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## Effectiveness of knowledge and attitude on dental caries among primary school mothers

**Muthulakshmi C, Monisha V and Mahalakshmi S**

### Abstract

Dental caries result when plaque forms on the surface of a tooth and converts the free sugars (all sugars added foods by the manufacture, cook, or consumer, plus sugars naturally present in honey, syrups and fruit juices) contained in foods and drinks into acids that distract the tooth overtime. World health organization (WHO). The research design for the study descriptive research design. Purposive sampling technique was used to select samples. Structured interview was used to collect background variable, Investigator prepared structured knowledge questionnaire containing 24 knowledge questions regarding dental caries and Investigator prepared attitude rating scale regarding dental caries consisting of 16 statements, Attitude statements were given with the range score of 0 to 2 marks. Data were collected by 60 from rural population. The present study revealed that the table 02 shows despite of level of knowledge among primary school mothers at Eraiyamangalam 67% had inadequate knowledge, 25% had moderate knowledge, 8% had adequate knowledge. The present study revealed that the attitude scale among primary school mothers positive 12%, negative 72% and neutral 16%. The significance associations of knowledge with the selected demographic variables in this study are age, education, occupation, number of children, history of dental disorders, type of family, and source of information.

**Keywords:** Dental caries, primary school children, knowledge and attitude

### Introduction

Dental caries problems are damage to a tooth that can happen when decay causing bacteria in your mouth make acids that attract the tooth surface, or enamel. This can lead to a small hole in a teeth called a cavity. Tooth caries is not treated; it can cause pain, infection, and even tooth loss<sup>[1]</sup>.

Oral health is an integral component of primary school children's health and well-being. The overall health, well being, education and development of children, families and communities can be affected by oral health<sup>[2]</sup>.

Early childhood caries is defined as "the presence of one or more decayed, missing (due to caries), or filled tooth surfaces in any primary tooth in a child, ECC imposes significant threats to the physical, psychology and social wellbeing of young children as dental pain and subsequent tooth loss resulting in difficulty in eating, speaking, sleeping and socializing<sup>[3]</sup>.

The environmental factors have a major influence on caries development and are well known. The mother as well as the entire family plays part in children's environment influencing the development and establishment of oral health behaviour. There is a significant growth in literature related to the association between caries experience in children and characteristics of the family, parental oral health behaviours and lifestyle. Routines like tooth brushing habits, dietary habits, and food choices of parents are directly associated with those of their children. Dental caries professionals accept that the effort intended to improve parental oral health behaviours could result in enhanced health in their children. However many factors are identified which can indirectly influence the parents health habits and in result their children's health. Some of these factors include parent's education, occupation, age, current knowledge, attitude, and behaviour related to health. The importance of a parent's knowledge on health including oral health cannot be oral overemphasized because most of their decisions with regard to the health of their children will be based on their knowledge<sup>[4]</sup>.

Parents have a major role in preventing dental diseases in their children. In addition, they have a major role in any preventive measure. Parents' knowledge about different preventive methods has been studied previously. Children generally spend most of their time with parents and guardians<sup>[5]</sup>.

It has been found that the more positive is the parents' attitudes toward dentistry, the better will be the dental health of their children. Young children's oral health maintenance and outcomes are influenced by their parent's knowledge beliefs and practices, which affect oral hygiene and healthy eating habits. Without basic knowledge of caries risk factors, importance of the deciduous teeth and oral maintenance, it is difficult to employ effective disease preventive strategies. Parent's knowledge and positive attitude toward good dental care are very important in the preventive cycle of dental caries<sup>[6]</sup>.

In 2012, the World Health Assembly adopted a resolution calling for attainment of "Health for all" by the year 2000. In line with this, the FDI recommended the establishment of specific oral health schedule on the time scale of the WHO goals for global oral health, the first goal is that 50% of 5-6 years old children should be caries free and the second goal is that the global average should not be more than 3 decayed, missing, or filled teeth at 12 years of age<sup>[7]</sup>.

Dental caries can be traced to be as old as civilization with its Evidence seen even in skeletal remnants of prehistoric humans. Dental Caries remains the most common disease affecting humans. Tooth decay is one of the most common fall disorders, second only to the common cold. It usually occurs in children and young adults but can affect any persons. Numerous studies have reviewed the effectiveness of different preventive measures in different populations. In spite of these studies, children still suffer from high caries incidence. In western countries, the prevalence of dental caries is low compared to developing countries<sup>[8]</sup>.

