

# A Study to Assess the Effectiveness of Planned Health Teaching Programme on School Children Regarding Oral Hygiene in Middle Government School, Medical Campus, District Rohtak (Haryana), India

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## Abstract

**Background:** Oral health is one of the important but most neglected aspect of general wellbeing of a children. Poor oral hygiene negatively impact the growth and self confidence of a children. There is paucity of data regarding effectiveness of planned health teaching programme using posters, audiovisual aids etc.

**Materials and methods:** This study was conceptualized to assess the knowledge and practices of oral health in govt. middle school children and to assess the impact of planned health teaching programme on oral hygiene. A pre-experimental research approach, one group pre test-post test design was adopted for the study. 44 school children of 3<sup>rd</sup> to 5<sup>th</sup> class in a govt school of Rohtak, Haryana were included in this study. Data was collected through structured interview questionnaire of 3<sup>rd</sup> to 5<sup>th</sup> class children.

**Results:** Mean post knowledge score (11.4) was significantly higher than mean pre test knowledge scores (8.6) with mean difference of 2.8 and 't' value of 5.7, ( $p < 0.05$ ).

**Conclusion:** There is a significant impact of planned health education using power point presentations, placards, posters and live demonstrations on oral hygiene.

**Keywords:** Oral hygiene • Audiovisual aids • Placards • Power point presentations

## Introduction

According to the World Health Organisation (WHO), Oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss and other diseases and disorders that affect the oral cavity. Despite one of the fastest growing economy in world India spent minimum percentage of its GDP on health, oral health gets least importance. Poor oral health is prevalent all over the world and literature shows that problem of poor oral hygiene exist in India also. According to the National oral health survey report 2004 caries prevalence in India was 51.9%, 53.8% and 63.1% at ages 5, 12 and 15 years, respectively, in different parts of India [1].

Diet has a significant role in prevention of dental caries, periodontal disease etc. In this era of electronic revolution food habits and lifestyle behaviours of children are mostly influenced by tv commercials and internet ads. Food commercials targeting children are one of the most important factor responsible for high intake of sugar reach food in this vulnerable population. High intake of sugar rich foods along with poor oral hygiene leads to the development of dental caries, gingivitis etc. Also research in the past few years has revealed the causal link between oral diseases and systemic diseases [2,3].

Information regarding oral hygiene can be given at multiple platforms like government hospitals, private clinics and schools etc. A child spends a significant duration of the day at school. School children are more receptive to their teachers and

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behavioural changes once imparted at this age will last for lifetime. School health teaching programme are ideal for them to bring life style changes for improved oral hygiene.

Assuring cleanliness and good health through practises is referred to as hygiene. Healthy gums, strong teeth and surrounding tissues all go hand in hand with good oral hygiene. Oral health is described by the World Health Organisation as "a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects like cleft lip and palate, periodontal disease, tooth decay and tooth loss and other diseases and disorders that affect the oral cavity." Speech, communication and food satisfaction are all facilitated by having healthy teeth and gums, which can also boost one's sense of worth and decency [4-6].

Because both problems are extremely prevalent globally, the WHO has identified dental caries and periodontal disease as the two most significant global dental health diseases. The majority of people 60 to 90% have dental caries.

## Materials and Methods

### Period of study

The study was done over a period of 1 week in April 2016.

### Place of study

Study was conducted in the Government middle school, 14J medical campus, PGIMS, Rohtak Haryana.

Day 1	Day 2-Day 5	Day 6	Day 7
Permission from principal of school	Pre test followed by planned teaching	Post test	Data analysis

**Table 1.** One group pre-test post-test experimental design.

### Research instrument

Baseline data was collected for socio demographic variables. To assess the knowledge of school children regarding oral hygiene, a questionnaire of 20 questions was made and its reliability was confirmed by using split half technique along with Karl Pearson's coefficient of correlation.

### Planned Health Teaching Programme (PHTP)

Planned health teaching about dental hygiene was given using power point presentations, posters etc. In addition, short videos regarding oral hygiene were used to increase the effectiveness of teaching [8].

### Planned health teaching

PHTP was based on the following important messages:

- Dental carries, bad breath, pain in teeth, bleeding gums etc are problems of poor oral hygiene
- Cleaning of teeth, cleaning of tongue and massaging of gums are elements of good oral hygiene.

### Study population

Government middle school children of class 3-5 in the age group 8-16 years.

### Inclusion criteria for sampling

- Govt. school children of class 3<sup>rd</sup>-5<sup>th</sup>.
- Children who are present on the day of teaching program.

### Exclusion criteria for sampling

- Children those who are absent on the day of teaching program.
- Those children whose parents refused to give consent for this study.

### Sample size

A total of 44 students were included in this study as per the inclusion criteria. Written permission was taken from the principal of school before conducting this study [7].

### Study design

One group pre-test post-test experimental design (Table 1).

- Twice daily brushing (once in morning and once before bedtime) of teeth with small, soft bristled brush is ideal for children.
- Only small amount of toothpaste should be used for brushing the teeth.
- Dairy foods like cheese, vegetables, fruits like apples are good for teeth.
- Smoking, tobacco, candies are associated with poor oral hygiene.
- Replace tooth brush every 2 months and get regular checkup with dentist every 6 months is recommended [9].

### Data analysis

The data were compiled, coded and tabulated. Paired t test with P value was calculated using SPSS Statistics ver 22.0.

