



ORIGINAL RESEARCH PAPER

Nursing

ASSESS THE EFFECTIVENESS OF KNOWLEDGE ON PREVENTION AND MANAGEMENT OF DENTAL FLUOROSIS AMONG MOTHERS OF UNDER-FIVE CHILDREN IN SELECTED AREA AT VELLORE

KEY WORDS:

Assess, Knowledge, Prevention, Management, dental fluorosis, mothers, under five children

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ABSTRACT

Healthy mothers and children are the backbone of healthy societies and nations. To reduce sufferings and death, we must use effective knowledge and equipments. Dental fluorosis or "mottled teeth" has long been recognized as an endemic problem affecting areas of the world with high levels of naturally occurring fluorides in the drinking water. The aim of the study was to determine the effectiveness of pre test and post test knowledge regarding prevention and management of dental fluorosis among mothers of under five children. A pre experimental one group pre-test post test design with convenient sampling technique was adopted to conduct a study among 50 mothers of under five children. Data was gathered by using structured questionnaire. Confidentiality was maintained throughout the procedure. Collected data were analyzed by using descriptive and inferential statistics. Among 50 mothers of under five children shows that the levels of knowledge regarding prevention and management of dental fluorosis in pre test (88%) have inadequate knowledge, (12%) have moderate knowledge. Where as in post-test (6%) had moderate knowledge and (94%) had adequate knowledge. The study shows that there is no significant association between the level of knowledge regarding prevention and management of dental fluorosis among mothers of under five children with demographic variables like Age, religion, educational status, mother occupation, types of family and number of siblings. There is a significant association between numbers of brushing the teeth per day. The findings of the study revealed that structured teaching programme on prevention and management of dental fluorosis helped to improve the level of knowledge among mothers of under five children.

INTRODUCTION

Healthy mothers and children are the backbone of healthy societies and nations. To reduce sufferings and death, we must use effective knowledge and equipments. Oral health is an essential part of general health and we can say that oral cavity is the archway of the body. Dental fluorosis or "mottled teeth" has long been recognized as an endemic problem affecting areas of the world with high levels of naturally occurring fluorides in the drinking water. Dental fluorosis is a health condition caused by a child receiving too much fluoride during tooth development. The critical period of exposure is between 1 and 4 years old. In its mild form, which is the most common, fluorosis appears as tiny white streaks or specks that are often unnoticeable. In its severest form, which is also called mottling of dental enamel; it is characterized by black and brown stains, as well as cracking and pitting of the teeth.

Dental fluorosis remains one of the most common disorders affecting the teeth, starting right from the early age. Hence it is important to prevent dental fluorosis from the school age level. To a certain duration (as per WHO; 0.6 ppm), fluoride ingestion is useful for teeth and bone development, but excessive ingestion causes a disease called fluorosis. The greatest matter in dental fluorosis is aesthetic modification in the permanent dentition (the adult teeth). These changes are prone to appear in children who are extremely exposed to fluoride between 30 and 20 months of age. The critical period of exposure is amidst 1 and 4 years old, and the child is not enduring risk after 8 years of age. The severity of dental fluorosis depends on the amount of fluoride exposure, the age of the child, individual response, weight, degree of physical activity, nutrition, and bone growth.

MATERIALS AND METHODS

A pre experimental one group pre-test post test design was used to assess the knowledge on prevention and management of dental fluorosis among mothers of under five children. The study was conducted in katipadi at Vellore district. The sample size comprised of 65 mothers of under five children those who fulfill the inclusion criteria. Convenient sampling technique was used to collect the data from sample. The inclusion criteria those who are having under five children, who are willing to participate, available at the data collection and who know tamil. Those who not having

under five children, not willing to participate and do not know tamil in the study were excluded. Explained about the study and informed consent was obtained. Data was collected by structured questionnaires. Confidentiality was maintained throughout the study. The first day pre test was conducted and health education was given and third 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 I: Description of Sample Characteristics

Majority (50%) of the mothers of under five children in the study with regards to the age in years from 25-30 years, Maximum (52%) were based on Hindu religion Maximum (55%) were completed no formal education. The highest percentages (56%) of women were house wife. Maximum (56%) of children are living in a nuclear family. Maximum (46%) were single child. Maximum (60%) were brushing teeth once a day.

