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RESEARCH ARTICLE

A STUDY TO ASSESS THE KNOWLEDGE REGARDING DENTAL HYGIENE AMONG SCHOOL GOING CHILDREN IN A SELECTED SCHOOL OF DELHI

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Abstract

A descriptive study was conducted to assess the knowledge regarding dental hygiene among school going children in a selected school of Delhi. A sample of 100 students, who fulfilled the inclusion criteria were selected using simple random sampling method. A structured knowledge questionnaire was used to assess the knowledge on dental hygiene among school students. Data was collected from 8th and 9th class students attending a selected school of Delhi. The data analysis and interpretation was done using descriptive and inferential statistics. The study result reveal that basic oral hygiene knowledge and practice of the studied participants were good and study suggested to improve advanced knowledge in children.

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Introduction:-

Dental hygiene is defined as the science and practice of the recognition, treatment and prevention of the oral diseases. Oral diseases are highly prevalent world wide. Untreated caries in permanent teeth was the most prevalent condition (affecting 35% of the population), whereas severe periodontitis, untreated caries in deciduous teeth, severe tooth loss were the 6th, 10th and 36th most prevalent conditions respectively, affecting 11%, 9% and 2% of the global population respectively. There are several barriers to oral health care such as lack of acknowledgment, perceive it to be as secondary, lack of access and quality of treatment. Oral health education is believed to be a cost effective method for promoting dental health if initiated through schools, where all school childrens irrespective of their socio economic status and ethnicity can be reached to get such oral health education. This knowledge will in theory lead to a change in attitude, which will in turn lead the individual to make changes in their daily life. The fact is that the little attention paid to the issue of oral hygiene of school aged children especially in the developing countries could be fatally dangerous in advance cases such as in patients with oral cancer, which is the eighth most common worldwide cancer. Hence the prevention of dental problems is of utmost importance for school children.

Objectives:-

1. To assess the knowledge regarding dental hygiene among school going children in a selected school of Delhi.
2. To find association between selected demographic variables and knowledge regarding dental hygiene among school going children.

Assumption:

School children have some knowledge regarding various practices and importance to maintain dental hygiene.

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Delimitations:

This study is delimited to:

- Only one school.
- Only 100 samples.
- School children of class 7th, 8th and 9th class.

Materials and Methods:-**Research design:**

A non experimental descriptive survey design is used to assess the knowledge regarding dental hygiene among school going children in a selected school of delhi.

Variables under study :

- In this study, the Research variable is knowledge regarding dental hygiene among school going children
- Socio-demographic variables are class, gender, religion, type of family, number of siblings, occupation of mother and occupation of father.

Setting of the study:

The present study was conducted in St. Xavier's Senior Secondary School, Raj Niwas Marg, Ludlow Castle, Civil Lines of Delhi.

Population:

The target population consists of children studying in St. Xavier's Senior Secondary School, Raj Niwas Marg, Ludlow Castle, Civil Lines of Delhi and accessible population includes children studying in 7th, 8th and 9th class of the school.

Sample and Sampling technique:

A sample of students studying in 7th , 8th & 9th class who fulfilled the inclusion criteria were selected using lottery method which is the simple random sampling technique.

Criteria for sample selection:**Inclusion criteria:**

The study includes children studying in 7th, 8th and 9th class.

Exclusion criteria:

1. Children who were not willing to participate in the study
2. Unavailable during the time of study.
3. Children studying in primary classes.
4. Children studying in 6th, 10th, 11th and 12th class.

Development of the tool:

A structured knowledge questionnaire was developed to collect the data among school going children regarding dental hygiene.

Tool for data collection had 2 parts:

Part 1 – Socio-demographic data.

Part 2 - Structured knowledge questionnaire to assess the knowledge regarding dental hygiene among school going children.

A structured knowledge questionnaire prepared which consists of 30 multiple choice questions. Each question has 4 choices of response of which the respondent has to choose one suitable answer. A score of 1 was given to correct answer and 0 for incorrect answer. The maximum score that can be obtained in this questionnaire is 30 and the minimum score is 0. Hence there scores were interpreted as:

Good knowledge - 21-30

Average knowledge - 11-20

Poor knowledge - 0-10

Content validity and reliability of the tool:

Content validity of the tool was confirmed by experts opinions for the relevance of the questionnaire. The experts were asked to give opinion on the relevance of the items content and clarity of the language. Some items were modified based on the suggestion given by the experts.

