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Original Article

"A EVALUATIVE STUDY AIMED TO FIND THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON DENTAL HYGIENE AMONG 5TH STANDARD SCHOOL CHILDREN IN THE SELECTED GOVERNMENT PRIMARY SCHOOLS AT KOTA CITY RAJASTHAN.

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ABSTRACT
Introduction:The successful learners of the any country and society are healthy children. Today's children are future of the any nation with effective leadership. The goal of WHO "Health for all by the year 2020"includes oral health also. It is the period of school age growth and development between the age of 9-12 years. They form 38%-40% of general population. School age children represent about 25% of total population.Itrefer to a young human being below the age of full physical development.The school age children's havemultitude of problems some common health problem of school children which includes:-
1). Mal-nutrition, including various vitamins deficiencies. 2). Infectious and communicable diseases, 3). Intestinal parasites, 4). Diseases of skin, eye and ear and 5). Dental caries.Where one of the aspects of School Health Service is Dental health.One of the most existing problemschildren in this age group is related to dental health.
Material & Methods: Evaluative research approachis defined as a form of disciplined and systematic inquiry that is carried out to arrive at an assessment or appraisal of an object, program, practice, activity, or system with the purpose of providing information that will be of use in decision making. Disciplined and systematic inquiry is described in terms of the quantitative and qualitative methods.
Result:The result of the study found that obtained t-values are greater than the table values at the 0.05 level of significance, the null hypothesisrejected and there is no any significant association between the attributed demographic variables with dependent variables that is knowledge and knowledge on practice scores of the samples selected.
Conclusion: The study concludes that the samples from selected primary government schools had inadequate knowledge in pre-test and they gained good and adequate knowledge in post-test after STP (Structured Teaching Program) With no significant association between the level of post-test general knowledge &knowledge on practice scores related to dental hygiene and demographic data.
Keywords
Evaluative, knowledge, STP, School children,

INTRODUCTION

Dental health is the part of oral health. On a purely functional level, teeth are important for eating and speaking. Different teeth allow for cutting, tearing and grinding food.Formation of dental caries requires three elements a susceptible tooth surface; a mouth colonized by cariogenic bacteria (known as streptococcus mutans) and the presence of sucrose. The bacteria produce lactic acid from fermentation of the carbohydrate, which then begins to dissolve the tooth enamel.Our mouth is a busy place More than 400 species of bacteria live in human mouth. Bacteria tiny colonies of living organisms are constantly on the move on the teeth, gums, lips and tongue. Certain

types of bacteria, can attach themselves to hard surfaces like the enamel that covers our teeth. By the age of 7 years, the child is capable of assuming responsibility for dental care including the use of dental floss. Dental checkup are recommended every 6 months. Because only approximately 35% of the population visits a dentist yearly. The school system should incorporate a dental health educational program into the curriculum. Tooth decay is a common health problem, it has been estimated that 90% of people in the United States have at least one cavity and that 75% of people had their first cavity by the age of five. In the national survey almost 10% of low income children had a need for dental care. More than 30% reported not seeing dentist in the preceding years. Between 11% to 72% of poor children has been found to have early childhood caries. According to WHO globally 200,335,280 teeth are either decayed or missing due to the caries. The estimated global DMFT (decayed missing filled teeth) rate for 12-year-olds was 1.61 in the year 2004 and in India it was 0.5 in 2003. This is just for one age group the 12-years-old and was presented in database in February 2004. By the age 9 most children will have at least one cavity and by the age 15 this proportion will be 60%. Dental caries is a common disease during childhood in India. Over 40% of the children in India are found to be affiliated with dental caries and a large percentage of children reside in rural areas and most of them are in the need of dental care. In the United state, tooth decay is the single most common chronic disease of childhood and affect one in four elementary school children. According to US department of health 2,900 children under the age of 5 years were hospitalized for tooth decay in 2005 in New York State alone.This emphasizes the health care professional to form a more practical approach to achieve primary level prevention of diseases of oral cavity. The most important solution required is to have dental health education. It shows that teachers and parents can modify dental health behavior among the children.

