

A Study to Assess the Effectiveness of Planned Health Teaching Programme on Oral Health Among School Children in the Age Group 6–12 Years in a Selected Rural School at Tarn Taran District

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Abstract

Oral health is an integral part of general health. Oral health has also been found to deeply influence the standard of life. It is necessary to keep up the oral hygiene to stop several problems like tooth decay, coated tongue, bad odor, tooth ache, dental caries and periodontal diseases, etc. Tooth decay and periodontal diseases are highly frequent diseases in many populations. They are extremely irreversible once they occur. Although primary techniques exist for these issues, however, they do not give total protection. Parent's level of knowledge, negligence, and lack of resources are the major contributors to the oral health problems. As children are totally unaware of these problems, therefore it is the responsibility of the parents to take care of their children. A study to assess the effectiveness of planned teaching programme on oral health among school children in the age group 6–12 years in a selected rural school at, Tarn Taran, District. Aim of study was to assess the impact of teaching on knowledge regarding oral hygiene. A pre-experimental one group pre-and post-test research design was used. The sample size was 60 selected from Government Elementary school, Tarn Taran. The tool used for the data collection was self-structured knowledge questionnaire. The simple random sampling technique was used to select the subjects. It can be seen from the result that the overall pre-test mean knowledge score 14.2 with SD 4.99 as compared to overall post-test mean knowledge score 22.9 with SD 3.96. The data subjected for statistical paired t-test showed a highly significant difference ($p < 0.05$) existing between pre- and post-test over all mean knowledge score ($t = 12.20^*$).

Keywords: knowledge, oral hygiene, planned teaching programme, school children

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INTRODUCTION

Healthy children are successful learners. The segment of life span extends from age 6 to 12 years. These middle years refer to a school age. Physiologically the middle year begin with the shedding of the first deciduous tooth and at puberty with the acquisition of the final permanent teeth. The first permanent teeth erupt at about 6 years of age which erupt posterior to the deciduous molars. Humans have two sets of teeth; deciduous and permanent.^[1-4]

The deciduous teeth also called primary teeth or milk teeth begin to erupt at about 6 months of age and one pair of teeth appears at about each month thereafter until all 20 are present. Because of permanent teeth erupt during school age year. Dental hygiene and regular attention to dental caries are important part of health suspension during this period inadequate dental care result in the most common dental problems that is dental

caries, malocclusion, periodontal diseases.^[2]

Dental caries is the obstruction of teeth due to the activities of the bacteria. The main criteria required for caries formation are enamel, bacteria, and fermentable carbohydrates. Dental caries can occur on any surface of a tooth that is exposed to the oral cavity, but not the structures that are retained within the bone.^[5-9]

Oral hygiene can be maintained by proper brushing and flossing daily. The purpose of oral hygiene is to minimize any etiologic agents of disease in the mouth. A toothbrush is used to remove plaque on reachable surfaces but not in between teeth. Other adjunct oral hygiene aids include flossing, brushing with fluoride toothpaste and mouthwash may help in remineralization.^[10,11]

All children prefer to eat sugar-containing food. Sugar rich food, especially the frequent intake of sweets like cakes, cookies, candy, chocolate, etc., is associated to both dental caries and periodontal diseases. In developing countries, cases of caries are escalated where there has been greater exposure to dietary sugars. Sugar has a unique relationship to oral health.^[12]

In India, dental caries is a public health problem with prevalence as high as 60–90% in school children. Dietary modifications include minimizing snacking is recommended since snacking create a continuous supply of nutrition for and creating bacteria in the mouth.

For children apart from this about 30% of children suffer from malaligned teeth and jaws. In this condition, 30% school going children suffer from some degree of malocclusion. The prevalence of dental caries in 5–12-year old school children in India was 55.5% in 1940; it rose to 68% in

1960 and climbed to 89% in subsequent years.^[7]

The oral health of children is crucial to their overall well-being. Education in schools prepares them to undertake responsibility for their own health and to get involved in personal care that will maintain and improve health. The utilization of classroom time to impart personal self-care skills, deliver fluoride products, and using the school setting to screen and refer children for needed dental services can be beneficial and will leave an impact on children's health and welfare. Dental health issues can deeply affect children, impairing their performance as students, learning self-esteem and decelerating personal development. Additionally, failure to avoid dental diseases has a massive effect on school attendance.^[8]

Health habits if thought early would last throughout life. Oral health helps to retain the health state of all the structures like lips, teeth, gums, tongue, and palate. Good oral hygiene stresses upon the cleanliness and moisturizing of mouth structures. It provides a sense of well-being as well as stimulates appetite. Brushing, flossing, and rinsing mouth can help in maintaining a good oral hygiene.

