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## To evaluate the effectiveness of video assisted teaching program on awareness and practice regarding techniques of tooth brushing among primary school children at selected rural areas of Kalaburagi

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### Abstract

Tooth brushing and other mechanical measures are the most practical and effective means of achieving and maintaining adequate oral hygiene. Although tooth brushing is a simple and effective means of removing plaque, the high prevalence of periodontal disease in the general population indicates that tooth-brushing performance is inadequate. Up to now, the toothbrush still remains the most efficient of all cleaning devices.

**Objective:** To evaluate the video assisted teaching program on awareness and practice of primary school children regarding techniques of tooth brushing at rural areas of Kalaburagi.

**Methodology:** A evaluative approach with pre experimental one group pre-test post-test design was adopted for the study. The samples from the selected rural areas were selected using purposive sampling technique. The sample consisted sixty primary school children from selected rural areas. The tools used for data collection was structured awareness scale and observational checklist.

**Results:** With regard to pre-test level of awareness it shows that, maximum 36(60%) respondents were having moderate awareness, 19(31.7%) respondents were having poor awareness and remaining 5(8.3%) of respondents were having good awareness. During post-test maximum 43 (71.7%) of respondents were having moderate awareness, 14(13.3%) of respondents were had good awareness and remaining 3(5%) of respondents were had poor awareness. With regard to pre-test level of practice it shows that, majority 29(48.3%) respondents were having moderate practice, 22(36.7%) of respondents were having poor practice and 9(15%) of respondents were having good practice. During post-test maximum 54(90%) of respondents were having good practice, and 6(10%) of respondents were had poor practice. With respect to awareness scores of participants, the statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 5% level ( $p < 0.05$ ) with a paired 't' value of 13.86. With respect to practice scores of participants, the statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 5% level ( $P < 0.05$ ) with a paired 't' value of 12.98. There exists a statistical significance in the difference of practice score indicating the positive impact of video assisted teaching program.

**Conclusion:** The findings revealed that awareness and practice of primary school children related to oral hygiene and techniques of tooth brushing were moderate and it was improved after demonstration method.

**Keywords:** Evaluate, demonstration method, techniques of tooth brushing, awareness, practice, primary school children

### Introduction

Process of regularly brushing one's teeth and cleaning in between them is known as oral hygiene. It keeps one's mouth healthy and free of illness and other issues. In order to prevent dental disease and foul breath, it is crucial to practise good oral hygiene on a regular basis. Dental illnesses that are most frequently encountered are periodontitis, gingivitis, and tooth decay. Maintaining good oral hygiene is essential to the growth of a healthy primary dentition. There are unquestionable scientific facts about how often, how long, and how often to clean your teeth.

Ensuring appropriate oral hygiene can be achieved and maintained most practically and effectively by tooth brushing and other mechanical procedures. Even while brushing your teeth is an easy and efficient way to get rid of plaque, the high rate of periodontal disease in the general population suggests that your brushing technique is insufficient. The toothbrush continues to be the most effective cleaning tool available today. Many studies have been conducted on the design of brushes and the mechanisation of the brushing process.

Different toothbrush designs have been suggested to improve dental plaque removal mechanically. Many studies have been done on how long individuals take to brush their teeth, but not many have looked at how people hold their toothbrushes throughout a typical brushing session. Both patient compliance and the use of a technically sound toothbrush are necessary for effective teeth brushing. In the long run, cleaning your teeth is still the most effective way to help kids get rid of dental plaque.

The ability of children to use a toothbrush varies widely depending on their age, dexterity, and motivation levels. Even though children's oral health has significantly improved over the past few decades, dental caries, or tooth decay, is still one of the most common oral health issues that affect children worldwide. Around the world, children are known to have poor oral hygiene due to growing calculus deposits and plaque as they age. Until they are between the ages of seven and eight, children will require assistance brushing their teeth.

The World Health Organisation (WHO) advises oral health promotion in schools to enhance students' understanding, attitudes, and behaviour linked to oral health as well as to prevent and control dental disorders. In India, the 1999-launched National Oral Health Programme includes the School Dental Programme, which aims to educate students, teachers, and parents, ages 9 to 14, on healthy dental habits. Within the National Rural Health Mission's School Health Programme, students can participate in screenings for oral and dental health issues in order to detect and prevent them early on.

