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Research Article

A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-ASSISTED TEACHING CUM DEMONSTRATION ON ORAL HEALTH AMONG SCHOOL CHILDREN IN SELECTED SCHOOL AT KANYAKUMARI DISTRICT

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Abstract

A study to assess the effectiveness of video-assisted teaching cum demonstration on oral health among school children in selected school at kanyakumari district. The objectives of the study were to assess the knowledge and practice regarding Oral Health among school children. To determine the effectiveness of Video Assisted Teaching cum demonstration among school children. To find out the association between the level of knowledge with their selected demographic variables through post- test. Pre experimental one group pre-test, post-test design was adopted for this study. The conceptual framework was based on Pender"s modified Health Promotion Model. The study was conducted in Don Bosco matriculation school midalakadu, kanyakumari. Non probability purposive sampling technique was adopted to select the desired sample. The sample size was 60 children respectively. Structured interview questionnaire was used to assess the knowledge and practice regarding oral health among school children. The data collection tool was validated by experts and was found to be valid. The group was shown videos and demonstrated the steps of brushing and flossing. The result revealed that "t" value was 9.31, it was significant at $p<0.05$ level. Hence the stated hypotheses H1 were accepted. It is inferred that video assisted teaching cum demonstration is effective in improving oral health knowledge and practice among school children.

Keywords: Oral health, Video teaching cum demonstration, Effectiveness.

INTRODUCTION

Children are assets of our country. Today's children are tomorrow's leaders. They form 38%-40% of our general population (Vangipuram *et al.,* 2016). The children are one third of our population and all of our future. There are about 200.6 million children belonging to 6 to 12 years globally (Shilpa and Swamy, 2015). Children in school age are prone to get specific health problems (Alhayek *et al.,* 2018). The various acute and chronic conditions which can be encountered during school period anywhere in the world include oral health problems, Dental caries, Diarrhea, Worm Infestations, Hepatitis, Anemia, Scabies, Eczema, Acne, Influenza, Pneumonia, Diphtheria, Asthma, Fracture, Measles, Mumps, Chickenpox,Urinary Tract Infection, Meningitis, Tuberculosis, Eye and Ear Infections (Shettigar *et al.,* 2013). The school age child has multitude of problems,among them one of the most existing problem is related to oral health (Al-Omiri *et al.,* 2006). The goal of WHO "Health for all by the year 2025" includes oral health also (Bellows *et al.,* 2013). Oral health has also been found to profoundly influence the quality of life. Oral health is an integral component of general health (Kuyken *et al.,* 2013). Research in the past few years has revealed the causal link between oral diseases and systemic diseases (Adab *et al.,* 2015). Oral health is the royal way to overall health, wellbeing and quality of life (Tercedor *et al.,* 2017). It acts as a mirror that reflects general health/disease According to Osler "Oral cavity is a mirror of rest of the body "Oral health is essential for general health and well-being throughout the lifespan and is a mark of overall health status (Prasai *et al.,* 2013). Research and other advances in oral health have led to safe and effective means of maintaining oral health and preventing dental caries and periodontal disease (Vander Ploeg *et al.,* 2014). India, a developing country faces many challenges in rendering oral health needs.

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The majority of Indian population resides in rural areas, of which more than 40% constitute children (Takehara *et al.,* 2019). These children cannot avail dental facilities due to inaccessibility, financial constraints and stagnation of public dental healthcare services (Sanadhya *et al.,* 2014). This entails the health professional to adopt a more practical approach to achieve primary prevention of oral diseases (Damle *et al.,* 2014). The most viable solution seems to be dental and oral health education (Martínez *et al.,* 2015; Haque *et al.,* 2016).

"Children are the world's most valuable resources and its best hope for the future"

-John F. Kennedy

Need for the study

India is facing many challenges in rendering oral health care to the rural masses. Out of these 70-72% residing in rural areas more than 40% constitute children. This report is based on research survey with respect to different parameters i.e. Oral hygiene practices, dietary pattern, tobacco smoking & chewing, media habits and awareness regarding oral and dental treatment to get the complete overview of the existing oral health related problems and the factors responsible for poor oral health among rural children. WHO reported that 60-90% of school children worldwide have dental cavities and an oral health survey in India showed that the prevalence of oral and dental diseases is 90%. Mehta A, Kaur G (2012) conducted a pre-experimental study to assess oral health related knowledge, attitude, and practices among6- 12-year-old school children studying in rural areas of Panchkula, India. The ultimate goal was to implement an oral health-promotion program in this area .A total of 440 children 216 males and 224 females from 12 schools were included in this study. All the participants were requested to complete a 13-question closed-ended questionnaire. Only 25% of the participants said that they