E.N. Kikwilu *et al.*, (2018) conducted a cross sectional study was conducted to describe the occurrence of dental caries and periodontal conditions among standards three and four primary school children in Morogoro municipality. A total of 1,297 standards three and four children in five primary schools randomly selected from a list of 36 primary schools. Dental caries and periodontal status were recorded using the criteria described in the WHO manual for Oral health Surveys, Basic Methods. Analysis and interpretation showed that seventy six percent of the children were caries free. No fillings were encountered. Remaining 29 % Of the sample were affected with dental caries<sup>[9]</sup>.

Madhumati Chatterjee *et al.*, (2016) Conducted for variations in tooth eruption patterns are supposed to have multifactorial reasons and etiologic factors to explain variation in caries are unsatisfactory. Prevalence of caries is comparatively higher in the children of developing countries than that of the children of same age in developed countries. Indian studies on the dental caries mostly in children related to prevalence and treatment. However, nutritional effect on dental caries on Indian school going children is yet to be carried out in eastern India. This study investigated the prevalence of dental caries in permanent teeth and nutritional status among the 544 School going children (girls) of 6 - 19 years age group of Bengalee ethnicity of West Bengal, India. Caries was recorded based on DMFT index following basic guidelines for Oral Health Surveys guideline (WHO). Nutritional status was obtained using

BMI and classification of nutritional status was achieved using the standards of WHO and CDC growth charts include an age- and sex-specific BMI reference for children aged 2 - 20 year. The overall prevalence of dental caries was 44.5% and mean DMFT was 0.45 and 1.57. Nutritional status demonstrated, about 30% and 6.69% of schools going girls were underweight and overweight respectively. Occurrence of dental caries was found in all permanent teeth among the girls of underweight and normal according to their BMI-for age status. Furthermore, a significant association ( $p < 0.05$ ) with occurrence of dental caries among the underweight girls has been found compared to that of the overweight and normal. This study indicates a close relationship between nutritional status and dental caries in this region<sup>[10]</sup>.

The purpose of the study was 1.To assess the demographic variable among primary school mothers at Eraiymangalam 2.to determine the knowledge regarding primary school mothers at Eraiymangalam 3. To evaluate the attitude scale for dental caries among primary school mothers at Eraiymangalam 4. To association between the demographic variable and knowledge regarding dental caries among primary school mothers at Eraiymangalam.

### Methods and Material

A descriptive study was conducted to assess the effectiveness of Knowledge and attitude of dental caries among primary school mothers at Eraiymangalam. The main study was conducted on 4.3.2020 to 13.3.2020 at rural population. The 60 samples who met the inclusion criteria were selected by purposive sampling technique. The investigator induced and explained the purpose of the study to samples and the written informed consent. A questionnaire was divided into two sections which include, Section A -background variable, section B consists of Investigator prepared structured knowledge questionnaire containing 24 knowledge questions regarding dental caries. Each correct response was given with score of 'one' and wrong answer was given a score of 'zero'. The maximum score was 24 and minimum score is Zero. The respondents were given the questionnaires and placed a tick (3) to their correct response. And section C consists of Investigator prepared attitude rating scale regarding dental caries consisting of 16 statements, Attitude statements were given with the range score of 0 to 2 marks. The demographic data was collected using structured interview questionnaire. Data collection period was for 1 week in rural population at Eraiymangalam.

