



## The Efficacy of Planned Teaching Programme on Oral Hygiene among School Children



**Ms. K. Sasi,**  
*M.Sc (N), Nursing Tutor,  
Nursing Department,  
SPMVV College of Nursing,  
Tirupathi.*

**Abstract:** Health is vital for overall well being, growth, development, learning, nutrition, communication and self-esteem for all. Oral health is a basic expectation of all Indians. Poor oral health, untreated oral diseases and conditions have a significant impact on quality of life. This affects the most basic human needs, including the ability to eat and drink, swallow, maintain proper nutrition, smile and communicate. Oral hygiene is the practice of keeping the mouth clean and healthy by brushing and flossing to prevent tooth decay and gum disease. **Aim:** The study was conducted to assess the efficacy of planned teaching programme on oral hygiene and its association with the sociodemographic factors among school children. **Methods:** In this study quasi experimental design, one group pre test and post test research design was used for a study to assess the effectiveness of planned teaching programme on oral hygiene among school children in age group of 6 - 12 years in selected rural area at Guntakal, Ananthapuramu district. A total of 50 children were selected using a non-probability convenient sampling and planned questionnaire was presented to them. Responses from the children were evaluated in terms of frequencies, percentages, mean, standard deviation, paired 't' test, correlation coefficient and chi square tests were used. **Results:** The results of the study shows lack of oral hygiene awareness and limited knowledge of oral hygiene practice. **Conclusion:** The planned teaching programme and A.V aids used for imparting knowledge may be considered to improve the knowledge regarding children. The planned teaching programme was effective on knowledge of oral hygiene among children. The 21.4 percent of knowledge gain is the net benefit of this study, which indicates the effectiveness of the planned teaching programme. The post test score was higher than the pre test score. Hence it proved that the planned teaching programme on knowledge of oral hygiene among children was effective.

### Introduction:

**Need for the study:** Generally, dentists recommend that teeth be cleaned professionally at least twice per year. Professional cleaning includes tooth scaling, tooth polishing, and, if tartar has accumulated, debridement; this is usually followed by a fluoride treatment. However, the American Dental Hygienists' Association (ADHA) publicly stated in 1998 that there

is an absence of evidence that scaling and polishing provides therapeutic.

### According to WHO response Oral diseases and conditions

The most common oral diseases are dental cavities, periodontal (gum) disease, oral cancer, oral infectious diseases, trauma from injuries, and hereditary lesions.



**Dental cavities:** Worldwide, 60–90% of school children and nearly 100% of adults have dental cavities, often leading to pain and discomfort.

**Periodontal disease:** Severe periodontal (gum) disease, which may result in tooth loss, is found in 15–20% of middle-aged (35–44 years) adults.

**Tooth loss:** Dental cavities and periodontal disease are major causes of tooth loss. Complete loss of natural teeth is widespread and particularly affects older people. Globally, about 30% of people aged 65–74 have no natural teeth.

**Oral cancer:** The incidence of oral cancer ranges from one to 10 cases per 100 000 people in most countries. The prevalence of oral cancer is relatively higher in men, in older people, and among people of low education and low income. Tobacco and alcohol are major causal factors.

**Fungal, bacterial or viral infections in HIV:** Almost half (40–50%) of people who are HIV - positive have oral fungal, bacterial or viral infections. These often occur early in the course of HIV infection.

**Oro-dental trauma:** Across the world, 16–40% of children in the age range 6 to 12 years old are affected by dental trauma due to unsafe playgrounds, unsafe schools, road accidents, or violence.

**Noma:** Noma is a gangrenous lesion that affects young children living in extreme poverty primarily in Africa and Asia. Lesions are severe gingival disease followed by necrosis (premature death of cells in living tissue) of lips and chin. Many children affected by noma suffer from other infections such as measles and HIV. Without any treatment, about 90% of these children die.

**Cleft lip and palate:** Birth defects such as cleft lip and palate occur in about one per 500–700 of all births. This rate varies substantially across different ethnic groups and geographical areas.

