

Teacher's Role in Promoting Health School Program for Student's Oral Hygiene

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ABSTRACT: Gum disease significantly affects the degree of health, growth and development process, even a child's future. The high rate of dental caries and poor oral hygiene status are oral health problem often encountered in the age group of children. The community of primary school is one of the strategic team to be included in oral health efforts. The purpose of this study was to analyze the effect of education on teachers' knowledge and action in health promotion efforts of tooth brushing behavior of elementary school students. The research design is quasi-experimental design with pre-test and post-test to determine knowledge and actions of teachers as well as to practice proper teeth brushing to students before and after a given educational intervention. The data analysis test used was Wilcoxon and McNemar. As a result, there are differences in teachers' knowledge and actions before and after the educational intervention on Promoting Health School Program for tooth brushing behavior in Elementary School Students. There are difference oral health extension activities by teachers at the school, the events of the tooth brushing, activities of dental hygiene teacher training and operations of networking in oral health to students before and after the educational intervention.

KEYWORDS: teacher, educational intervention, students.

I. INTRODUCTION

The high rate of dental caries and poor oral hygiene status is an oral health problem that is often encountered in the age group of children, the prevalence of dental caries as high as 97.5%; caries experience (DMF-T) approaches 2.84 in the age group of 12 years [1]. The dental and oral diseases affect health status, the growth process, even a child's future [2]. Children are vulnerable to malnutrition due to pain in the teeth and mouth lowered their appetites [3]. The learning ability of the child would be decreased so that will affect the learning achievement [4,5]. The role of the school is needed in the process of creating the brushing habits in children [6,8] as the primary school age is an ideal time for a child's motor skills, including brushing teeth [3,9]. The purpose of this study was to analyze the impact of educating teachers' knowledge and action in health promotion programs at schools to conduct proper teeth brushing in primary school students.

II. RESEARCH METHODOLOGY

Design research is quasi-experimental with non-equivalent control group design. Out of 28 elementary schools teachers, 14 people are intervention group and 14 others are included in the control group.

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III.RESULT AND DISCUSSION

The main finding is depicted in the following tables.

Table 1 Knowledge, Attitudes, and Actions Before Training

No	Criteria	Before Getting Educational Intervention					
		Knowledge		Attitude		Action	
		f	%	f	%	f	%
1	Good	3	21.4	14	100	9	64.3
2	Satisfactory	11	78.6	0	0	1	7.1
3	Less	0	0	0	0	4	28.6
Total		14	100	14	100	14	100

From table 1 above it can be seen that before intervention by educating teachers, knowledge of the teachers in the intervention group on health promoting schools effort to conduct proper tooth brushing in primary school students are the majority (78.6%) in the satisfactory level. The attitude of teachers on health promoting schools effort to conduct proper tooth brushing at all elementary school students is entirely in good categories (100%). Furthermore, the actions of teachers on health promoting schools effort in schools to conduct proper brushing teeth in most of the elementary school students are in good stance (64.3%).

Table 2 Knowledge, Attitudes, and Actions After Training

No	Criteria	After Getting Educational Intervention					
		Knowledge		Attitude		Action	
		f	%	f	%	f	%
1	Good	12	85.7	14	100	14	100
2	Satisfactory	2	14.3	0	0	0	0
3	Less	0	0	0	0	0	0
Total		14	100	14	100	14	100

From table 2 above it can be seen that after the intervention in the form of education to the teachers, knowledge of the teachers in the intervention group on health promoting school efforts in schools to conduct proper tooth brushing in primary school students majority (85.7%) are in a good category. The attitude of teachers on health promoting school efforts to hold an appropriate tooth brushing at all elementary school students remain in good classes (100%). But the actions of teachers on health promoting school efforts to conduct proper tooth cleaning at all elementary school students increase into good categories (100%).

