inferential statistics.

**Result:** Among 60 samples of mothers of pre-school children shows that The knowledge regarding oral hygiene and dental carries in the pretest (40%) have inadequate knowledge, (34%) have moderate knowledge and 16(26%) have adequate knowledge Whereas in the post test (4%) have inadequate knowledge, (15%) have moderate knowledge and (81%) have adequate knowledge on oral hygiene and dental carries among mothers of preschool children. The study shows that there is no significant association between the level of knowledge regarding oral hygiene and dental carries among mothers of preschool children with demographic variables like age, number of children, religion, educational status, occupation, Types of marriage, Types of family.

**Conclusion:** The findings of the study revealed that video-assisted teaching on oral hygiene and dental caries helped to improve the level of knowledge among mothers of preschool children. The study concluded that there is no significant difference between the levels of knowledge on oral hygiene and dental caries among mothers of preschool children.

**Keywords:** Assess, knowledge, oral hygiene, dental caries, mothers of preschool children

**Introduction**

Protecting our teeth is an important as any aspect of our health and regular visits to the dentist are essential for taking care of our smile. While lack of dental care can cause major problems, the good the news is that body is resilient and practicing good oral hygiene can change the way we feel about our smile, improve our overall health and boost our self-confidence [1]. Routine dental exams help our dentist discover and fix small dental issues before they become problematic.

Dental symptoms affect the teeth and gums [2]. They may include toothache, pain with chewing, sensitivity of the teeth, tooth discoloration, redness or swelling of the gums, receding or bleeding gums, worn-down teeth, broken or chipped teeth, and loose or lost teeth.

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Tooth decay is an ongoing process. Bacteria that are naturally present in the mouth combine with saliva and food particles to form plaque. The bacteria produce acid when they break down foods, especially those containing sugars and starches. The acid erodes the enamel, the hard protective surface of teeth. Sensitivity and pain can result from tooth decay<sup>[3]</sup>. Tooth decay can lead to cavity formation. Left untreated, cavities can lead to painful tooth abscesses and tooth loss. Plaque can also contribute to gingivitis (reversible inflammation of the gums) and periodontitis (gum disease).

Injuries, such as cracks or breaks in the tooth, are other potential causes of tooth infection and abscess. Tooth grinding (bruxism) can wear down teeth, chip teeth, and cause sensitivity. Sensitivity can also be caused by erosion of the enamel. This can be associated with brushing too vigorously, gastro esophageal reflux disease (GERD), and bulimia. Pain felt in the mouth and teeth can also come from other sources, such as sinus or ear infections. Pain from a heart attack can include the jaw. Rates of cavities and tooth decay have been rising in recent years<sup>[4]</sup>. It is now thought that up to 25% of toddlers and preschoolers, and half of preteens and teenagers, have cavities, with rates even higher in lower-income families. While the best protection against decay is good oral health, additional steps can be taken to prevent cavities.

A child is a precious gift which has lots of potential within, which can be the best resource for nation if raised and molded in good manner. Healthy children can become healthy citizen constituting a healthy nation. Healthy children are also successful learners<sup>[5]</sup>. Dental hygiene or health should begin in the childhood as even babies are susceptible to cavities. The extended contact with sugar increases the rate of tooth decay, having potential to destroy child's entire set of teeth. Oral health is an integral part of the general health and well-being of an individual<sup>[6]</sup>. Oral diseases continue to have high prevalence despite the decline in dental caries in developed countries. Oral health promotion through schools is recommended by the World Health Organization (WHO) for improving knowledge, attitude, and behavior related to oral health and for prevention and control of dental diseases among schoolchildren.

If the child does develop cavities, take him to the dentist for an evaluation and possible fillings. Do not be under the misconception that children do not need to have cavities filled because their baby teeth will fall out eventually. The fact is that children keep many of their baby teeth for a long time and cavities can be painful. Nutrition plays an important role in good dental health. Eating nutritional snacks and limiting the amount of sugary drinks will help to prevent plaque from forming on the teeth<sup>[7]</sup>.

Unfortunately, parents often allow their children to engage in a lot of habits that can actually promote cavities and tooth decay, including drinking too much juice or any amount of soda or other sugar-sweetened drinks, drinking milk or juice at bedtime or in the middle of the night, continuous snacking throughout the day, eating a lot of candy, especially gummy type candy, which can get in between teeth and can be hard to get out without flossing, giving kids bottled water instead of fluoridated tap water or filtered tap water that still retains its fluoride. And perhaps the worst habit that can promote cavities and tooth decay is not getting an early start at proper tooth brushing twice a day as soon as

your child gets a tooth<sup>[8]</sup>. In fact, we should likely start even earlier, wiping the baby's gums with a soft washcloth or soft infant toothbrush and water each day even before she gets a tooth.