**According to oral health care in India:** India's oral health care status demonstrates a great need for better education and more accessible services. The National Oral Health Programme notes that 95% of adults in India suffer from gum disease and 50% of our citizens don't use a toothbrush. The program also finds that 70% of children under the age of 15 have dental caries. According to Utilization of dental care: An Indian outlook, (2013) report published in the dentist-to-population ratio is 1:10,000 in urban areas but drops drastically to 1:150,000 in rural India. The report further notes that even in areas where the infrastructure for dental care exists, the utilisation of services can still remain low due to demographic, behavioural, socio-economic, cultural and epidemiological factors. Among these factors are fear of dental treatment and attitudes that assign lower importance to oral health. These factors indicate the need for greater education on the advancements that have made pain-managed dentistry more common and widely available. The general complacency toward oral health also highlights the need for better education on the link between oral health and general health.

**Statement of the Problem:** *A Study to assess the effectiveness of planned teaching programme on oral hygiene among school children in age group of 6 - 12 Years in selected rural area at Guntakal, Ananthapuramu District.*

**Objectives:**

- 1) To assess the knowledge level of school children in age group of 6–12 years on oral hygiene in selected rural area at Guntakal, Ananthapuramu district by pretest score.
- 2) To determine the relationship between the mean pre test and post test score on oral hygiene among school children in age group of 6–12 years.
- 3) To find out the association between the mean pre test and post test knowledge score on oral hygiene



among school children in age group of 6-12 years with selected demographic variables.

**Operational Definitions:**

**Study:** In the study it refers to the activity or process of learning about something by reading, memorizing facts, attending school.

**Assess:** In the study it refers to the act of making a judgment about something or the act of assessing something

**Effectiveness:** In this study it refers the degree to which objectiveness are aimed and the extent to which targeted and on oral hygiene among school children in age group of 6-12 years by administering planned teaching programme.

**Planned Teaching Programme:** In this study planned teaching programme refers to information provided systematically and written in simple language of teaching programme on oral hygiene among school children in age group of 6-12 years.

**Knowledge:** In this study, it refers to gaining information on oral hygiene among school children in age group of 6-12 years. It consists of introduction definition, incidence, etiology, risk factors, types, pathophysiology, signs and symptoms, diagnostic procedures, complications management and preventive measures of oral health problem.

**Oral Hygiene:** Oral hygiene is the practice of keeping the mouth and teeth clean to prevent dental problems, most commonly, dental cavities, gingivitis, periodontal (gum) diseases and bad breath. There are also oral pathologic conditions in which good oral hygiene is required for healing and regeneration of the oral tissues.

**School Children:** In this study it refers to the children who are having age group of 6-12 year school children residing in selected rural area at Ambethkar Nagar, Guntakal, Ananthapuramu district.

**Selected Rural Area:** In this study it refers to the children who are in age group of 6-12 years school children residing in selected rural area at Ambethkar Nagar, Guntakal, Ananthapuramu district.

**HYPOTHESIS**

**H<sub>1</sub>:** There is a significance difference between the mean pre and post test knowledge score on oral hygiene among school children in age group of 6-12 years.

**H<sub>2</sub>:** There is a significant association between the mean pre and post test knowledge score on oral hygiene among school children in age group of 6-12 years with selected demographic variables.

**Assumptions:** The children may have inadequate knowledge on oral hygiene among school children in age group of 6-12 years

- Regarding prevention of oral health problem.
- The knowledge may differ from child to child.
- The post test knowledge level is higher than the pre test knowledge on oral hygiene among school children in age group of 6-12 years. After administering planned teaching programme.
- Planned teaching programm will enhance the knowledge of children on oral hygiene among school children.

**Materials and methods**

**Research approach:** Quantitative research approach was adopted for the present study.

**Research design:** A Quasi experimental one group pre test and post test research design

**Setting of the study:** The study was conducted at Ambedkar nagar, Gunthakal

**Population:** The target population chosen for this study was school children (6-12yr) who were falling under inclusion criteria

**Sample size and sampling Technique:** 50 school children were selected by “non probability convenient sampling” technique.