Table 3 Teacher's Knowledge, Attitudes, and Actions without Educational Intervention

No.	Criteria	Not Getting Educational Intervention					
		Knowledge,		Attitudes		Action	
		f	%	f	%	f	%
1	Good	7	50	14	100	6	42.9
2	Satisfactory	7	50	0	0	3	21.4
3	Less	0	0	0	0	5	35.7
Total		14	100	14	100	14	100

From table 3 above it can be seen that the teachers who entered the control group, did not receive the educational intervention education, knowledge of Health Promoting School efforts to conduct proper tooth brushing in primary school students are equally divided between good and fairly (50%). The attitude of teachers on Health Promoting School efforts to conduct proper tooth brushing at all elementary school students is in good categories (100%). However, the actions of teachers on Health Promoting School efforts to conduct proper tooth brushing in

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primary school students are only 42.9% in good categories.

Table 4 Activity of Health Promoting School Program for Tooth Brushing Behavioral on Elementary Students Before and After Getting Training

No	Activity of Promoting School Health Program for Tooth Brushing Behavioral	Implementation							
		Before Intervention				After Intervention			
		f	%	f	%	f	%	f	%
1	Counseling event about oral health by teachers	4	28.6	10	71.4	14	100	0	0
2	Mass toothbrush activity in school	6	42.8	8	57.2	14	100	0	0
3	Teacher following the cases of dental training activities are integrated with health workers	6	42.8	8	57.2	14	100	0	0
4	Oral health networking activities for students followed by removal of deciduous teeth timely	7	50	7	50	14	100	0	0
5	Emergency treatment activity for painkiller	3	21.4	11	78.6	3	21.4	11	78.6
6	Basic health service activity is geared on request (<i>care on demand</i>)	1	7.14	13	92.86	2	14.3	12	85.7
7	There is a reference effort for those in need	3	21.4	11	78.6	3	21.4	11	78.6

Table 4 above shows that health promoting school effort for tooth brushing behavior in the elementary school students before the intervention has not much done but after the intervention activities are increased in terms of counseling about oral health by teachers, mass toothbrush activity, teachers participated in the training cases integrated with health workers, and activities oral health netting for students followed by removal of deciduous teeth.

Table 5 Activity of Health Promoting School for Tooth Brushing Behavioral at the Elementary School Students without Educational Intervention

No	Activity of Promoting School Health Program for Tooth Brushing Behavioral	implementation of Activity			
		f	%	f	%
1	Counseling event about oral health by teachers	4	28.6	10	71.4
2	Mass toothbrush activity in school	4	28.6	10	71.4
3	Teacher following the cases of dental training activities are integrated with health workers	2	14.3	12	85.7
4	Oral health networking activities for students followed by removal of deciduous teeth timely	7	50	7	50
5	Emergency treatment activity for painkiller	0	0	14	100
6	Basic health service activity is geared on request (<i>care on demand</i>)	1	7.14	13	92.86
7	There is a reference effort for those in need	1	7.14	13	92.86

Table 5 shows that health promoting school effort for tooth brushing behavior in primary school students indicates that majority (50%) do not even get the intervention in oral health networking activities for student followed by removal of deciduous teeth timely.

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Table 6 Differences in Knowledge, Attitude, and Action of Teacher Before and After Educational Intervention

Test Statistics			
Knowledge of teachers after – knowledge of teacher before	the teacher's attitudes after - the attitude of the teacher before	the teacher's behavior after - the teacher's behavior before	
-3.000 ^a	.000 ^b	-2.121 ^a	
.003	1.000	.034	

- a. Based on negative ranks.
- b. The sum of negative ranks equals the sum of positive ranks.
- c. Wilcoxon Signed Ranks Test

Table 6 shows that there are differences in knowledge teachers before and after intervention with $p = 0.003$. But no difference in the attitudes of teachers before and after intervention with $p = 1$. The same thing also found that no difference in the teacher's behavior before and after the intervention with $p = 0.034$.

Table 7 Different Activities Implementation of Health Promotion at School in Brushing Teeth Behavior.