The American Dental Association recommends that to avoid oral diseases individual should brush and floss at least once a day and visit a dentist regularly. We all know that lack of oral hygiene practices leads to development of oral diseases. These practices, such as brushing, flossing, and periodic dental visit should be developed early in the childhood. Dental flossing and tooth brushing are the most commonly performed oral self-care behavior. About one-third of the sample reported flossing at least once a day. Three quarters of the population reported making periodic dental visits at least once a year<sup>[9]</sup>. Most of the children (73-83%) in Sweden, Denmark, Germany, Austria, and Norway brushed their teeth twice a day. The use of the dental floss was rare. In general, flossing was less frequent among boys than among girls. Recent studies carried out in Michigan have found that, on an average, subjects reported brushing their teeth twice daily. Around 90% of the population brushed at least once a day. African-Americans are less likely than whites to brush and floss thoroughly and get regular dental checkup a developing country, face many challenges in rendering oral health needs<sup>[10]</sup>. The majority of Indian population resides in rural areas of which more than 40% constitute children. Ultimately the video-assisted teaching help to identify the knowledge of mothers of preschool children and also educate them on how to care for and prevent oral hygiene and dental caries<sup>[11]</sup>.

## Materials and methods

A Quasi-experimental research design was used to assess the level of knowledge on oral hygiene and dental caries among mothers of preschool children. The study was conducted in Avadi, Thiruvallur District. The sample size comprised 60 Mothers of children, those who the inclusion criteria. The purposive sampling technique was used to collect the data from the sample. The inclusion criteria the mother with children and the children age around 3 to 6 years. Those who are willing to participate in the study. Those who are available during the data collection. Those who are not willing to participate in the study were excluded. Explained about the study and informed consent was obtained. Data were collected by structured questionnaires. Confidentiality was maintained throughout the study. The first-day pre-test was conducted and health education was given and the seventh-day post-test was conducted. Collected data were analyzed by using descriptive and inferential statistics. The project has been approved by the Ethics Committee of the Institution.

## Results and discussion

### Section A: To assess the level of knowledge regarding oral hygiene and dental carries among mothers of preschool children

#### Description of sample Characteristics

The majority of 60 sample of mothers of preschool children, Maximum (50%) were under the age of 26 – 35 years, maximum (76%) samples were Hindu religion, Maximum (73%) samples were non consanguineous marriage, Maximum (73%) samples were lived in nuclear family, Maximum (50%) samples were one kid, Maximum (54%) were working class, Maximum (74%) samples were private

work, Maximum (57%) samples were inappropriate hygiene, Maximum (40%) samples were graduated.

**Section B: To determine the effectiveness of video assisted teaching regarding oral hygiene and dental carries among mothers of preschool children**

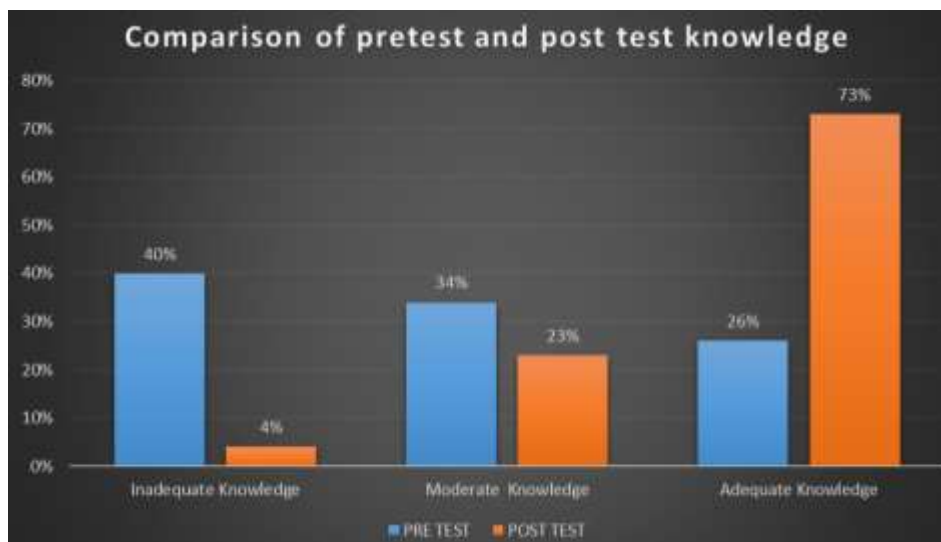
**Table 1:** Frequency and percentage distribution level of knowledge on oral hygiene and dental carries among mothers of preschool children. N=60

Level of knowledge	Pre Test		Post Test	
	Frequency	Percentage	Frequency	Percentage
Inadequate Knowledge	24	40%	2	4%
Moderate Knowledge	20	34%	14	23%
Adequate Knowledge	16	26%	44	73%
<b>Total</b>	<b>60</b>	<b>100%</b>	<b>60</b>	<b>100%</b>

The data presented in table 1 shows that the level of knowledge on oral hygiene and dental carries among mothers of preschool children. In pre-test 24(40%) have inadequate knowledge, 20(34%) have moderate knowledge and 16(26%) have adequate knowledge whereas in the post test 2(4%) have inadequate knowledge, 10(15%) have moderate knowledge and 48(81%) have adequate knowledge on oral hygiene and dental carries among mothers of preschool children.