NEED FOR STUDY

Oral health is an important element of general health. Today the child health is viewed as a holistic and positive element for the whole development and health is important for a better quality of life for children. A healthful school environment therefore is critical for the best emotional, social, and personal health of the pupils. The fundamental aim of structured teaching programme is to bring a major modification in the knowledge and health behavior of children and family.

Now a days children are very fond of sweets, chocolates, junk foods, spicy food,

etc. in homes as well as in school instead of taking healthy meal. Regularly they are using these types of food which affect their teeth. Due to early age they do not care about their teeth and mouth and just keep using these things so their mouths get very smelly or stinky.

Dental health is an important aspect of the personal health of individual teeth is essential not only for mastication of food but also for good appearance and clear speech. Oral hygiene is important in view of the healthy mouth and the beauty of the face. As healthy mouth leads to healthy smile so prevention of oral problems is needed for the healthy smile and facial beauty.

When permanent teeth erupt, good dental health and regular attention of dental caries are vital parts of health supervision. During this period correct brushing techniques should be taught and reinforced. As per WHO expert committee on oral health and welfare of society, the predominant demand is for education and assistance in maintaining oral health and primary disease. School health is an important branch of community health.^[3]

OBJECTIVES

- (i) To assess the pre-test knowledge on oral hygiene among school children.
- (ii) To implement the planned health teaching programme on oral hygiene.
- (iii) To assess the post-test knowledge on oral hygiene among school children.
- (iv) To assess the effectiveness of planned health teaching programme on oral hygiene among school children.
- (v) To determine the association on oral hygiene among school children between knowledge and selected demographic variables.
- (vi) To prepare a manual on oral hygiene.

METHODOLOGY

The research design selected for this study was pre experimental one group pre- and post-test design. Independent variable is structured teaching programme on oral hygiene and dependent variable is knowledge of the preschool children on oral hygiene. The study was conducted Government elementary school, Tarn Taran, Punjab. Samples comprised of 60 pre-school children who were studying at a Government school, Tarn Taran. Present study simple random sampling technique was used. The tool consists of a structured knowledge questionnaire. It is divided into two parts.

- (i) Part I: Includes 5 items related to the demographic variables of the respondents about age, gender, education, religion, and type of family.
- (ii) Part II: Consists of 32 items of objective type related to knowledge of oral hygiene. All the items were scored. Each correct response was given a score of one and wrong answers a score of zero.

Table 1 depicts the classification of subjects according to age, gender, education, type of family, and religion. The results indicate that higher percentage of subjects (45%) belong to the age group 10–12 years. About 35% were belonging to 8–10 years age group followed by 11.66% and 8.33% of them falling under 12 years and above and 6–8 years, respectively. Findings also shows that female had more knowledge than male that is 55.67% percentage of female and 43.33% of male. It can be seen from the findings that vast majority of the respondents (45%) was studying in 6th–7th, while 35% were studying in 4th–5th class. Further, knowledge level falling from 11.66 to 8.33% of the respondents was studying in 2nd–3rd and 8th class, respectively.

Table 1. Section A: Demographic Characteristics of the Children Frequency and Percentage Distribution of Demographic variables of Students.

N=60

Sl. No.	Demographic Characteristics	Frequency	Percentage (%)
1	Age		
	6–8 years	5	8.33
	8–10 years	21	35
	10–12 years	27	45
	12 years and more	7	11.66
2	Gender		
	Male	26	43.33
	Female	34	55.67
3	Education		
	2nd–3rd	05	8.33
	4th–5th	21	35
	6th–7th	27	45
	8th class	07	11.66
4.	Type of Family		
	Nuclear	40	66.66
	Joint	20	33.33
5	Religion		
	Hindu	5	8.33
	Muslim	1	1.66
	Christian	4	6.66
	Sikh	50	83.33

The result indicates that 66.66% of the respondents belongs to nuclear family as compared to 33.33% of the respondents emerged from joint family background. Religion also effect the knowledge level in

findings Sikh religion was shown maximum level of knowledge that is 83.33% in others religion Hindu, Muslim, and Christian percentage level falling from 8.33, 1.66, and 6.66%, respectively.

Table 2. Objective 1: To Assess the Pre-test Knowledge on Oral Hygiene Among School Children.

N=60

Sl. No.	Level of Knowledge	Frequency	Percentage (%)
1	Poor	15	25
2	Average	42	70
3	Good	3	5

Table 2 shows that 70% of children had average knowledge regarding oral hygiene, 25% had poor knowledge

regarding, and 5% had good knowledge regarding oral hygiene.