Test Statistics							
	Extension activities before & after intervention	Toothbrush activities before & after intervention	Teacher's actions before & after intervention	Dental health networking before & after intervention	Medical emergency before & after intervention	Medical services before & after intervention	Reference before & after intervention
N					14		
Exact Sig. (2-tailed)	.002 ^a	.008 ^a	.008 ^a	.031 ^a	1.000 ^a	1.000 ^a	1.000 ^a

- a. Binomial distribution used.
- b. McNemar's Test

In Table 7 after being tested with McNemar test, the result indicates that there is a difference in extension activities of oral health by teachers at the school before and after intervention with $p = 0.002$. There are differences in the activities of mass toothbrush before and after intervention with $p = 0.008$. There are differences in the training integrated with health workers before and after intervention with $p = 0.008$. There is a difference of activities of oral health for students by removal of deciduous teeth timely before and after intervention with $p = 0.031$. However, no differences in the activities of emergency medicine for the relief of pain before and after intervention with $p = 1$. No difference in the operation of essential dental health service upon request (*care on demand*) before and after intervention with $p = 1$. No difference in reference activity for those in need before and after intervention with $p = 1$.

Teachers have an important role in dental health education to the students and teach healthy living practices in schools [6,8,10]. Activities teachers undertaking in schools is leading the mass toothbrush with fluoride toothpaste, implementing rinse the mouth with a solution of flour and providing the on going dental health education in the subjects of exercise and health [1,11].

The condition of the level of knowledge of teachers and students in general that they have pretty good experience. This is due to teachers, doctors, and students involved in the program to cooperate actively in particular health behavior of brushing the teeth at school activities. Regarding age, most of the teacher participants are still young (productive) and have the motivation to improve both knowledge and work performance that drives them to keep learning. High motivation will encourage someone to carry out an activity actively. The health worker who found that

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health workers with high motivation can be active more significant than those with the low motivation [12,14]. In the meantime, the student participants are children with school-age with high curiosity [5,15]. Method of counseling conducted in both directions and use inspiring images which is vital in conveying information [14]. The media used in the learning process will lead to the learning process becomes more attractive so it can be easily understood and cause the target does not become bored quickly. Teachers and students are not dull and promptly understand what material is delivered.

The results showed that there were differences in teachers' knowledge before and after the educational intervention on health promotion in schools for brushing teeth in proper behavior. Likewise, there are differences in the teacher's behavior before and after the educational intervention on health promotion in schools for brushing teeth in correct behavior. It is addressing that training, counseling or other forms of refreshment are required for school teachers and students for updating their knowledge that has not been exposed to promoting schools for tooth brushing behavior in students [16,17]. This training course is not just limited to the dental school material alone but for other things which need improvement such as knowledge on various aspects of the matter as long as they are confronted with the problems that they need get help including communication and motivation theory [17]. They have expected that they can apply personal hygiene behavior in general and specifically dental hygiene in daily life and may influence others to adopt healthy practices. Teachers are an essential source of information for students. When teachers know healthy behaviors, it is expected that this information will be appropriately communicated to the students as there is influence between the resources with the knowledge of a person [16].

The study also found an increase in the skills of teachers in health promoting schools to conduct toothbrushing on the students [9]. This occurred because the simulation and demonstration of health education on the behavior of brushing teeth rightly in the students that researchers do make teachers and students interested in doing so [15]. Knowledge is one of the important domain in shaping a person's actions. The extension services that attract and accompanied the demonstration will be easily remembered and practiced by the participants rather than just given a question and answer it. Training influences a person's skills. Besides, supervision, inspection, and guidance are performed every month by the class teacher assisted by a new physician that stimulates the students to change the pattern of their usual personal hygiene practice [3].

To achieve the success of dental school program, coordination is needed from various stakeholders. The main parties are health centers, school administration, and village administration. Therefore a real step to encourage health workers (teachers and doctors) in schools to run the program continuously. To be sustainable, things to consider is the support of the clinic in the form of knowledge and operational support, while on the school administration is in the way of policy and operational help as well.

IV. CONCLUSION

1. There are differences in the teacher's knowledge of the Health Promoting School program for tooth brushing behavior in elementary school students before and after the educational intervention.
2. There are a difference oral health extension activities by teachers at the school before and after the educational intervention.
3. There are differences in the activities of a mass toothbrush in school before and after the educational intervention.
4. There is a difference in dental health teacher training activities integrated with health workers before and after the educational intervention.
5. There are a difference oral health networking activities for students followed by removal of deciduous teeth timely before and after the educational intervention.

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