The present study findings supported by Khanal.K. *et al.*

(2015) conducted a descriptive study to assess the knowledge on dental hygiene among parents on pediatric outpatient department on Dhulikhel hospital. A total 100 parents were taken for this study and self-administered questionnaire was given to assess the knowledge on dental hygiene. The result showed that 81% had moderate knowledge 15% has poor knowledge and 4% had good knowledge on oral hygiene. The study concluded that the parents need some more knowledge in some aspect in oral hygiene.



**Fig 1:** Comparison of pretest and post test level of knowledge regarding oral hygiene and dental carries among mothers of preschool children.

The figure 1 shows that in the pretest 24 (40%) have inadequate knowledge, 20(34%) have moderate knowledge and 16(26%) have adequate knowledge whereas in the post test 2(4%) have inadequate knowledge, 10(15%) have moderate knowledge and 48(81%) have adequate

knowledge on oral hygiene and dental carries among mothers of preschool children.

**Section C: To determine the effectiveness of pre and post-test knowledge regarding oral hygiene and dental carries among mothers of preschool children**

**Table 2:** Mean, Standard deviation, Mean difference and knowledge scores mothers of children between pretest and post test, N = 60

Knowledge	Mean	S.D	Paired 't' test Value
Pretest	8.94	2.16	t = 34.023 p = 0.0001 S***
Post Test	24.85	2.86	

\*\*\*p<0.001, S – Significant

The data presented in the Table 2 depicts that the pretest mean score of knowledge was 8.94 with standard deviation 2.16 and the post test mean score of knowledge was 24.85 with standard deviation 2.86. The calculated paired't' test value of t = 34.023 was found to be statistically highly significant at p<0.001 level. This clearly infers that there was significant improvement was observed in the post test

level of knowledge on oral hygiene and dental carries among mothers of preschool children. This implies the knowledge level is improved through video-assisted teaching regarding oral hygiene and dental carries among mothers of preschool children.

The present study findings supported by Hiba S. Abduljalil and Amal H. Abuaffan (2016) led a cross-sectional pre-

school based investigation of 419 mothers of 3-5 years of age pre-younger students were chosen haphazardly from 20 kindergartens in Khartoum North, Sudan. A questionnaire regulated poll used to survey the mother's dental wellbeing information and practice comparable to mother's age, schooling and occupation. Most of mothers 394 (94%) age were 20 to 40 years of age, 52.7% had college schooling and 63.7% were housewives. As a rule, mothers showed great information, the general mean  $\pm$  SD information score was  $7.22 \pm 1.42$ , while for training the general mean  $\pm$  SD practice score was  $41.3 \pm 11.8$ . Critical affiliation found between dental wellbeing information and practice and mother's schooling level ( $p = 0.00$ ). The investigation inferred that moderately great mother information in regards to dental wellbeing of preschool children yet lamentably this information was not completely thought about rehearses. Advanced education mothers would be wise to information and practices. <sup>[14]</sup> The discoveries of this investigation accentuate the huge part of mothers in advancing dental soundness of pre-younger students.

#### **Section D: To find out the association between pre and post test levels of knowledge regarding oral hygiene and dental carries among mothers of preschool children with selected demographic variables**

The study data of the association shows that none of the demographic variables had not shown statistically significant association with post test level of knowledge regarding oral hygiene and dental carries among mothers of preschool children

The present study findings supported by Davidovic B (2014) has directed an examination on, information, mentality and conduct of children according to oral hygiene. The point of this examination was to analyze the degree of information and propensities in children with respect to oral cleanliness, diet and negative quirks. The examination included 506 younger students matured 12 & 15 years in three towns. The overview was directed to evaluate information, disposition and propensities that children have comparable to their own oral hygiene. The aftereffect of the investigation was, an aggregate of 54.9% of children brush their teeth after each feast, and keeping in mind that 40.1% of them brush teeth just a single time during the day long term olds brush their teeth all the more frequently, particularly after a supper. A sum of 92.5% of children had never utilized fluoride tablets nor are the tablets prescribed to them by anybody. The greater part of the children (61.7%) visited the dental specialist interestingly prior to beginning school that is on the customary assessment that is performed upon enlistment to class. <sup>[15]</sup> A torment as a justification dental visits was available in 43.9% while the preventive check in just 31.4% of the children. Children remembered for this investigation, especially long term olds, are very much educated about teeth brushing recurrence and appropriate determination of apparatuses for cleanliness upkeep, yet this information isn't applied. Young ladies are more liable for their own hygiene, and come routinely to the preventive dental tests.

#### **Conclusion**

The findings of the study revealed that video-assisted teaching on oral hygiene and dental carries helped to improve the level of knowledge among mothers of children. The study concluded that there is no significant difference

between to assess levels of knowledge on oral hygiene and dental carries among mothers of preschool children.

#### **Conflict of interest**

The authors declare no conflict of interest.

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