Table 3. Objective 3: To Assess the Post-test Knowledge on Oral Hygiene Among School Children

Sl. No.	Level of Knowledge	Frequency	Percentage (%)
1	Poor	5	8.33
2	Average	14	21.66
3	Good	41	70

Table 3 shows that 8.33% of children had poor knowledge, 21.66% had average, and

70% had good knowledge after post-test regarding oral hygiene.

Table 4. Objective 4: To Assess the Effectiveness of Planned Teaching Programme on Oral Hygiene Among School Children

Aspects	Maximum Score	Mean Score	SD	Paired <i>t</i> -test
Pre-test	32	14.2	4.99	12.20*
Post-test	32	22.9	3.96	

* Significant at 0.05 Level.

Overall mean knowledge score of pre- and post-test on oral hygiene established in Table 4. It can be seen from the findings that the overall pre-test mean knowledge score found to be 14.2 with SD 4.99 as compared to overall post-test mean

knowledge score noticed as 22.9 with SD 3.96. The data subjected for statistical paired *t*-test showed significant ($p < 0.05$) existing between pre- and post-test over all mean knowledge score ($t = 12.20^*$).

Table 5. Objective 5: To Determine the Association on Oral Hygiene Among School Children Between Knowledge and Selected Demographic Variables

Sl.No.	Demographic Variables	Level of Knowledge						Calculated Value at <i>p</i> 0.05 Level	df	Table Value
		Poor		Average		Good				
		F	%	F	%	F	%			
1	Age							34.74 S	6	12.56
	6–8 years	3	5	1	1.66	1	1.66			
	8–10 years	2	3.33	4	6.66	15	25			
	10–12 years	0	0	7	11.6	20	33.3			
	12 years and above	0	0	2	3.33	5	8.33			
2	Gender							0.501 NS	2	5.99
	Male	2	3.33	5	8.33	19	31.66			
	Female	3	5	9	15	22	36.6			
3	Education							34.74 S	6	12.56
	2nd–3rd	3	5	1	1.66	1	1.66			
	4th–5th	2	3.33	4	6.66	15	25			
	6th–7th	0	0	7	11.6	20	33.3			
	8th class	0	0	2	3.33	5	8.33			
4	Type of family							1.88 NS	2	5.99
	Nuclear	4	6.66	11	18.3	25	41.6			
	Joint	1	1.66	3	5	16	26.6			
5	Religion							16.95 S	6	12.59
	Hindu	2	3.33	2	3.33	1	1.66			
	Muslim	0	0	0	0	1	1.66			
	Christian	0	0	2	3.33	2	3.33			
	Sikh	3	5	10	16.6	37	61.6			

Table 5 presents the association of level of knowledge of the total sample after post-test with selected demographic variables.

The impact of age, education, and religion on knowledge of children is significant as the calculated value is more than tabulated value at 0.05 level of significance. Chi-square test result depicts the significant

impact of teaching on the post-test knowledge score of oral hygiene among school children.

The results on impact of type of family and gender on mean knowledge score on oral hygiene found to be non-significant ($p > 0.05$) as indicated by Chi-test results.

IMPLICATIONS

The implications of findings have been discussed in relation to nursing service, nursing administration nursing education, and nursing research.

(a) Nursing service

- (i) The research findings can be used to inform the decisions, actions, and interrelated with school children.
- (ii) Research findings will also help to eliminate nursing action that do not achieve desired outcome.
- (iii) The research findings can be used for discussing the implications and relevance of research findings with school children.
- (iv) Nurses should assess the knowledge of school children regarding oral hygiene.

(v) *Nursing administration*

- (i) Nurse as an administrator plays an important role in educations the professionals such as mass health education measures in the hospital.
- (ii) The nurse administrator should formulate policies, protocols, system of care in collaboration with the multidisciplinary team.
- (iii) Nurse administrator should be encouraged to attend the health teaching programme related to oral hygiene.

(c) Nursing education

This study can be useful in nursing education through following ways.

- (i) The division used in the question tool can be useful in academic curriculum for the sake of tests, exams practical and viva-voice.
- (ii) The statement can be further intensified to educate the student nurses regarding oral hygiene.

(iii) The research work can be used in community health nursing to teach nursing students regarding oral hygiene.

(d) Nursing research

- (i) The research findings can be used by the new students in their research work.
- (ii) The research work will help to attend research presentation at professional conference.

RECOMMENDATIONS

- (i) On the basis of the study that had been conducted certain suggestions are given for further studies.
- (ii) A similar study can be undertaken on large sample for better generalization.
- (iii) A similar study can be under taken by adopting an experimental design to improve knowledge of school children regarding oral hygiene.
- (iv) A similar study can be under taken by adopting other interventional strategy to improve awareness, knowledge regarding oral hygiene among school children.

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