The reliability of the tool was established at 0.91, using Karl Pearson's co-efficient of correlation.

Pilot study:

Pilot study was conducted on 9/12/2019 and 10/12/2019 on 10 students of 7th class of St. Xavier's Senior Secondary School. The samples were selected by using simple random sampling technique (lottery method). The pilot study was conducted to ensure the reliability and feasibility of the study. It was found reliable and feasible.

Procedure for data collection:

Data was collected after obtaining formal informed consent from the parents of the children who met the set inclusion criteria. Final study was conducted from 27/01/2020 to 01/01/2020 in St. Xavier's Senior Secondary School, Delhi. The sample of 100 school going children were selected from 8th and 9th class (accessible population) by using simple random sampling technique, a probability sampling lottery method.

Self introduction and purpose of the study was explained to the representative children and confidentiality was ensured. The researchers collected the data.

Data analysis and interpretation:

1. The data was analysed using descriptive and inferential statistics.
2. Frequency and percentage distribution to assess socio demographic characteristics of school going children.
3. Frequency and percentage distribution of knowledge score among school going children regarding dental hygiene.
4. Mean, median and standard deviation in terms of knowledge score of children regarding dental hygiene.
5. Chi square test to establish association between the knowledge regarding dental hygiene among children and socio demographic variables.

Results:-

This study reveal that of the 100 samples selected 12% have good knowledge score, 83% have average knowledge score and 5% have poor knowledge score regarding dental hygiene and association between occupation of mother and knowledge of school going children is present at $p \leq 0.05$ level of significance. This also revealed that basic oral hygiene knowledge and practice of the studied participants were good and study suggested to improve advance knowledge in children.

Discussion:-

The main aim of this study was to assess the knowledge regarding dental hygiene among school going children and to find association between selected demographic variables and knowledge regarding dental hygiene.

Table 1(a):- Frequency and Percentage distribution of School going Children according to their Demographic characteristics. n=100

SOCIO-DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE (%)
1. Class		
a) 8 th	60	60%
b) 9 th	40	40%
2. Gender		
a) Male	57	57%
b) Female	43	43%
3. Type of family		
a) Nuclear	69	69%
b) Joint	31	31%

4. Religion		
a) Hindu	78	78%
b) Muslim	7	7%
c) Christian	11	11%
d) Sikh	2	2%
e) Others	2	2%

Table-1(b):- Frequency and Percentage distribution of School going Children according to their Demographic characteristics n=100.

SOCIO-DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE (%)
5. Number of siblings		
a) One	51	51%
b) Two	23	23%
c) Three	9	9%
d) More than three	11	11%
e) None	6	6%
6. Occupation of mother		
a) Housewife		
b) Private job	63	63%
c) Government job	18	18%
	19	19%
7. Occupation of father		
a) Private job		
b) Government job	31	31%
c) Own business	40	40%
d) Unemployed	26	26%
	3	3%

Table-2:- Frequency and Percentage distribution of Knowledge score of School going Children regarding Dental hygiene n=100.

LEVEL OF KNOWLEDGE	RANGE OF SCORE	FREQUENCY (f)	PERCENTAGE (%)
GOOD	21-30	12	12%
AVERAGE	11-20	83	83%
POOR	0-10	5	5%

Table-3(a):- Chi-square test showing Association between the Knowledge regarding Dental hygiene among Children and Socio-demographic Variables n=100.

Socio-demographic variables	Frequency (f)			Chi-square value	Table value	Df
	Good	Average	Poor			
1. Class						
a) 8 th	9	47	4	2.348	5.99 ^{NS}	2
b) 9 th	3	36	1			
2. Gender						
a) Male	7	45	5	4.076	5.99 ^{NS}	2
b) Female	5	38	0			
3. Type of family						
a) Nuclear	8	59	2	2.163	5.99 ^{NS}	2
b) Joint	4	24	3			

4. Religion						
a) Hindu	9	65	4	2.080	15.51 ^{NS}	8
b) Muslim	1	6	0			
c) Christian	2	8	1			
d) Sikh	0	2	0			
e) Others	0	2	0			

Table 3(b):- Chi-square test showing Association between the Knowledge regarding Dental hygiene among Children and Socio-demographic Variables n=100.