Since brushing is a fairly complex motor skill that young children find difficult to learn, parents must help their children from the time they get their first tooth until they reach adolescence. Children as young as two years old start to become more independent and enjoy taking care of themselves. Children, adults, and the elderly all have lower quality of life when they have poor dental health. It has an impact on kids' growth, development, and school attendance in addition to nutrition. Dental caries are the most prevalent chronic oral illness in teens (12–19 years old) and children (6–11 years old). Even though dental caries and other oral disorders are primarily

### Objectives of the study

1. To assess the awareness and practice of primary school children regarding techniques of tooth brushing in

terms of pre-test and post-test awareness and practice scores.

2. To assess the effectiveness of video assisted teaching program on awareness and practice of primary school children regarding techniques of tooth brushing by comparing pre-test and post-test awareness and practice scores.

### Hypotheses

- **H<sub>1</sub>:** The mean post-test awareness scores of the primary school children exposed to video assisted teaching program on techniques of tooth brushing will be significantly greater than the mean pretest awareness scores at 0.05 level of significance
- **H<sub>2</sub>:** The mean post-test practice scores of the primary school children exposed to video assisted teaching program on techniques of tooth brushing will be significantly greater than the mean pretest practice scores at 0.05 level of significance

### Methodology

- **Research Approach:** Evaluative research approach.
- **Research Design:** Pre Experimental one group pre-test post- test design.
- **Sampling technique:** Non-Probability; Convenient Sampling Technique.
- **Sample size:** 60.
- **Setting of study:** Selected rural areas of Kalaburagi district, Karnataka.
- **Population:** Primary school children of selected rural area, Kalaburagi.

### Tool used for data collection

**Section I: Demographic data:** It consists of 8 items related to demographic data of participants

### Section II: Structured awareness questionnaire

This section consists of 24 structured multiple choice items with the four to five options for each item to assess the awareness of primary school children regarding techniques of tooth brushing.

### Section III: Structured practice scale

A structured practice scale consisted of 7 statements regarding techniques of tooth brushing. There are two alternative response columns for each items Yes or NO. Participants have to choose one options based on their practice for each item.

### Procedure of data collection

Data collection procedure for main study began from 15.03.2024 to 15.04.2024, After obtaining permission from concerned authority of selected rural area, Kalaburagi and consent from subjects the pre-test was conducted to 60 participants using structured awareness and practice scales.

**Results**

**Section I: Demographic Profile**

**Table 1:** Frequency & Percentage Distribution of Respondents according to socio demographic variables. n=60

Sl. No.	Demographic variables	Frequency (f)	Percentage (%)
1.	<b>Age (in yrs)</b>		
	8-9	23	38.3
	10-11	27	45
	Above 11	10	16.7
2.	<b>Gender</b>		
	Male	40	66.7
	Female	20	33.3
3.	<b>Year of study</b>		
	3 <sup>rd</sup> std	22	36.7
	4 <sup>th</sup> std	16	26.7
	5 <sup>th</sup> std	12	20
	6 <sup>th</sup> std	10	16.7
4.	<b>Religion</b>		
	Hindu	36	60
	Muslim	10	16.7
	Christian	7	11.7
	Other	7	11.7
5.	<b>Education of mother</b>		
	Illiterate	7	11.7
	Primary school	34	56.7
	High school	16	26.7
	PUC and above	3	5
6.	<b>Type of family</b>		
	Nuclear	28	46.7
	Joint	28	46.7
	Extended	4	6.7
7.	<b>Family Income/Month</b>		
	Below Rs.5000	18	30
	Rs. 5001-10,000	15	25
	10,001-15,000	16	26.7
	Above 15,000	11	18.3
8.	<b>Source of information</b>		
	News papers	2	3.3
	Family & Friends	13	21.7
	Social media	27	45
	School Teacher	18	30

**Section II**

Distribution Respondent’s Scores According to Their Level of awareness and practice during pretest and post-test.