## Results

Age wise distribution of study sample revealed that 75% of children were in age group 8-10 years, 20.45% of children were in age group of 11-13 years and 4.5% were in age group 14-16 years. With regards to the gender of the children, the majority of them 59.09% were females and 40.09% were males. In terms of class 22.72% children were from 3rd class, 45.45% were from 4th class and 31.8% were from 5th class [10] (Table 2).

Demographic variables	Category	Frequency	Percentage
Age	8-10 yrs	33	75%
	11-13 yrs	9	20.40%
	14-16 yrs	2	4.50%
Gender	Male	18	40.90%
	Female	26	59.09%
Class	3 <sup>rd</sup>	10	22.70%
	4 <sup>th</sup>	20	45.45%
	5 <sup>th</sup>	14	31.80%

**Table 2.** Baseline demographic data.

**Analysis of pre-test and post-test knowledge score**

knowledge about oral hygiene [11] (Table 3).

It was observed that in pre-test school children had 47.7% poor knowledge, 45.5% had average knowledge and 6.8% had good knowledge about oral hygiene [11] (Table 3).

**Pre test knowledge (n=44)**

Grading	Score	Frequency	Percentage
Poor/Inadequate	0-7	21	47.70%
Average/Moderate	8-14	20	45.50%
Good/Adequate	15-20	3	6.80%

**Table 3.** Pre-test knowledge score.

After planned health teaching of 3<sup>rd</sup> to 5<sup>th</sup> standard school children it was found that 11.4% had poor knowledge, 63.6%

had average knowledge and 25% had good knowledge of oral hygiene (table 4).

**Post test knowledge (n=44)**

Grading	Score	Frequency	percentage
Poor/Inadequate	0-7	5	11.40%
Average/Moderate	8-14	28	63.60%
Good/Adequate	15-20	11	25%

**Table 4.** Post-test knowledge score.

The data was analysed using descriptive and inferential statistics. Mean post knowledge score (11.4) was higher than mean pre test knowledge scores (8.6) with 't' value (t=5.7,

p<0.05). Significant difference in the pre test and post test was found. The post test knowledge score is higher than pre test knowledge score with mean difference of 2.8 (Table 5).

Group	Mean	SD	Mean difference	t value	Significance (p value)
Pre-test (n=44)	8.6	3.1	2.8	5.7	<0.05
Post-test (n=44)	11.4	3.3			

**Table 5.** Evaluating impact of planned health teaching programme.

## Discussion

The findings of the study implied that the planned health teaching programme plays a significant role in improving the knowledge and attitude of school children regarding oral hygiene. The results of our study were substantiated by findings of studies regarding oral health and hygiene in school children in different part of our country, it also implied that school provides the ideal platform to promote oral health. School education can play an important role in health services; nurses have a pivotal role in channelizing health reforms to the community using children as a potent messengers. Young children need to be enriched with the treasure of knowledge especially with health related issues. Schools can be an important setting for health education programmes. The school provides the ideal platform to teach oral hygiene practices. School-based oral health programme has shown significant impact on oral hygiene and gingival health in many countries [12].

Oral health is a mirror of general wellbeing and is often neglected. Childhood is the formative age where one develops general hygiene practices and attitude toward health. It is the duty of parents, teachers as well as children themselves to know the importance of oral hygiene. Children should be motivated at school level regarding maintenance of oral hygiene. It is essential to imbibe oral hygiene practises in their daily curriculum at school level. This will aid in creating awareness and nurturing of correct oral health practices thereby decreasing the burden of dental problems at a larger scale in our country. Educating children regarding oral hygiene may be cumbersome but with the help of planned health teaching programmes the outcome is certain to be positive.

One of the most common illnesses worldwide is oral disease, which is mostly avoidable. In industrialised nations, dental caries affects 60%-90% of schoolchildren and the majority of adults. It is becoming more common in emerging nations and is particularly common in various Asian and Latin American nations. Periodontal disease is widespread throughout the world, affecting 5%-15% of the population with severe periodontitis, which is unmistakably linked to diabetes and weakened immune systems. Dental caries are common in India, with 63.1% of 15-year-olds having it and up to 80.2% of individuals in the 35-44 year old age range having it, according to the National oral health survey. In fact, 89.6% of those aged 35 to 44 and 67.7% of people aged 15 had periodontal disease. The prevalence of edentulism among persons 65 and older is significant in several nations.

Any collection of learning opportunities intended to encourage voluntarily healthy behaviours is referred to as health education. These deeds or behaviours could come from one or more of the following: Individuals, families, institutions or communities. Therefore, the range of health education may include instructional initiatives for kids, parents, decision-makers or healthcare professionals. Correct health information or knowledge alone does not always result in optimal health behaviours, as has been well-documented in dentistry and other fields of medicine. However, the information acquired

might be used as a tool to arm particular demographic groups with precise knowledge about health and medical technology, enabling people to take action to safeguard their health [13].

## Conclusion

- Pediatric oral health should be included in nursing curriculum.
- Nursing administrator should provide the logistic support for planned health teaching programmes.
- Planned health teaching programmes using audiovisual aids and posters can be used in schools to transfer knowledge regarding oral hygiene.
- Nurse can be the torch bearer in enlightening the community regarding the merits of good oral hygiene practises by educating children at an early age at the school level which will have a positive impact on the community at large.

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