cleaned their teeth more than once in a day. 32% percent did not clean their teeth daily. Based upon the findings of the present study, the knowledge, attitude, and practices of the surveyed children with regard to oral health is poor. Hence, there is a need for regular oral health education of the children, as well as their parents and school teachers. Awareness regarding the importance of oral hygiene has significantly increased in the developed countries, but contrary to that, the modern dietary lifestyle habits are posing a greater risk for oral health. Healthy teeth not only enable you to look and feel good, they make it possible to eat and speak properly. Good oral health is important to your overall well-being. There is a need of health education to all people. It has got preventive, promotive and rehabilitative dimensions. The school children can be an excellent mode to transmit information. Here the investigator hope that they can be an effective messengers of health, to other children, to their parents, to the family and finally to reach out the community. Hence the investigator felt that by doing this kind of study, will focus on prevailing problems of oral health and findings help to develop effective teaching program in order to modify the knowledge and practices of school children; So that the general health related complications among the future adults may be prevented leading to healthy generations.

MATERIALS AND METHODS

A study was conducted in 2013 using pre- experimental research design (one group pre-test and post-test design)to assess the effectiveness of video assisted teaching cum demonstration on oral health among school children in selected school at Kanyakumari district. 60 scholars were selected adopting non-probability purposive sampling technique. The tool has two parts, Part I: Demographic variables, Part II: Structured knowledge questionnaire to assess the knowledge regarding oral health among school children. Descriptive and inferential statistics

RESULTS

The study reveals that Regarding age 17(28.3%) belongs to age group of 7 years,37(61.6%) belongs to age group of 8 years ,6(10%) belongs to age group of 9 years. Regarding Gender 26(43.3%) are males and 34(56.6%) are females. Regarding type of family 18(30%) belongs to joint family and 42(70%) belongs to nuclear family. Regarding number of siblings 20(33.3%) has no siblings, 18(30%) has one sibling, 22(36.6%) has more than one siblings. Regarding education of father 18(30%) were illiterates, 10 916.6%) were primary, 5(8.3%) were high school, 10(16.6%) were higher secondary, and 17(28.3%) were degree. Regarding education of mother 10(16.6%) were illiterates, 2(3.3%) were primary, 10(16.6%) were high school, 21(35%) were higher secondary and 17(28.3%) were degree. Regarding occupation father 18(30%) are coolies, 12(20%) are self employers, 20(33.3%) are private employers, 8(13.3%) are government employers and 2(3.3%) are unemployed. Regarding occupation mother 7(11.6%) are coolies, 8(13.3%) are self employers, 7(11.6%) are private employers, 6(10%) are government employers and 3 2(53.3%) are home makers. Regarding monthly income of the family 3(5%) earns Rs <5000, 14(23.3%) earns 5001-10, 000, 29(48.3%) earns 10,001 -20,000, 14(23.3%) earns >20,000. Regarding tooth brushing media 55(91.6%) were brush users and 5(8.3%) were non brush users. Regarding previous knowledge about oral health 21(35%) has previous knowledge and 39(65%) has no previous knowledge on oral health.

Table 1. Frequency and percentage distribution of demographic variables

Sl. No	Demographic Variables	Frequency	Percentage %
1	**Age years**		
	7yrs	17	28.3
	8yrs	37	61.6
	9yrs	6	10
2	**Sex**		
	Male	26	43.3
	Female	34	56.6
3	**Type of family**		
	Joint	18	30
	Nuclear	42	70
4	**No of siblings**		
	None	20	33.3
	One	18	30
	More than one	22	36.6
5	**Education of father**		
	Illiterate	18	30
	Primary	10	16.6
	High school	5	8.3
	Higher secondary	10	16.6
	Degree/Equivalent	17	28.3
6	**Education of mother**		
	Illiterate	10	16.6
	Primary	2	3.3
	High school	10	16.6
	Higher secondary	21	35
	Degree/Equivalent	17	28.3
7	**Occupation of father**		
	Coolie	18	30
	Self employed	12	20
	Private employed	20	33.3
	Government employed	8	13.3
	Unemployed	2	3.3
8	**Occupation of mother**		
	Coolie	7	11.6
	Self employed	8	13.3
	Private employed	7	11.6
	Government employed/Home maker	6 32	10 53.3
9	**Monthly income**		
	<5000	3	5
	5001-10,000	14	23.3
	10,000-20,000	29	48.3
	>20,000	14	23.3
10	**Tooth brushing media**		
	Brush user	55	91.6
	Non brush user	5	8.3
11	**Previous knowledge about oral health**		
	Yes	21	35
	No	39	65
12	**No of visit to dentist in a year**		
	None	28	46.6
	Once	8	13.3
	Twice	10	16.6
	More than 2 times	14	23.3

