



A Study To Assess The Effectiveness Of Planned Teaching Programme On Knowledge Regarding Dental Hygiene Among The Teachers In Selected Primary Schools At Vijayapur, Karnataka

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Abstract

Background: Dental hygiene is the practice of keeping one's mouth clean and free of disease and other problems by regular brushing of the teeth and cleaning between the teeth. It is important that oral hygiene be carried out on a regular basis to enable prevention of dental disease and bad breath. General guidelines for adults suggest brushing at least twice a day with a fluoridated tooth paste brushing last thing at night and at least on one other occasion. Cleaning between the teeth is called interdental cleaning and is as important as tooth brushing. This is because a tooth brush cannot reach between the teeth and therefore only removes about 50% of plaque from the surface of the teeth. **Objectives:** 1) To assess the knowledge regarding dental hygiene among the Primary school teachers. 2) To evaluate the effectiveness of planned teaching programme on knowledge regarding dental hygiene. 3) To find the association between knowledge scores with selected socio-demographic variables. **Hypothesis:** H₁: The mean post-test knowledge scores will be significantly higher than mean pretest knowledge scores of the sample. H₂: There will be significant association between post-test knowledge score with selected socio-demographic variables at 0.05 level of significance. **Methodology:** The research design consisted of pre-experimental research design of one group pretest and post-test design. The population selected for the study was teachers of selected Primary schools at Vijayapur district. The study samples were 60 teachers and were selected by using purposive sampling technique. The development of the tool involved steps of test construction i.e. preparing the blue print, selection of items, content validation and

establishment of reliability. The content validity of the questionnaire was done and modifications were done according to the suggestions given by the experts. Pre-testing and reliability of the tools were done. The reliability coefficient of the knowledge questionnaire was found to be 0.893. The tool was found to be reliable.

Results: In the pre-test, level of knowledge of Teachers working in Primary schools of Vijayapur before using Planned Teaching Programme, 45(75.0%) of the study respondents had inadequate pre-test knowledge regarding dental hygiene, 10(16.7%) had moderately adequate pretest knowledge and very few 5(8.3%) had adequate pretest knowledge. In the Post-test, level of knowledge of Teachers working in Primary schools of Vijayapur after using Planned Teaching Programme, 60(100%) had adequate posttest knowledge and none of had moderately adequate and none of had inadequate knowledge regarding dental Hygiene. The mean pre-test knowledge score was 10.4 and was increased to 25.4 after intervention. The difference in knowledge score was -14.9 and percentage increase knowledge was 58.6% indicating that intervention programme was effective in increasing the knowledge of the study participants. **Conclusion:** The result of the study showed that, there was a significant improvement obtained following PTP on Dental Hygiene. This study enlightens that there is an immense need for teaching programme in pre-school areas to improve the knowledge of Primary school teachers regarding Dental Hygiene.

Keywords: Planned Teaching Programme, Dental Hygiene, Primary School Teachers.

Introduction

“Maintaining good health should be the primary focus of everyone”

Sangram Singh.

The health is defined as "State of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity." Health is a dynamic condition resulting from a body's constant adjustment and adaptation in response to stresses and changes in the environment for maintaining an inner equilibrium, the condition of an organism or one of its parts in which it performs vital functions normally or properly. The state of being sound in body or mind, the condition of an organism with respect to the performance of its vital functions especially as evaluated subjectively or non professionally¹.

Dental health is concerned with your teeth, gums and mouth. The goal is to prevent complications such as tooth decay (cavities) and gum disease and to maintain the overall health of your mouth. A healthy mouth, free of infections, injuries and other problems with teeth and gums, is important in maintaining your overall health. Although a different set of medical professionals focuses on dental health, they are still part of your regular health care team. Disease and other conditions can affect your dental health and dental problems can affect other parts of your body. Failing to properly care for your oral health may lead to other health problems. You can help prevent or minimize many oral health problems by regular preventive steps (brushing, flossing and so on) and regular visits to dental health professionals².