Section II: Table 1: Frequency and percentage distribution of level of knowledge on knowledge on prevention and management of dental fluorosis among mothers of under five children

LEVEL OF KNOWLEDGE	PRE-TEST		POST-TEST	
	Frequenc y	Percent age	Frequenc y	Percent age
Inadequate knowledge	44	88%	0	0%
Moderately adequate	6	12%	3	6%
Adequate knowledge	-	-	47	94%
Total	50	100	50	100

The data presented in the table 1 show that the level of knowledge regarding prevention and management of dental fluorosis among mothers of under five children. In Pre- test, (88%) had inadequate knowledge, (12%) had moderate knowledge. In Post- test, (6%) had moderately adequate knowledge and (94%) had adequate knowledge on prevention and management of dental fluorosis among mothers of under five children.

The result was supported by similar study conducted by

Vivek Nehra, Swamy PGN,et.al(2018) to determine the effectiveness of planned teaching program on knowledge regarding dental fluorosis among parents of primary school children at selected rural area of Vadodara district. The results indicates that there is increased the level of knowledge of parents in post-test compare to the pre-test after administration of the planned teaching program so it proves that my planned teaching program is effective for respondents. Hence, it is observed that structure teaching program is very effective tool in improving the knowledge.

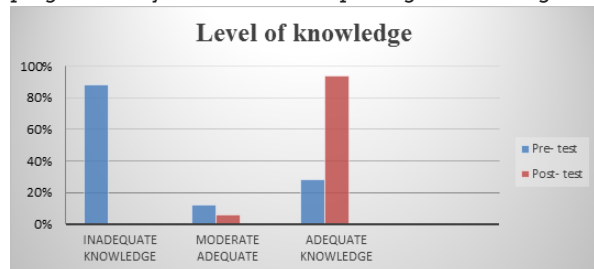


Figure 1: Frequency And Percentages Distribution Of Level Of Overall Knowledge On Prevention And Management Of Dental Fluorsis Among Mothers Of Under Five Children

Section III: To determine the effectiveness of pre test and post test knowledge on prevention and management of dental fluorosis among mothers of under five children

To find out the significant mean difference between the level of knowledge on prevention and management of dental fluorosis among mothers of under five children.

Table 2: Comparison of mean score, standard deviation, mean difference and paired T value of knowledge on prevention and management of dental fluorosis among mothers of under five children in pre-test and post-test.

Variables	Mean	Standard Deviation	Mean Difference	Paired 'T' Test Value P Value
Pre Test	8.94	1.39	9.28	T = 35.8594 P = <.05 Df = 49(S)
Post Test	18.22	1.46		

The data presented in the table 2 shows that, the mean pre-test score was 8.94 and post test score was 18.22 were higher than post- test among mothers of under five children The mean difference on pre test and post test is 9.28. The SD value of pre test is 1.39 and post test is 1.46The mean post test score was higher than pre test. This shows that knowledge level had improved after the teaching program. Paired t value was 35.8594, p value is <0.5. The result was significant (S).

The result was supported by similar study conducted by **Anna Turska-Szybka, a Magdalena.et.al.,(2018)** to what do parents know about the use of fluoride products in children? a questionnaire study. Care must be taken to ensure that a balance is maintained between maximizing the protective F effect against dental caries and minimizing the risk of dental fluorosis. It appears necessary to raise parental awareness by implementing proper educational programs.

Section IV: To find out the association between level of knowledge on prevention and management of dental fluorosis among mothers of under five children with selected demographic variables.

In order to determine the significant association of level of knowledge on prevention and management of dental fluorosis among mothers of under five children with selected demographic variable, Chi-square tests were computed for the available data.

Table 3: Association of selected demographic variables

among mothers of under five children regarding prevention and management of dental fluorosis in post-test

Data shows that there is no significant association between the level of knowledge regarding prevention and management of dental fluorosis among mothers of under five children with demographic variables like Age, religion, educational status, mother occupation, types of family and number of siblings. There is a significant association between numbers of brushing the teeth per day.

The result was supported by similar study conducted by **Mr. Priyank Bhatt (2020)** A Study to Assess the effectiveness of Planned Teaching Programme on Knowledge regarding Dental Fluorosis and its management among mothers of under five children. It was observed that the educational status of mothers of under five children was significant and remaining demographic variables were not significant, which was statistically significant.

CONCLUSION

The findings of the study revealed that structured teaching programme on knowledge on prevention and management of dental fluorosis among mothers of under five children The findings of the study revealed that structured teaching programme on prevention and management of dental fluorosis helped to improve the level of knowledge among mothers of under five children.

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