**Inclusion Criteria:** Inclusion criteria are a set of conditions that must be met in order to participate in the study.

- The children residing in in selected rural area at Ambethkar Nagar Guntakal, Ananthapuramu district.
- The children who were having 6-12 years age group.
- The study participants, children who were able to understand read and write Telugu and English.
- The children who are available at the time of data collection.
- Sample size was 50 children.
- The children who were willing to participate in the study

**Exclusion Criteria:**

Exclusion criteria are the standards used to determine whether a person may or may not allowed to participating in the study.

- The children 6-12 years age group children who were no cooperative.
- The children 6-12 years age group children with seriously complicated illness.
- The children who had undergone the same study previously.
- The study duration was not more than 4-6 weeks

**Description of the research tool:**

The planned self administrated questionnaire was used to assess the knowledge regarding oral hygiene among children. This tool consists of two sections.

Part - A: Demographic Data

Part - B: Planned interview questionnaire

**Pilot Study:**

Pilot study was conducted on 5 subjects and reliability The tool was found reliable with a score reliability score was  $r=0.8145$ , which was statistically significant. Karl Pearson's co-efficient correlation was used to calculate reliability of split half test.

**Data collection:** self reported questionnaire was administered.

**Results:**

**Table-1: Frequency and percentage distribution of school children according to their selected demographic variables. (N=50)**

Demographic Variables	Fre	Per
<b>Age in years</b>		
a) 6-7	24	48
b) 8-9	18	36
c) 10-12	8	16
<b>Gender</b>		
a) Male child	13	26
b) Female child	37	74
<b>Religion</b>		
a) Hindu	18	36
b) Muslim	4	8
c) Christian	28	56
<b>Child education</b>		
a) 1 <sup>st</sup> std -3 <sup>rd</sup> std	28	56
b) 4 <sup>th</sup> std - 6 <sup>th</sup> std	2	4
c) 7 <sup>th</sup> std	20	40
<b>Parents education</b>		
a) Primary education	22	44
b) Secondary education	12	24
c) Degree and above	16	32
<b>Dietary habits</b>		
a) Vegetarian	22	44
b) Non vegetarian	19	38
c) Mixed both	9	18
<b>Source of information</b>		
a) Magazines	19	38
b) Radio	0	0
c) Television	22	44
d) Friends and elders	9	18

Table-2: The mean knowledge and comparison of pre test and post test mean knowledge scores by using





paired 't' test and testing the hypothesis of the present study.

Knowledge scores	Pre test	Post test
Mean	19.7	41.1
Standard Deviation	5.74	6.38
Standard error	1.64	1.40

Paired 't' test 30.94\*\*

Correlation Coefficient ( r ) 0.679\*

49df Table t-value 3.46 P<0.001

49df Table r- value 0.273 P<0.05

The table no - 2 that the pre test mean was 19.7 with 5.74 standard deviation, 1.64 standard error and that of post test was 41.1 with 6.38 standard deviation and 1.40 standard error. The calculated 't' value was 30.941, which is higher than the table 't' value 3.46 at 49df with 0.001 level of significance. It shows that there is significant difference (p<0.001) in pre test and post test knowledge scores.

Regarding correlation between pre test and post test knowledge scores, the calculated r value (0.679) was significant at p<0.05 level of significance at 49df.

Hence it was concluded that there is positive moderate correlation between pre test and post test knowledge scores of children on oral hygiene.

Hence it concluded after planned teaching programme on oral hygiene the knowledge scores of the children have been increased. The positive result gives a clear indication of effectiveness of planned teaching programme on oral hygiene. Hence research hypothesis H<sub>1</sub> was accepted.

Association between pre test and post test knowledge scores of children on oral hygiene with age in year of children.