For a healthy smile, you must practice good oral hygiene. Dental hygiene refers to the practice of keeping the mouth, teeth and gums clean and healthy to prevent diseases. Nowadays because of the ongoing lifestyle Dental hygiene are often taken for granted but it is one of the most essential part of our regular schedule. If we go into the basics we have always been told to brush regularly and that to especially two times a day specifically morning and night but ever wondered why yes the reason is in the night especially bacteria are more active and they develop a culture media in which they develop more easily and causes cavities in tooth leading to various gum diseases, bad breath problems like halitosis, gingivitis, periodontitis. Good oral and dental hygiene can help prevent bad breath, tooth decay and several other gum diseases and even these are several oral manifestations related to systemic diseases like diabetes, arthritis. Practicing good dental hygiene is so important because it can prevent these type of oral disease and dental problems³.

Dental hygiene is the practice of keeping one's mouth clean and free of disease and other problems (e.g. bad breath) by regular brushing of the teeth (dental hygiene) and cleaning between the teeth. It is important that oral hygiene be carried out on a regular basis to enable prevention of dental disease and bad breath. General guidelines for adults suggest brushing at least twice a day with a fluoridated tooth paste brushing last thing at night and at least on one other occasion. Cleaning between the teeth is called interdental cleaning and is as important as tooth brushing. This is because a tooth brush cannot reach between the teeth and therefore only removes about 50% of plaque from the surface of the teeth⁴.

10 Signs of Good Oral hygiene: The following are 10 signs that allow someone to know when they are in good oral hygiene. The gums do not bleed when brushing or flossing. The gums should be a nice pink color. Pleasant smelling breath is present. Smooth feeling teeth mean clean teeth. Having teeth that are not sensitive. The tongue is pink, firm and moist. The teeth are strong and do the job they are supposed to do. There are no signs of gum disease present. There are no signs of smoking effects. A nice, bright beautiful smile⁵.

Preventive health is the use of recognized proactive health screenings, counseling and maintenance to prevent future illness and treatment. Preventive health is also known as preventive medicine or prophylaxis. Preventive health measures save insurance providers and patients from expensive healthcare costs in the long run while providing better patient outcomes. Usually, these benefits motivate healthcare insurance providers to cover preventive health measures. Preventive health measures focus on preventable disease, injury and patient illness that can be caught early to save the patient suffering from the resulting condition⁶.

Preventive measures in addition to fluoridated water, good oral hygiene can help prevent tooth decay brush twice a day with a fluoride toothpaste. Clean between your teeth daily with floss or interdental cleaner. Eat nutritious and balanced meals and limit snacking. Visit your dentist regularly for professional cleanings and oral examination.⁷

Material and Methods

Research approach: Evaluative Research Approach.

Research design: Pre-experimental; one group pre-test, post-test design.

Research setting: Selected hospitals at Vijayapur.

Population: Post cerebrovascular Accident Patients.

Sample: Post cerebrovascular Accident Patients Admitted in Selected hospitals at Vijayapur.

Sampling technique: Purposive sampling technique.

Sample size: 60 Post cerebrovascular Accident Patients.

Criteria for selection of the sample

The criteria for sample selection are mainly depicted under two headings, which includes the inclusion and the exclusion criteria.

Inclusive criteria: The study includes: Post CVA patients, who are;

- ✓ Co-operative and willing to participate in the study.
- ✓ Available during the time of data collection.
- ✓ At age group of 18 to 55 years.

Exclusion criteria: The study excludes: Post CVA patients, who are;

- ✓ Not available at the time of data collection.
- ✓ Not co-operative and not willing to participate in the study.

Development of the tool

The tool used for research study was Self-administered knowledge questionnaire which was prepared to assess the knowledge and quality of life regarding cerebrovascular accident. The tool was formulated on the basis of the experience of the investigator, review of literature, extensive library search and consultation with experts.

Description of tool: The tool consists of the following sections:

Section A

Socio-demographic variables: The first part of the tool consists of 8 items for obtaining information of the selected socio-demographic factors such as Age, Gender, Religion, Place of residency, type of family, Qualification, monthly income in year in rupees, source of Information.

Section B

Self-administered structured knowledge questionnaire: Self-administered structured knowledge questionnaire was prepared in the form of multiple-choice questions. It consists of 30 items regarding Dental Hygiene. The total maximum score is 30.

