

# A Study to Assess the Effectiveness of Video Assisted Teaching Program on the Knowledge and Practice of School going Children Related to Oral Hygiene in Selected Government Schools of District Kangra (H.P.)

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**Abstract:** ***Background:** The introduction of Oral Hygiene is the practice of keeping the mouth and teeth clean to prevent dental problems, especially dental caries, gingivitis, and bad breath. Poor oral health has an impact on the physical, social, and psychological health and decreases the quality of life of school-aged children. **Methodology:** A quantitative research approach and pre-experimental research design was adopted to conduct study. The non-probability purposive sampling technique was used to select 60 school going children of Distt Kangra, Himachal Pradesh. A Self-structured knowledge questionnaire was used to assess the level of knowledge, and self structured observational practice checklist was used to assess the level of practice. Analysis of collected data was done to the according to the objectives of the study and data analyzed by using descriptive and inferential statistics. **Result:** The study shows that, out of 60 school going children, about (71.67%) of school going children belongs to age group of 7-8 years, all were female (55%), (100%) children were Hindu 83.35% children were studying in 3rd -4th class., 73.3% father and mother were passed matriculation passed examination, 91.7% fathers in private job and 100% mother were housewife. 93.3% parents had income less than 10000 rupees/month, 100% children were having previous knowledge related to oral hygiene from their parents and teachers. Overall mean value of pre test was high then the post test. The value of t was significant at  $p < 0.05$  level of significance. There was mild co-relation between post test knowledge and practice score Study findings revealed that out of all the selected socio-demographic variables only education status of father and monthly income were associating with the post test knowledge and practice score of school going children related to oral hygiene. **Conclusion:** Video assisted teaching programme was an effective strategy in improving the knowledge and practice of school going children.*

**Keywords:** Oral Hygiene, video assisted teaching

## 1. Introduction

Dental care starts from infancy to old age. Even before the emergence of the first tooth, the attitude on care for the oral cavity can profoundly affect a person's future appearance and health. Regular tooth brushing is considered an excellent preventive measure for control of many oral diseases. The most common dental problem of concern in school going children is dental caries.<sup>1</sup>

In India, Oral health has been neglected for a long period, and gingival and periodontal diseases are on the rise in recent times. Himachal Pradesh is also not an exception, where due to adopted changes in dietary patterns, faulty oral hygiene practices have contributed to an increased burden of these diseases. Periodontal disease is defined as "a group of inflammatory diseases affecting the surrounding tissues that support and anchor the teeth in their sockets." The health of these structures is of utmost importance; if left untreated, periodontal disease results in the destruction of the gums, alveolar bone, and the outer layer of the tooth root. Furthermore, good oral health reflects the overall health status of an individual.<sup>2</sup>

Children and adolescents can have any of the several forms of periodontitis as described in the proceedings of the 1999

International Workshop for a Classification of Periodontal Diseases and Conditions like aggressive periodontitis, chronic periodontitis, and periodontitis as a manifestation of systemic diseases. However, chronic periodontitis is more common in adults, while aggressive periodontitis may be more common in children and adolescents.<sup>3</sup>

Dental plaque is considered as the possible causative agent of the major dental diseases such as caries and periodontal disease. Plaque as an etiologic agent was first identified in a classic study conducted in 1965, where it was demonstrated that there was the development of gingivitis within a few days of stopping oral hygiene practices. It was attributed to the shift to gram-negative plaque flora, and it was noted that gingivitis was reversible when patients resumed their oral hygiene procedures. The use of preventive procedures to maintain optimal oral health in children is a major concern of the dental profession. An essential element in a preventive dental program, for both the individual and the group, is a well-organized plaque control program. The core of this preventive regimen including the mechanical and chemical plaque control measures is comprehensive home oral hygiene.<sup>4</sup>

Dental caries contributes to being a major problem in many countries, especially in India, where it has consistently reflected an increasing trend in the last couple of decades. The point prevalence surveys have shown the persistence of

“untreated carious lesions” among children in rural areas. It reflects either non-availability of oral health care services or poor oral health seeking behavior of rural people. Awareness related to oral health among the children is also found to be poor.<sup>5</sup>

Oral Hygiene is the practice of keeping the mouth and teeth clean to prevent dental problems, especially dental caries, gingivitis, and bad breath. Poor oral health has an impact on the physical, social, and psychological health and decreases the quality of life of school-aged children.