**Table-3: Pre and Post test knowledge on oral hygiene among children.**

Age in year	Level of Knowledge													
	Pre test							Post test						
	Inadequate		Moderate adequate		Adequate		Total	Inadequate		Moderate adequate		Adequate		Total
	F	%	F	%	F	%		F	%	F	%	F	%	
6-7	22	44%	2	4%	-	-	24	-	-	8	16%	16	32%	24
8-9	15	30%	3	6%	-	-	8	-	-	2	4%	16	32%	18
10-12	3	6%	5	10%	-	-	18	--	--	-	-	8	16%	8
<b>Total</b>	<b>41</b>	<b>80%</b>	<b>9</b>	<b>20%</b>	<b>-</b>	<b>-</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>20%</b>	<b>40</b>	<b>80%</b>	<b>50</b>

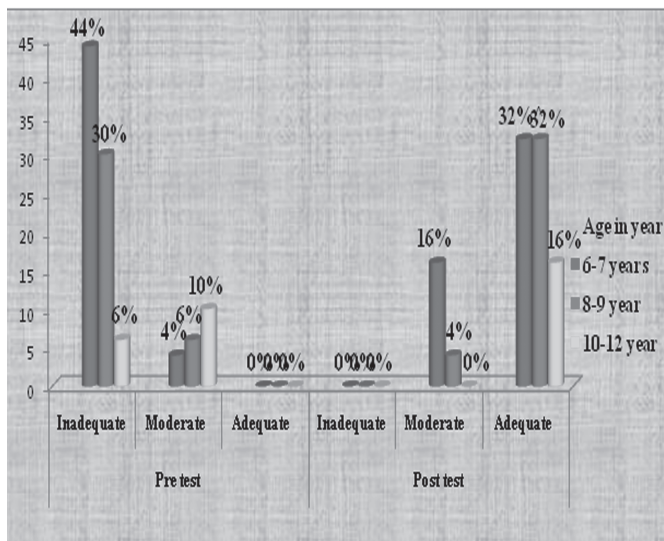
The association between pre test and post test knowledge scores on oral hygiene among children with age in year. For pre test the table value of 2 at 0.05 level of significance with 2df is 5.99, as the calculated value of  $\chi^2$  (12.83) was more than the table value that shows there was significant association between the

level of knowledge on oral hygiene among children with age. Hence research hypothesis H<sub>2</sub> was accepted.

The post test table value of  $\chi^2$  at 0.05 level of significance with 2df is 5.99, as the calculated value of 2 (9.79) was more than the table value that shows there was significant association between the level of



knowledge on oral hygiene among children with age. Hence research hypothesis H<sub>2</sub> was accepted.



**Discussion:**

The research study was done to “An evaluative study was undertaken a study to assess the effectiveness of planned teaching programme on oral hygiene among school children in age group of 6 - 12 years. In present study the findings were obtained by using descriptive and inferential statistical analysis of collected data.

The present study first objective was Comparison between level of knowledge regarding oral hygiene among children with as the pre test and post test knowledge levels.

The overall knowledge level among 50 children with inadequate knowledge were 41 (82%) and nine (18%) were moderate adequate knowledge level and none of them in adequate knowledge score of children according to knowledge level of children in pre test score on oral hygiene among children.

The overall knowledge level among 50 children with no one in inadequate knowledge and 10 (20%) were moderate adequate knowledge level and 40 (80%) were in adequate knowledge score of children according to knowledge level of children in post test score on oral hygiene among children.

The present study second objective was Association between the levels of knowledge in pre test and post test with selected demographic variables.

There is significant association between pre test and post test knowledge of children with their age, religion, child education and dietary habits where obtained chi square values were significant at 0.05 level of significance.

**CONCLUSION:** The planned teaching programme and A.V aids used for imparting oral hygiene knowledge was effective. The 21.4 percent of knowledge gain is the net benefit of this study, which indicates the effectiveness of the planned teaching programme. The post test score was higher than the pre test score. Hence it proved that the planned teaching programme on knowledge of oral hygiene among children was effective.