### Result and Discussion

#### Section A: To assess the dental caries for primary school children mothers according to their demographic Variable

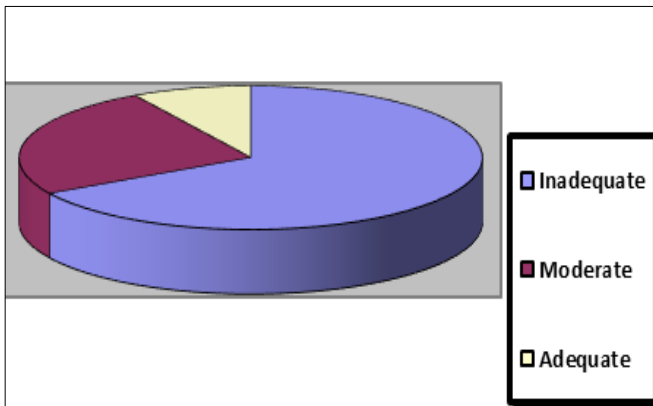
The present study revealed that Frequency and percentage distribution of demographic variables out of 60 samples were come under the a were (62%) in the age group of 21-25years, majority of the subjects (38%) had up to higher education and majority of the respondents (35%) were Home makers, 37% of the family income falls between Rs. 2000 -3000. Majority of respondents were have 2 children (37%). 26% of the samples have mouth ulcer, 36% samples were from nuclear family. Majority of them got information from health personnel's about dental caries.

**Section B: To determine the level of knowledge for dental caries among primary school mothers at Eraiymangalm**

The present study revealed that the table 02 shows despite of level of knowledge among primary school mothers at Eraiymangalam 67% had inadequate knowledge, 25% had moderate knowledge, 8% had adequate knowledge.

**Table 1:** Frequency and distribution of level of knowledge among primary school mothers

S. No.	Level of knowledge	Frequency	Percentage
1.	Adequate	5	8%
2.	Moderate	15	25%
3.	Inadequate	40	67%



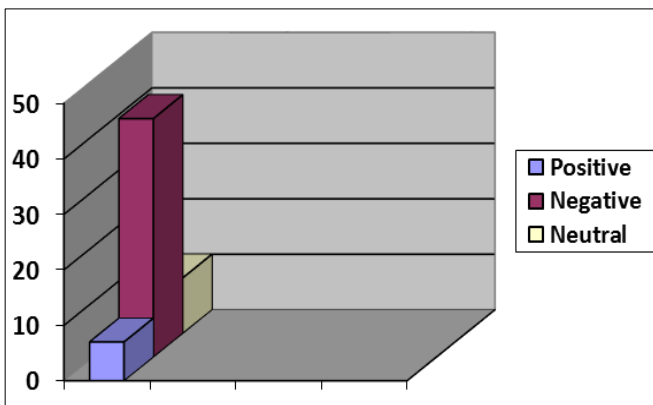
**Fig 1:** Level of knowledge for dental caries among primary school mothers at Eraiymangalam.

**Section C: To evaluate the level of Attitude for dental caries among primary school mothers at Eraiymangalam**

The present study revealed that the attitude scale among primary school mothers positive 12%, negative 72% and neutral 16%.

**Table 2:** Frequency and distribution attitude scale among primary school mothers

S. No.	Degree of attitude	Frequency	Percentage
1.	Positive	7	12%
2.	Neutral	10	16%
3.	Negative	43	72%



**Fig 2:** Assess the degree of attitude for dental caries among primary school mothers at Eraiymangalam.

**Section D: To find out association between knowledge among primary school mothers with selected demographic variables**

The significance associations of knowledge with the selected demographic variables in this study are age, education, occupation, number of children, History of dental disorders, type of family, and source of information. Age - The value of X2 found significant at the level of 5% (X2 = 9.248 at  $P > 0.05$  level). Occupation – The value of X2 found non significant at the level of 5% (X2= 0.793 at  $P < 0.05$  level). Education- The value of X2 found to be statistically non significant at the level of 5% (X2 = 1.078 at  $P < 0.05$  level). Number of children- The value of X2 found to be statistically significant at the level of 5% (X2= at 5.568  $P > 0.05$  level). Religion- The value of X2 found to be statistically significant at the level of 5% (X2 = 7.968 at  $P > 0.05$  level). Source of information- The value of X2 found to be statistically significant at the level of 5% (X2 = 7.0808 at  $P > 0.05$  level).

**Conclusion**

Dental caries was the most common problem among the primary school children. Parents play a important role to take care of children teeth. The level of knowledge 67% had inadequate knowledge, 25% had moderate knowledge, 8% had adequate knowledge. The attitude scale among primary school mothers positive 12%, negative 72% and neutral 16%.

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**Authors Contribution**

All the authors actively participated in the work of the study. All authors read and approved the final, manuscript.

**Conflicts of Interest**

The authors declare no conflicts of interest

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