## 2. Objectives

- 1) To assess the mean Pre test Knowledge and Practice scores of school going children related to Oral Hygiene.
- 2) To assess the mean post test Knowledge and Practice scores of school going children related to Oral Hygiene.
- 3) To compare the pre-test and post-test Knowledge and Practice scores of school going children related to Oral Hygiene.
- 4) To find out the co-relation between Knowledge and Practice scores of school going children related to Oral Hygiene
- 5) To determine the association of level of Knowledge and Practice with the selected socio-demographic variables of school going children

## 3. Methodology

In this study quantitative research approach and pre-experimental research design were used to collect the data from the sample size of 60 school going children of selected Government schools of District Kangra (H.P.) who were willing to participate in the study and available at the time of data collection..

Non Probability-Purposive sampling technique was used to select the study sample and self- structured knowledge questionnaire and self- structured practice check-list was used to collect the data from subjects. The tool comprised of three sections- Section A had questions related to socio-demographic variables (Age, Gender, residence ,class, education status of father and mother, occupation status of father and mother, monthly family income, previous knowledge) while Section B consisted of self- structured knowledge questionnaire consisting of 30 knowledge items related to oral hygiene Section C consisted of self-structured observational practice check-list which consist of four items i.e Tooth brushing, tongue cleaning, flossing, mouth wash. To ensure the content validity of the tool, it was submitted to ten experts (all experts from Nursing field). Reliability of the tool was computed by using Karl Pearson formula and was found to be reliable with value of 0.2.

Ethical approval was sought from the concerned authorities of Netaji Subhash College of Nursing, Palampur (H.P.) An informed consent was obtained from school teacher before administering the tool. Confidentiality of information of all respondents were maintained. After taking pre-test, the Video Assisted Teaching was administered and post- test was conducted after one week.

Data was analyzed by using descriptive and inferential statistics i.e. frequency and percentage distribution, mean, median and chi square to determine the association between knowledge and practice with selected variables.

## 4. Result

The present study findings showed that Among age-distribution, 71.7% children aged 7-8 years, 28.33% children aged between 9-10 years. None of the children aged more than 10 years Gender-based distribution showed that 45% of school going children were male and 55% were female.

All 100% children were Hindu. All of school going children residing rural area. Class-based distribution showed that 83.3% of school going children were studying in 3rd to 4th class and 16.7% studying in 5th to 6th class. None of the children was studying in 7<sup>th</sup> – 8<sup>th</sup> class. According to education status of father, 25% fathers were having non-formal education, 73.3% fathers were passed matric examination, and 3.33% fathers were graduated. 21.7% mothers were having non formal education, 73.3% mothers were passed matric examination, and 5% mothers were graduated

According to occupation of father, 91.7% fathers were in private job, 6.1% fathers were Govt. employees, and 1.7% fathers were self employed, all 100% mother were housewife. According to the monthly family income, 93.3% parents had income less than 10000 rupees/month, 5% parents had income 10,000- 20000 and 1.7% had income 20,000- 30,000. None of the family's monthly income was more than 30,000. According to the previous knowledge all 100% children having knowledge regarding oral hygiene 81.7% children having source of information from their parent and 18.3% children having source of information from their teacher.

**Table 1:** Frequency and percentage distribution of socio demographic variables of school going children, N=60

S. No.	Socio-Demographic variables	f	%
1.	Age ( in Years)		
	7-8	43	71.67
	9-10	17	28.33
	11-12	00	00
2.	Gender		
	Male	27	45
	Female	33	55
3.	Religion		
	Hindu	60	100
	Sikh	00	00
	Muslim	00	00
	Christian	00	00
4.	Residence		
	Rural	60	100
	Urban	00	00
5.	Class		
	3 <sup>rd</sup> -4 <sup>th</sup>	50	83.33
	5 <sup>th</sup> -6 <sup>th</sup>	10	16.67
	7 <sup>th</sup> -8 <sup>th</sup>	00	00
6.	Education Status of Father		
	Non- formal education	15	25
	Matriculation	43	71.67
	Graduation and above	02	3.33