Development of PTP (Planned Teaching Programme): Based on the objectives, the PTP was prepared. Content validity was taken from seven experts and necessary modifications were done. The PTP was pertaining to domains of learning i.e., knowledge.

The following steps were adopted to develop the PTP.

- ✓ Development of content blue print.
- ✓ Preparation of SIM.
- ✓ Establishment of content validity of SIM.

Self-instructional module: The script of Planned Teaching Programme was designed and developed by the investigator with the help of review of literature and suggestion of guide and experts. Planned Teaching Programme was based on following aspects: Introduction, Definition, Purposes, Indications and Contra indications, Articles needed, Procedure, Neglected Dental Hygiene.

Results and Discussion

Majority 18(30.0%) of the study participants were in the age group 36-40 followed by 16(26.7%) were in the age group 25-30 years and 13(21.7%) each were in the age group 31-35 years and ≥ 41 years. Majority 35(58.35) of the study respondents were males and remaining 25(41.7%) were females. Majority 33(55.0%) of the study participants were Hindu and remaining 27(45.0%) were Muslims. 65 Majority44(73.3%) of the study participants were from urban followed by 10(16.7%) were from rural area, and remaining 6(10.05) were from semiurban area. Majority 32(53.3%) of the study participants were living in nuclear family and remaining 28(46.7%) were living in joint family. Majority 30(50.0%) of the study samples were MA B.Ed graduates, 12(20.0%) were BA B.Ed graduates, 10(16.7%) were B.Sc. B.Edgraduates, and remaining 8(13.3%) were studied D.Ed. Majority 33(55.0%) of the study participants had family income ≥ 9001 Rs. and remaining 27(45.0%) had family income between 8001-9000Rs. Majority of, 24(40.0%) had heard about dental hygiene through Books and magazines, 20(33.3%) through health care professional, 7(11.7%) through family and friends, 5(8.3%) through mass media, and 4(6.7%) through mass health education program.

Table 1.Frequency and percentage distribution of pre-test knowledge score regarding occupational hazards of nurse among 3rd year B.Sc. Nursing students (N=60).

Pretest knowledge score	Score	Frequency	Percentage
Inadequate	$\leq 50\%$	45	75.0
Moderate	50-75%	10	16.7
Adequate	$\geq 75\%$	05	8.3
Total		60	100

The data in the above table revealed that, majority 45(75.0%) of the study respondents had inadequate pre-test knowledge regarding dental hygiene, 10(16.7%) had moderately adequate pre-test knowledge and very few 5(8.3%) had adequate pre-test knowledge where as in post-test, All the study respondents had adequate knowledge regarding dental hygiene.

Table 2. Frequency and percentage distribution of post-test knowledge score regarding occupational hazards of nurse among 3rd year B.Sc. Nursing students.

Post test knowledge score	Score	Frequency	Percentage
Inadequate	≤ 50%	00	00
Moderate	50-75%	00	00
Adequate	≥ 75%	60	100.0
Total		60	100.0

The data presented in the above table revealed that majority of the study participants 60(100%) were adequate knowledge score and none of them had moderate and inadequate knowledge regarding Dental Hygiene.

Table 3. Paired 't' test showing the significance of mean difference between pre-test and posttest knowledge score of subjects who received Self-instructional model (N = 60).

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	S.E Mean			
Pretests						
*Posttest	14.93	6.30	0.81	-18.1	59	<0.0001(S)

The data presented in the above table revealed that mean paired difference in knowledge score was 14.93 with t-value= -18.1 with p-value less than 0.0001 indicates that Planned Teaching Programme was effective in enhancing knowledge regarding Dental Hygiene among Primary school teachers.

Testing of hypotheses

H₁: There is significant difference between mean pre-test and post-test knowledge scores of teachers before and after receiving Planned Teaching Programme on Dental Hygiene.

Table 1 showed that enhancement in knowledge score on Dental Hygiene among teachers after Planned Teaching Programme was significant. So, research hypothesis H₁ was accepted. This indicates the gain in the knowledge score is statistically significant at P value 0.05 level. The result indicates that Planned Teaching Programme on dental hygiene is effective in improving the knowledge level of Teachers.