MATERIAL & METHODS:

Research Approach: Evaluativeresearch approach

Research Design: Research design is a plan, structure and strategy of investigation of answering the research question. Research design is the overall plan or blue print the researcher select to carry out their study to find answers to the questions being studied. The pre-experimental research design was used for the present study.

Setting Of The Study:

Setting is a physical location and condition in which data collection takes place in the study.The present study was conducted in the Selected Government Primary school, at Kota City, Rajasthan. The selected setting included the School children studying in 5th standard of both the sexes,availability of the sample,willing to participate ,availability of time, understand Hindi and English, the geographical accessibility and population of the subjects in the selected school.

VARIABLES: Variables are qualities, properties or characteristics of the person, things or situation that change or vary.

Independent Variables: - Independent variable is the "Structured teaching program"

Dependent Variables: - Dependent variable is general knowledge and knowledge on practice regarding dental hygiene.

Demographic Variables: - It includes age, gender, residence, religion, type of diet, source of health information, and previous history of dental caries.

POPULATION: The entire set of individuals having some common characteristic some time referred to as Universe. The target population selected for the study was 5th standard school children in government primary schools at Kota City Rajasthan.

SAMPLE

A sample consists of subject of the population selected to participate in a research study.the sampleconsists of 5th standard school children who fulfil the inclusion and exclusion criteria.

SAMPLE SIZE:

The sample of 100 5th standard school childrenwho met the inclusion and exclusion criteria was selected for the study.

SAMPLING TECHNIQUE

Sampling is the process in which representative units of a population are selected for study in a research investigation. Non-probability convenient sampling technique is where samples are selected based on the judgment of the researcher to achieve particular objectives of the research at hand.

Purposive sampling technique, a type of non-probability sampling approach was used to select the sample of 1005th standard school children.

Criteria for selection of sample.

Ø Inclusion Criteria:

- School children studying in 5th standard of both the sexes.
- Those available during the period data collection.
- Those willing to participate in the study.
- Those able to understand Hindi and English.

Ø Exclusion criteria:

- School children not available during the period of data collection.
- Those not willing to participate in the study.
- Those not studying in 5th standard.
- Those not able to understand Hindi and English.

SELECTION OF THE TOOL: Data collection tools are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem. Tools are prepared on the basis of the objectives of the study. A self administered structured knowledge and practice questionnaires was selected to assess the knowledge & practice on dental hygiene. as it was considered to be the most appropriate instrument to bring out responses from the participants.

Development of the Tool:-The tool was developed by the investigator with his personal and professional experience. The related literature was reviewed like books, journals periodicals and unpublished research studies and mass media. The developed tool was refined and validated by subject experts and guide.

Description of the Tool

Section-A: Demographic data consist of 7 items which include age, gender, residence, religion, type of diet, source of health information, previous history of dental caries.

Section-B: Consisting of 15 items related to general knowledge on dental hygiene.

Section-C: Consisting of 15 items related to knowledge on practice regarding dental hygiene.

The items were given one score for correct answer and zero score for wrong answer. The items were developed to cover different areas such as, Anatomy and physiology of tooth, Dental problems, Meaning, Cause, Risk factors & Preventive measure of dental problems especially dental caries.

RESULTS:

Section-1: Distribution of demographic variables.

S.N	Demographic Variables	Categories	Frequency	Percentage
1	Age in years	9 - 10 years	40	40%
		10 - 11 years	47	47%
		11 - 12 years	13	13%
2	Gender	Male	59	59%
		Female	41	41%
3	Residence	Urban	22	22%
		Semi urban	28	28%
		Rural	50	50%
4	Religion	Hindu	84	84%
		Muslim	6	6%
		Christian	10	10%
		Others	0	0%
5	Type of diet	Vegetarian	69	69%
		Non Vegetarian	25	25%
		Ova Vegetarian	6	6%
6	Source of health information	Professionals	32	32%
		Mass Medias	28	28%
		Parents	29	29%
		friends	11	11%
7	Previous history of Dental caries	Yes	31	31%
		No	69	69%

Section-2: Analysis consisting of Grading of Scores related to general knowledge on dental hygiene.