Table 2. Frequency and percentage distribution of knowledge and practice after video assisted teaching cum demonstration

Level of Knowledge	Classification of Respondents	
	Post test	
	Number	Percentage
Inadequate (<0-40% of score)	9	15
Moderate (41-60% of score)	10	17
Adequate (>61 % of score)	41	68
Total	60	100

Regarding number of visits to dentist 28(46.6%) has never visited, 8(13.3%) visited once, 10(16.6%) visited twice, 14(23.3%) visited more than two times. Number of visits to

dentist in a year. The level of knowledge score is 9(15%) for inadequate knowledge, 10(17%) for moderately adequate knowledge, and 41(68%) for adequate knowledge. It is inferred that there was significant association only between the level of knowledge of children with their age.

Table 3. Mean Standard Deviation and independent "t" test value of level of knowledge and practice on oral health before and after video assisted teaching cum demonstration, n=60

S No	Level of knowledge and practice on oral health	Mean	Standard deviation	"t" Test value
1.	Post Test	9.98	3.27	9.318*
2.	Pre Test	4.65	3.02	

Table 2 shows that the mean value for the post test is 9.98 and the standard deviation is 3.27 and the mean pre-test value is 4.65 and standard deviation is 3.02. The tabulated "t" value is 1.77 and the obtained "t" value is 9.318, it is significant at $p<0.05$ level. H_1 is accepted.

Table 4. Frequency, percentage and Chi-square distribution on the level of knowledge and practice among school children with their selected demographic variables

Demographic Variables	Inadequate		Moderate		Adequate		Chi-square
	n	%	n	%	n	%	
Age years							
7yrs	4	7	0	0	9	15	9.86
8yrs	4	7	6	10	27	45	p<0.05
9yrs	4	7	3	5	3	5	S
Gender							
Male	4	7	6	10	15	25	1.75
Female	4	7	4	7	27	45	P<0.05
Type of family							NS
Joint	3	5	2	3	9	15	0.32
Nuclear	6	10	8	13	32	53	P<0.05
No of siblings							NS
None	6	10	1	2	13	22	
One	3	5	4	7	11	18	9.49
More than one	1	2	4	7	17	28	P<0.05
Education of father							NS
Illiterate	2	3	1	2	13	22	
Primary	1	2	2	3	7	12	
High school	0	0	0	0	5	8	5.68
Higher secondary	3	5	1	2	5	8	P<0.05
Degree	1	2	3	5	16	27	NS
Education of mother							
Illiterate	3	5	1	2	3	5	
Primary	0	0	1	2	1	2	
High school	2	3	4	7	4	7	3.27
Higher secondary	1	2	2	3	2	3	P<0.05
Degree	3	5	9	15	24	40	NS
Occupation of father							
Coolie	4	7	2	3	13	22	
Self employed	2	3	3	5	7	12	
Private employed	2	3	4	7	6	10	2.47
Government	2	3	3	3	3	3	P<0.05
employed / Unemployed	3	5	3	3	3	3	NS
Occupation of mother							
Coolie	2	3	3	5	7	12	
Self employed	2	3	4	7	11	18	3.4
Private employed	2	3	3	5	5	8	P<0.05
Government employed	3	5	4	7	6	10	NS
Home maker	3	5	3	5	31	52	
Monthly income							
<5000	0	0	0	0	2	3	
5001-10,000	3	5	4	7	13	22	0.85
10,000-20,000	8	13	3	5	2	3	P<0.05
>20,000	17	28	5	8	3	5	NS
Tooth brushing media							
Brush user	1	2	0	0	4	7	7.22
Non brush user	8	13	10	17	37	62	P<0.05
Previous knowledge about oral health							NS
Yes	5	8	0	0	4	7	1.25
No	8	13	10	17	33	55	P<0.05
No of visit to dentist in a year							NS
None	4	7	5	8	19	32	
Once	1	2	1	2	6	10	1.25
Twice	1	2	1	2	8	13	P<0.05
More than 2 times	1	2	3	5	10	17	NS

DISCUSSION AND CONCLUSION

Children are future of the country. Healthy children are important for healthy nation (Xu *et al.,* 2015; Cooper *et al.,* 2013; Salmon *et al.,* 2007; Monse *et al.,* 2013). India remains one of the highest ranking in the world in terms of number of children suffers with various disease in which oral problem is one among them. So it is important to create awareness among the pediatric population.

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