7.	<b>Education Status of Mother</b>		
	Non- formal education	13	21.67
	Matriculation	44	73.33
	Graduation and above	03	05
8.	<b>Occupation of Father</b>		
	Private job	55	91.67
	Government job	04	6.67
	Self employed	01	1.67
9.	<b>Occupation of Mother</b>		
	Private job	00	00
	Government job	00	00
	Housewife	60	100
10.	<b>Monthly Family Income ( in rupees)</b>		
	≤10000	56	93.33
	10,001-20000	03	5.00
	20,001-30000	01	1.67
	≥30000	00	00
11.	<b>Previous Knowledge</b>		
	Yes	60	100
	No	00	00
12.	<b>If Yes, source of information</b>		
	Peer group	00	00
	Parent	49	81.67
	Teacher	11	18.33
	Mass Media	00	00

**Table 3:** Frequency and percentage distribution of post test knowledge scores of school going children, N=60

Level of knowledge	Post-test knowledge Scores	f	%
Good	21- 30	28	46.67
Average	11-20	30	50.00
Poor	1-10	02	3.33

Maximum score=30

Minimum score =00

**Table 6:** Mean, Median, Standard Deviation, Mean Difference and t value pre-test and post -test knowledge scores of school going children related to oral hygiene, N= 60

Level of knowledge	Mean	Median	Standard Deviation	df	t	P value
Pre-test	11.03	11.0	1.92	59	-26.18*	<0.0001 <sup>S</sup>
Post-test	20.50	20.0	2.23			

't '(59)= 2.04, \*significant a(p≤ 0.05)

NS- Non significant (P>0.05)

The data depicted in table 6 shows the effectiveness of video assisted teaching on knowledge mean pre-test score was 11.03 or post - test was 20.50 and t value obtained was 26.18 at ≤ 0.05 which was significant. Hence, it is inferred that the mean post - test was greater than mean pre- test score.

Hence research hypothesis H<sub>1</sub> is accepted.

**Table 7:** Mean, Median, Standard Deviation, Mean Difference and t value pre- test and post -test practice score of school going children related to oral hygiene, N= 60

Level of Practice	Mean	Median	Standard Deviation	df	t	P value
Pre-test	17.33	6.5	2.94	59	-22.17*	<0.0001
Post-test	16.08	16.0	2.50			

't '(59)= 2.04, \*significant a(p≤ 0.05)

NS- Non significant (P>0.05)

The data depicted in table seven shows the effectiveness of video assisted teaching on practice mean pre-test score was 17.33 or post - test was 16.08 and t value obtained was

Data presented in the table three shows that the post- test knowledge score of school going children. Maximum 50% of school going children scored under average category, 46.6% school going children scored good category and 3.33% school going children scored under poor category.

**Table 4:** Frequency and percentage distribution of pre test practice scores of school going children, N=60

Level of Practice	Pre-test Practice Scores	f	%
Good	15- 21	3	5.00
Average	8-14	7	11.67
Poor	1-7	50	83.33

Maximum score=30

Minimum score =00

Data presented in the table four shows that the pre- test practice score of school going children. Maximum 83.33% of school going children scored under poor category, 11.67 % school going children scored under average category and 5% school going children scored under good category.

**Table 5:** Frequency and percentage distribution of post test practice scores of school going children, N=60

Practice scores	Post-test Practice Scores	f	%
Good	15- 21	16	26.67
Average	8-14	42	70.00
Poor	1-7	02	3.33

Maximum score=30

Minimum score =00

Data presented in the table five shows post- test practice score of school going children. Maximum 70 % of school going children scored under average category, 26.67 % school going children scored under good category and 3.33% school going children scored under poor category.

found to be statistically significant ('t '(59)= 2.04) at 0.05 level of significance .

Thus it is established that mean post test practice score, which shows the effectiveness of video assisted teaching program. Hence research hypothesis H<sub>2</sub> is accepted.

**Table 8:** Co-relation between knowledge and practice scores of school going children related to oral hygiene, N=60

Scores	Spearman Correlation Coefficient	P Value
Post-test knowledge scores	0.280	0.031
Post-test practice scores		

r(59)=0.280, \*Significant(p ≤ 0.05)

NS-Non Significant (p>0.05)

The data presented in table eight revealed a mild positive correlation (0.2) between post-test knowledge and practice score.