**Area wise and total distribution of pre-test and post-test awareness scores of respondents**

**Table 2:** Mean, median, mode, standard deviation and range of pre-test and post-test awareness scores of Respondents, n = 60

Area of Awareness	Number of Items	Mean	Median	Mode	Standard deviation	Range
<b>Pre-test</b>	24	10.66	11	11	3.35	5-18
<b>Post-test</b>	24	15.06	15	15	2.79	7-22

Table 2 reveals pre-test awareness score of respondents regarding techniques of tooth brushing, it shows that; The pretest awareness scores respondents mean was 10.66, median was 11, mode was 11 with standard deviation 3.35 and score range was 5-18. The post-test awareness scores

respondents mean was 15.06, median was 15, mode was 15 with standard deviation 2.79 and score range was 7-22.

**Area wise and total distribution of pre-test and post-test practice scores of respondents. Table 3**

**Table 3:** Mean, median, mode, standard deviation and range of pre-test and post-test practice scores of Respondents. n = 60

Area of practice	Number of Items	Mean	Median	Mode	Standard deviation	Range
<b>Pretest</b>	7	2.98	3	3	1.22	1-6
<b>Post-test</b>	7	5.65	6	6	0.95	3-7

Table 3 reveals pretest and post-test practice score of respondents regarding techniques of tooth brushing, It shows that; In pre-test, respondents mean was 2.98, median

was 3, mode was 3 with standard deviation 1.22 and score range was 1-6. In post-test, respondents mean was 5.65, median was 6, mode was 6 with standard deviation 0.95 and

score range was 3-7.

**Distribution Respondent’s Pretest and Post-test Scores according To Their Level of Awareness and Practice Awareness Scores**

**Table 4:** Frequency and Percentage distribution of respondents according to level of Awareness regarding techniques of tooth brushing. n=60

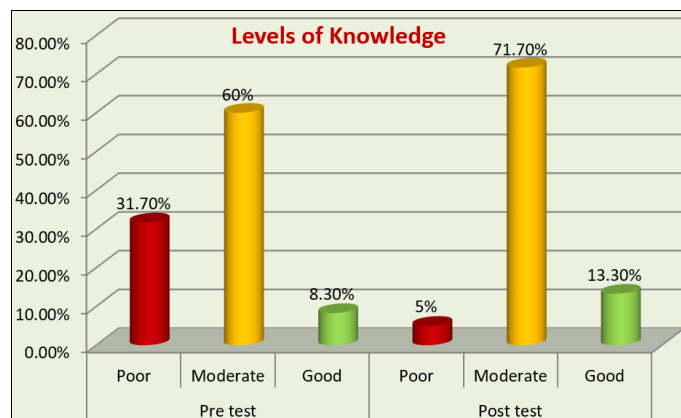
Level of Awareness					
Pre-test			Post-test		
Poor f(%)	Moderate f(%)	Good f (%)	Poor f(%)	Moderate f(%)	Good f (%)
19(31.7%)	36(60%)	05(8.3%)	3(5%)	43 (71.7%)	14 (13.3%)

The data presented in the Table 4 depicts the respondent’s level of awareness during pretest and post-test regarding techniques of tooth brushing;

With regard to pre-test level of awareness it shows that, maximum 36(60%) respondents were having moderate awareness, 19(31.7%) respondents were having poor

awareness and remaining 5(8.3%) of respondents were having good awareness.

During post-test maximum 43 (71.7%) of respondents were having moderate awareness, 14(13.3%) of respondents were had good awareness and remaining 3(5%) of respondents were had poor awareness.