Socio-demographic variables	Frequency (f)			Chi-square value	Table value	Df
	Good	Average	Poor			
5. Number of siblings						
a) One	6	43	2	8.077	15.51 ^{NS}	8
b) Two	4	19	0			
c) Three	0	8	1			
d) More than three	1	8	2			
e) None	1	5	0			
6. Occupation of mother						
a) Housewife	6	52	5	13.947	9.49*	4
b) Private job	3	15	0			
c) Government job	3	16	0			
7. Occupation of father						
a) Private job	3	25	3	4.832	12.59 ^{NS}	6
b) Government job	6	34	0			
c) Own business	3	21	2			
d) Unemployed	0	3	0			

Inference: NS= not significant, *= significant at ' $p \leq 0.05$ level

Observation:-

The discussions are presented in context to the objectives and findings of this study, and the findings revealed in other related research studies. This study reveal that of the 100 samples selected 12% have good knowledge score, 83% have average knowledge score and 5% have poor knowledge score regarding dental hygiene and association between occupation of mother and knowledge of school going children is present at $p \leq 0.05$ level of significance. The findings of this study are supported by the study findings of Kaur M. conducted an experimental study to assess the effectiveness of structured teaching programme on knowledge regarding dental hygiene among middle school children. The study concluded that after structured teaching programme 68% students had average and 32% had good level of knowledge and no one had poor level of knowledge regarding dental hygiene. Similarly, Peter D, Fernandes PJ, Menezes LJ, Thangachan S, Crasta S, Davy N et al conducted a descriptive study on knowledge of school going children regarding prevention of dental caries. The study concluded that majority of the school children (50%) had average knowledge regarding the prevention of dental caries. There was a significant association between the level of knowledge and the selected baseline variables such as age.

The present study is contradicted by the study findings of Gualie YT, Tayachew AT conducted a cross-sectional survey to assess knowledge, attitude and practice toward oral hygiene among governmental secondary school students in Amhara region, North Central Ethiopia. The findings revealed that majority (60%) of students had good knowledge regarding to oral hygiene. Similarly, Kamath A, Bijle MN, Walimbe H, Patil V. conducted a descriptive study to assess awareness and attitude regarding oral hygiene in children of various schools in rural Mangalore. The

study result revealed that basic oral hygiene knowledge and practice of the studied participants were good and study suggested to improve advanced knowledge in children.

Limitations

1. The study is limited to students of 7th, 8th and 9th considering their availability during period of study.
2. The study is limited to 100 students, therefore generalization is unachievable.

Recommendations:-

1. A similar study can be replicated on a large sample to help validate and generalize the findings to the given population of a region or a part of the country.
2. A similar study can be conducted to assess the knowledge related to dental hygiene among government school children.
3. A similar study can be conducted to assess the effectiveness of educational programs on the dental hygiene practice among school children.
4. A similar study can be conducted to assess the knowledge and practice related to dental hygiene among children.

Implications Of The Study

1. Nurse educators should take up the responsibility of updating the knowledge of school children on dental hygiene, disease associated with poor dental hygiene and their prevention through proper orientation and by organizing health camps in the school.
2. In-service and continuing educational programs can be organized for the nurses working in the hospitals, communities and schools, so that their knowledge regarding diseases associated with poor oral or dental hygiene is updated.
3. Education is the key for the development of excellence in nursing practice. Nurses should be lifelong learners and there should be opportunities given for continuing education.
4. The study findings of this study regarding dental hygiene can be used by school health nurse, community health nurses and bedside nursing personnel to ensure that the practice towards target client are the best laying special emphasis on the preventive measures to maintain an optimal level of dental hygiene.
5. In the context of the high incidence of diseases associated with poor dental hygiene among school students, the nursing profession needs to divert more attention to involve the school health nurses to actively participate in preventive programmes related to dental problems.
6. The nurse administrator should arrange health campaign on dental hygiene for the school students and should thereafter assess the effectiveness of such programmes.
7. Finding of the study will act as a catalyst to carry out more extensive research on a larger population sample in various schools. This will help to identify the various aspects of dental aspects of dental problems in the children.

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