H₁: There is significant difference between pre-test and post-test knowledge score regarding dental hygiene among Teachers.

The association between knowledge score of Teachers and the selected socio-demographic variables

In order to compute the association chi-square was applied and the value was observed with 0.05% significance level. There was no any association with level of knowledge with selected sociodemographic variables. Thereby suggesting that, there is no association between the selected sociodemographic variables with pre-test knowledge score of Teachers. Hence reject research hypothesis and accept null hypothesis.

Association between the pre-test level of knowledge among Teachers with their selected demographic variables

This section deals with the findings of the association between pre-test knowledge score and selected socio-demographic characteristics. The number of respondents who were above and below the median are identified and grouped according to their age, gender, religion, type of family, family income, area of residency and source of information. To find the association between the pre-test knowledge score and demographic variables, the following null hypothesis is formulated:

H₂: There is no significant association between level of knowledge and selected Sociodemographical variables of the Teachers at 0.05 level of significance.

The findings of the study were supported through a study conducted by Coppola et al⁸. where the researcher found Excluding tobacco use (99.8%–100%), considerable variability were found among dental hygienists about important oral cancer risk factors such as alcohol consumption (30.0%–90.0%), human papilloma virus (23.0%–90.0%), oldness (37.7%–69.3%), diet (30.0%–42.2%) and betel quid chewing (5.0% and 98.0%). There was a good level of awareness among dental hygienists regarding leukoplakia (86.5%), instead less than half recognized erythroplakia as a precancerous lesion. Moderate knowledge was recorded about frequent sites of oral cancer development. Most of dental hygienists reported to perform intraoral screening (85.2%–100%). To regard attitude, a great variability was found about adequacy of undergraduate training (15.7%–75.0%) and most of dental hygienists expressed the need for continuing education (92.7%–99.0%).

With regards to course of study, findings were supported by Togoo et al⁹. who observed that the 58.4% of study sample brushed their teeth using tooth brush and paste, while 32.1% of the sample used Miswak (wooden toothbrush) as their teeth cleaning aid. 2.3% of the study population used dental floss and 7.2% used tooth picks for cleaning their teeth. Majority (64.3%) of the study population brushed their teeth once daily, while 16.6% of the study population practiced irregular tooth brushing. Only 32.6% of the study populations were supervised by their parents. 62.26% felt that high sugar diet causes dental decay where as 58.45% felt soft drinks affect dental health and 51.14% of study population felt that they can keep their gums healthy by brushing daily.

Conclusion

On the basis of the findings, the investigator concluded that the intervention using Planned Teaching Programme regarding Dental Hygiene was effective in enhancing the knowledge of Teachers. The improved knowledge regarding Dental Hygiene will enable them to make informed choices in decision making and adopting a healthy lifestyle, which will, in turn, help the Teachers to improve the education and Practice.

Implications of the Study

The findings of the study have implications for Research and administration. Based on the study results, the nurses can organize awareness campaign through different media to increase the awareness regarding Dental Hygiene. Nursing professionals can make significant contribution to health promotion among Teachers.

Recommendations

On the basis of the findings of the study, the following recommendations have been made for further study:

- 1) The study can be conducted on a larger sample.
- 2) A comparative study can be conducted to find out the effectiveness of Planned Teaching Programme between Other school teachers.
- 3) An evaluatory study can be conducted to find out the effectiveness of Planned Teaching Programme among two different groups of health professionals.

Declarations

Acknowledgement: Write acknowledgement section here you should say thanks to department, university, college etc...write in a single statement)

Conflict of interest: The authors declare that they have no competing interest.

Funding: This research received no external funding.

Informed Consent: The authors have obtained student consent and were asked to sign the consent form. All data collected were kept strictly confidential.

Ethical Approval: The proposal for the study was approved by the Institutional Review Board of the BLDEA's College of Nursing Tikota.

Author Contributions: All authors contributed to the conception and design of the work, drafted the manuscript, revised it critically for important intellectual content, gave final approval of the version to be published and agreed to be accountable for all aspects of the work.

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