**Fig 1:** Pre-test and post-test level of awareness

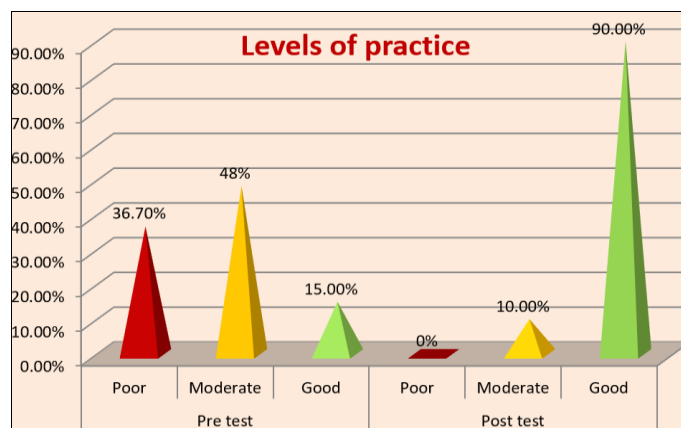
**Practice Scores**

**Table 5:** Frequency and Percentage distribution of respondents according to level of Practice regarding techniques of tooth brushing, n=60

Level of Practice					
Pre-test			Post-test		
Poor f(%)	Moderate f(%)	Good f (%)	Poor f(%)	Moderate f(%)	Good f (%)
22 (36.7%)	29 (48.3%)	9(15%)	00	6 (10%)	54 (90%)

The data presented in the Table 5 depicts the respondent’s level of practice during pretest and post-test regarding techniques of tooth brushing; With regard to pre-test level of practice it shows that, majority 29(48.3%) respondents were having moderate practice, 22(36.7%) of respondents were

having poor practice and9(15%) of respondents were having good practice. During post-test maximum 54(90%) of respondents were having good practice, and 6(10%) of respondents were had poor practice.



**Fig 2:** Pre-test and post-test level of practice

### Effectiveness of video assisted teaching program

Paired 't' value was computed to find out the significance of difference between means of pre-test and post-test awareness and practice scores of respondents. The data is presented in Table 6. To test statistical significance following research hypothesis were stated-

- **H<sub>1</sub>:** The mean post-test awareness scores of the primary school children exposed to video assisted teaching program on techniques of tooth brushing will be significantly greater than the mean pretest awareness scores at 0.05 level of significance.
- **H<sub>2</sub>:** The mean post-test practice scores of the primary school children exposed to video assisted teaching program on techniques of tooth brushing will be significantly greater than the mean pretest practice scores at 0.05 level of significance.

**Table 6:** Mean, standard deviation, standard error of difference and 't' value of pre-test and post-test awareness and practice scores, N=60

Area	Aspects	Mean	Sd	SEMD	Paired t Test
Awareness	Pre-test	10.66	3.35	0.31	13.86*
	Post-test	15.06	2.79		
Practice	Pre-test	2.98	1.22	0.20	12.98*
	Post-test	5.65	0.95		

\* Significant at 5% level

Table 6 indicates the overall mean awareness and practice scores of pre-test and post-test scores.

#### Awareness

With respect to awareness scores of participants, the findings reveal that the post-test mean awareness scores was found higher [mean=15.06, SD of 2.79] when compared with pre-test mean awareness score value which was 10.66 with SD of 3.35.

The statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 5% level ( $p < 0.05$ ) with a paired 't' value of 13.86. There exists a statistical significance in the difference of awareness score indicating the positive impact of video assisted teaching program.

Hence, the research hypothesis H<sub>1</sub> is supported. This indicates that the enhancement in awareness is not by chance and the primary school children who exposed to video assisted teaching program on techniques of tooth brushing, significantly improved in their awareness.

#### Practice

With respect to practice scores of participants, the findings reveal that the post-test mean practice scores was found higher [mean=5.65, SD of 0.95] when compared with pre-test mean practice score value which was 2.98 with SD of 1.22. The statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 5% level ( $p < 0.05$ ) with a paired 't' value of 12.98. There exists a statistical significance in the difference of practice score indicating the positive impact of video assisted teaching program.

Hence, the research hypothesis H<sub>2</sub> is supported. This indicates that the enhancement in practice is not by chance and the primary school children who exposed to video assisted teaching program on techniques of tooth brushing, significantly improved in their practice.

### Conclusion

Hygiene and techniques of tooth brushing were moderate and it was improved after demonstration method. Since a very few studies have been conducted regarding this topic in India, so the nurse researcher can take further studies on the same topic.

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### Author's Contribution

Not available.

### Conflict of Interest

Not available.

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