**REFERENCES:**

1. Allender, J. A., Rector, C., & Warner, K. D. (2010). Community health nursing: Promoting and protecting the public’s health. Philadelphia: Wolters Kluwer/ Lippincott Williams & Wilkins.S
2. American Educational Research Association, American Psychological Association, & the National Council on Measurement in Education. (1999). Standards for educational and psychological testing. Washington, DC: American Educational Research Association.
3. Ball, J., Bindler, R. C., & Cowen, K. J. (2010). Child health nursing: Partnering with children & families (2nd ed.). New York: Pearson.
4. Ball, J., & Bindler, R. (2008). Pediatric nursing: Caring for children (4th ed.). Upper Saddle River, NJ: Prentice Hall.
5. Bloom, B. (1956). Taxonomy of educational objectives handbook I: The cognitive domain. New York: David McKay Company Inc.



6. Brown, F. (1983). Principles of educational and psychological testing (4th ed.). Philadelphia: W. B. Saunders.
7. Bryant, R. A., & Nix, D. P. (2012). Acute & chronic wounds: Nursing management (4th ed.). St. Louis, MO: Mosby.
8. Canadian Nurses Association. (2008). Code of ethics for registered nurses. Ottawa: Author.
9. Community Health Nurses of Canada. (2011). Professional practice model & standards of practice. Toronto: Author.
10. Day, R. A., Paul, P., Williams, B., Smeltzer, S. C., & Bare, B. (2007). Brunner & Suddarth's textbook of medical-surgical nursing (1st Canadian ed.). Philadelphia: Lippincott Williams & Wilkins.
11. Evans, R. J., & Orshan, S. A. (2010). Canadian maternity, newborn and women's health nursing: Comprehensive care across the life span. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.
12. Harkness, G. A., & DeMarco, R. (2012). Community and public health nursing: evidence for practice. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
13. Health Canada. (2010). Bed bugs: Pest management. Ottawa: Author.
14. Health Canada. (2011). Proper use and disposal of medication. Retrieved from: Certification.
15. Heymann, D. (2008). Control of communicable diseases (19th ed.). Washington, DC: American Public Health Association.
16. Hockenberry, M., & Wilson, D. (2011). Wong's nursing care of infants and children. St. Louis, MO: Mosby.
17. Keatings, M. K., & Smith, O. (2010). Ethical & legal issues in Canadian nursing (3rd ed.) Toronto: Elsevier Canada.
18. Lehne, R. A. (2010). Pharmacology for nursing care. St. Louis, MO: Saunders/Elsevier.
19. Leifer, G. (2008). Maternity nursing: An introductory text. St. Louis, MO: Saunders/Elsevier.
20. Lewis, S. L., Heitkemper, M., Dirksen, S., O'Brien, P., & Bucher, L. (2010). Medical-surgical nursing in Canada: Assessment and management of clinical problems. Toronto: Mosby Elsevier.
21. National Advisory Committee on Immunization. (2006). Canadian immunization guide (7th ed.). Ottawa: Public Health Agency of Canada.
22. Nies, M. A., & McEwen, M. (2011). Community health nursing: Promoting the health of populations (5th ed.). Philadelphia: W. B. Saunders.
23. Potter, P. A., & Perry, A. (2010). Canadian fundamentals of nursing (Revised 4th ed.). J. C. Ross-Kerr & M. J. Wood (Eds.). St. Louis, MO: Mosby.
24. Public Health Agency of Canada. (2010). Safe sleep for your baby. Ottawa: Author.
25. Registered Nurses Association of Ontario. (2005). Woman abuse: Screening, identification and initial response. Toronto: Author.
26. Registered Nurses Association of Ontario. (2007a). Integrating smoking cessation into daily nursing practice. Toronto: Author.
27. Rice, R. (2006). Home care nursing practice: Concepts and application (4th ed.). St. Louis, MO: Mosby.
28. Riordan, J. (2005). Breastfeeding and human lactation (3rd ed.). Sudbury, MA: Jones and Bartlett Publishers.
29. Stamler, L. L., & Yiu, L. (2012). Community health nursing: A Canadian perspective (3rd ed.). Toronto: Pearson.
30. Stanhope, M., Lancaster, J., Jessup-Falcioni, H., & Viverais-Dresler, G. A. (2011). Community health nursing in Canada (2nd ed.). Toronto, ON: Elsevier.