Thus, the research hypothesis is partially accepted, as there is significant relationship between post -test knowledge and practice score.

**Table 9:** Chi-square showing association of socio demographic variables of school going children with their Level of knowledge, N=60

Socio-Demographic Variables	Poor	Average	Good	$\chi^2$	df	P Value
<b>Age (In Years)</b>						
7-8	1	22	20	0.504 <sup>NS</sup>	2	0.781
9-10	1	8	8			
<b>Gender</b>						
Male	1	15	11	0.693 <sup>NS</sup>	2	0.719
Female	1	15	17			
<b>Class</b>						
3 <sup>rd</sup> -4 <sup>th</sup>	1	27	22	3.017 <sup>NS</sup>	2	0.163
5 <sup>th</sup> -6 <sup>th</sup>	1	3	6			
<b>Education Status of Father</b>						
Non-formal education	0	9	6	1.386 <sup>NS</sup>	4	0.844
Matriculation	2	20	21			
Graduation and above	0	1	1			
<b>Education Status of Mother</b>						
Non-formal education	0	8	5	1.289 <sup>NS</sup>	4	0.771
Matriculation	2	20	22			
Graduation and above	0	2	1			
<b>Occupation of father</b>						
Private Job	1	28	26	7.571 <sup>NS</sup>	4	0.177
Government Job	1	2	1			
Self Employed	0	0	1			
<b>Monthly Family income (in Rupees)</b>						
≤10000	0	28	28	40.667*	4	0.003
10,001-20000	2	1	0			
20,001-30000	0	1	0			
<b>Source of information</b>						
Parent	1	24	24	1.702 <sup>NS</sup>	2	0.375
Teacher	1	6	4			

There was significant association of level of knowledge with monthly family income and it was found statistically significant at 0.05 level of significant. Thus it is revealed that monthly family income had some impact on level of knowledge of school going children.

Hence research hypothesis H<sub>4</sub> is partially accepted.

**Table 10:** Chi-square showing association of socio demographic variables of school going children with their Level of practice, N=60

Socio-Demographic Variables	Poor	Average	Good	$\chi^2$	df	P Value
<b>Age (in Years)</b>						
7-8	2	13	28	2.03 <sup>NS</sup>	2	0.466
9-10	0	3	14			
<b>Gender</b>						
Male	2	4	21	5.455 <sup>NS</sup>	2	0.069
Female	0	12	21			
<b>Class</b>						
3 <sup>rd</sup> -4 <sup>th</sup>	2	12	34	0.771 <sup>NS</sup>	2	0.880
5 <sup>th</sup> -6 <sup>th</sup>	0	2	8			
<b>Education Status of Father</b>						
Non- formal Education	1	8	6	8.970*	4	0.034
Matriculation	1	8	34			
Graduation and above	0	0	2			

<b>Education Status of Mother</b>	1	4	8	1.352 <sup>NS</sup>	4	0.618
Non- formal Education	1	11	32			
Matriculation	0	1	2			
Graduation and above						
<b>Occupation of father</b>						
Private Job	2	15	38	0.610 <sup>NS</sup>	4	1.000
Government Job	0	1	3			
Self employed	0	0	1			
<b>Monthly Family income</b>						
<b>(In rupees)</b>						
≤10000	1	15	40	12.074 <sup>Ns</sup>	4	0.082
10,001-20000	1	0	2			
20,001-30000	0	1	0			
<b>Source of information</b>						
Parent	1	13	35	1.419 <sup>NS</sup>	2	0.508
Teacher	1	3	7			

There was significant association of level of practice with education status of father and it was found statistically significant at 0.05 level of significant. Thus it is revealed that education status of father had some impact on level of practice of school going children. Hence research hypothesis H<sub>5</sub> is partially accepted.

## 5. Conclusion

The findings of the study revealed that:

- The Government school children had low knowledge and practice regarding oral hygiene.
- The knowledge and practice scores improved after administrating the video assisted teaching programme on oral hygiene.
- There is co-relation between knowledge and practice scores of school going children.

Hence, the video assisted teaching programme was an effective strategy in improving the knowledge and practice of school going children.

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