(I) Frequency and Percentage distribution of the pre and post-test general knowledge score of school children.

Grading	Score %	Pre-Test		Post-Test	
		Frequency	Percentage	Frequency	Percentage
Adequate	76%-100%	6	6%	59	59%
Moderately adequate	51%-75%	20	20%	41	41%
Inadequate	<50%	74	74%	0	0%

(II) Analysis of effectiveness of structured teaching program comparison of pre test &post-test knowledge Scores.

Test	Mean	Median	Difference of Mean	Standard deviation	Paired t- value
Pre test	2.58	5	5.55	2.54	24.34
Post test	11.13	11		2.41	

t_{tab}=1.98, df=99, P< 0.05 level

Section-3: Analysis consisting of Grading of Scores related to knowledge on practice on dental hygiene.

(I) Frequency and Percentage distribution of the pre and post-test level of knowledge on practice score

Grading	Score %	Pre-Test		Post-Test	
		Frequency	Percentage	Frequency	Percentage
Adequate	76-100%	7	7%	67	67%
Moderately adequate	51%-75%	78	78%	33	33%
Inadequate	<50%	15	15%	0	0%

(II) Analysis of effectiveness of structured teaching program comparison of pre-test &post-test knowledge on practice scores.

Test	Mean	Median	Difference of Mean	Standard deviation	Paired t- value
Pre test	5.44	5	5.7	2.47	24.96
Post test	11.23	11.50		1.49	

t_{tab}=1.98, df=99, P< 0.05

Section-4: Analysis Association between the level of post-test general knowledge score and knowledge on practice score regardingdental hygiene with the selected demographic variables.

S. no	Demographic variables	Categories	Df	Knowledge	Practice
				x^2_{cal}	x^2_{cal}
1	Age in years	9 - 10 years	4	1.58 NS	1.61 NS
		10 - 11 years			
		11 - 12 years			
2	Gender	Male	2	4.30 NS	3.83 NS
		Female			
3	Residence	Urban	4	4.20 NS	3.63 NS
		Semi urban			
		Rural			
4	Religion	Hindu	4	8.36 NS	2.48 NS
		Muslim			
		Christian			
		Others			

5	Type of diet	Vegetarian Non Vegetarian Ova Vegetarian	4	4.67 NS	5.36 NS
6	Source of health information	Professionals Mass Medias Parents friends	6	7.71 NS	0.51 NS
7	Previous history of Dental caries	Yes No	2	1.07 NS	1.34 NS

Note: - x^2_{cal}-Calculated chi -square value, Df – Degree of freedom,
NS- Not significant.
Data in table above represents that x^2_{cal} values is less than the x^2_{tab} values at degree of freedom 2 (x^2_{tab}=5.99, 4 (x^2_{tab}=9.49, 6 (x^2_{tab}=12.59 at 0.05 significance level.

DISCUSSION: This study focused to achieve the objectives of the study, Evaluative research approach was made for the study. 100 samples were taken those undergone inclusion and exclusion criteria selected by the Non-probability convenient samplingtechnique. The selected samples were assessed by using their demographic data and self administered structured knowledge and practice questionnaires prepared by the researcher,

CONCLUSION: The study concludes as following:

(I) Overall post-test mean and median scores were improved when compared pre-test mean scores of general knowledge and knowledge on practice on dental hygiene after intervention.

(II) The finding resulted adequate gain in level of knowledge about 59%& knowledge on practice about 67% in regards to dental hygiene after intervention.

(III) There was no significant association between the level of post-test general knowledge scores & knowledge on practice scores related to dental hygiene and demographic data.

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