

## SCHOOL HEALTH PROGRAM AS AN EDUCATIONAL FACILITY IN INCREASING KNOWLEDGE ABOUT DENTAL AND ORAL HEALTH AT BUNGA BANGSA ELEMENTARY SCHOOL

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### Abstract

Dental and oral health in Indonesia is still a health problem that requires attention. To address dental and oral health problems in Indonesia, particularly in school-age and adult groups, it is necessary to carry out promotive-preventive activities by inviting local universities and business entities that focus on dental and oral health. The most common dental and oral diseases are caries and periodontal disease. One of the strategies of the Ministry of Health of the Republic of Indonesia in reducing the number of dental caries sufferers is by declaring the "Carry Free Indonesia 2030" program. The lack of knowledge and awareness of the Indonesian population regarding dental hygiene and the difficulty of reaching information due to the geographical conditions in several regions in Indonesia which make it impossible to hamper the distribution of education. The Training of Trainer Program targets teachers and parents for 21 days of morning and evening toothbrushes, teaching children and adults about the benefits of good oral hygiene and showing them how to brush their teeth twice a day with fluoride toothpaste. This program aims to provide comprehensive, applicable and sustainable education and knowledge about dental and oral health to school-age children in Indonesia.

**Keyword:** School Health Program, Training of Trainers, Dental and Oral Health, Morning and Evening Toothbrushes, 21 Days.

### INTRODUCTION

Dental and oral health in Indonesia is still a health problem that requires attention. Based on the 2018 Basic Health Research (Riskesdas), it was reported that the prevalence of dental and oral problems in Indonesia is still very high. As many as 57.6 percent of Indonesians have dental and mouth problems, of which 10.2% receive services from dental medical personnel. The proportion of teeth brushing behavior properly, namely twice a day, after eating and before

going to bed is only 2.8% in Indonesian society. Meanwhile, 93% of those who experience dental and mouth problems are school-age children (Risikesdas 2018).

The most common dental and oral disease is caries. One of the strategies of the Ministry of Health of the Republic of Indonesia in reducing the number of dental caries sufferers is by launching the "Indonesia Caries Free 2030" program. The lack of knowledge and awareness of the Indonesian population regarding dental hygiene and the difficulty of reaching information due to the geographical conditions in several regions in Indonesia which make it impossible to hamper the distribution of education.

To address dental and oral health problems in Indonesia, particularly in school-age and adult groups, it is necessary to carry out promotive-preventive activities by inviting local universities and business entities that focus on dental and oral health. Hang Tuah University in collaboration with PT Unilever organizes preventive promotive activities for school-age children called the "School Health Program" based on the Training of Trainers which targets teachers and guardians of students to carry out morning and evening tooth brushing activities for 21 days. This program aims to provide comprehensive, applicable and sustainable education and knowledge about oral and dental health to school-age children in Indonesia through the School Health Program using the training of trainer (ToT) method on dental health to teachers and guardians of students.

## **IMPLEMENTATION METHOD**

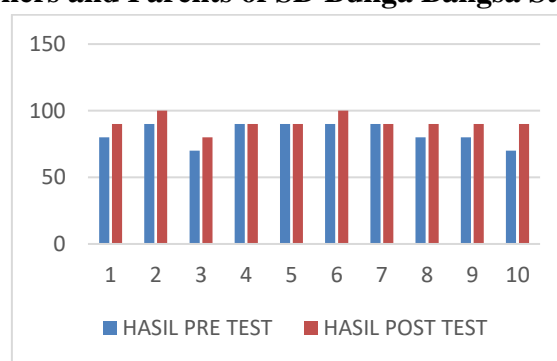
This activity uses a digital/online system through the Zoom application. The participants consisted of 5 parents and 5 teachers at Bunga Bangsa Elementary School. The mechanism of the activity is "Training of Trainer" (ToT) for teachers and student guardians organized by dentists from the Faculty of Dentistry, Hang Tuah University Surabaya. These dentists will be divided to provide dental health education and train brushing teeth to teachers and student guardians online via Zoom media. In providing education, dentists use PowerPoint media and educational videos. Provision of dental health education to teachers and guardians of students using educational videos and the Dental Health Education Calendar (Ekagi) which contains dental and oral health material, consisting of causes of cavities, swollen gums, bleeding gums, how to brush your teeth properly, the right time to brush teeth, as well as foods that are good and not good for dental health.

The mechanism program is "Training of Trainer" (ToT) for teachers and student guardians carried out by dentists, followed by student training by teachers and student guardians. Evaluate the success of the program by conducting a knowledge test about oral health before and after the ToT activity is carried out. Cadres (representatives of teachers and student guardians) who have attended ToT with dentists will provide health education and reporting guidelines to teachers and other student guardians as a guide to disseminate education to other students.

## RESULTS AND DISCUSSION

Each participant in the School Health Program must complete the pre-test and post-test given by the presenters, in order to see an increase in knowledge and understanding of each participant in the Training of Trainers. Data from pre-test and post-test results were processed and statistically tested using Microsoft Excel 365 and SPSS 26 programs.

**Table 1. Pre-Test and Post-Test Results of Participants in the Training of Trainers Teachers and Parents of SD Bunga Bangsa Students**



**Table 2. Different Test Results of Pre-Test and Post-Test of School Health Program Participants**

		Paired Samples Test							
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
UJI	HASIL PRE	-	6.325	2.000	-12.524	-3.476	-	9	.003
BEDA	TEST - HASIL POST TEST	8.000					4.000		

The results of the pre-test and post-test of School Health Program participants showed a significant increase in understanding about health and how to maintain oral hygiene. This is evidenced by the increase in the participants' post-test scores and the overall difference with before training, which is statistically significant.

The biggest dental and oral health problems are caries and periodontal disease. Based on the results of the 2013 Basic Health Research (Riskesdas), the prevalence of the Indonesian population with dental caries is 25.9%. In particular, children aged 10-14 years are more likely to have problems with oral health with a percentage of 25.2%. The biggest dental problems occur due to lack of maintaining healthy teeth and mouth. Children's teeth and mouth that are not kept clean will be susceptible to caries which causes complaints of pain and loss of teeth (Ali, et.al, 2016).

Dental caries and periodontal disease are generally affected by a lack of knowledge about maintaining dental and oral hygiene as well as cariogenic foods and drinks. Lack of knowledge in maintaining dental and oral hygiene can result in higher rates of caries in children. Preventive measures that can be taken are cleaning the mouth by brushing, flossing, and regular dental checks to the dentist (Asep, 2013).

Brushing your teeth is the easiest plaque prevention measure to do. There are several

techniques in brushing teeth, but the combination technique is the technique most often used in general. This combination technique combines horizontal techniques (back and forth), vertical techniques (up and down), and circular techniques (twisting). So by using this combination technique, a toothbrush can reach all parts of the teeth (Praetyowati et. Al, 2018).



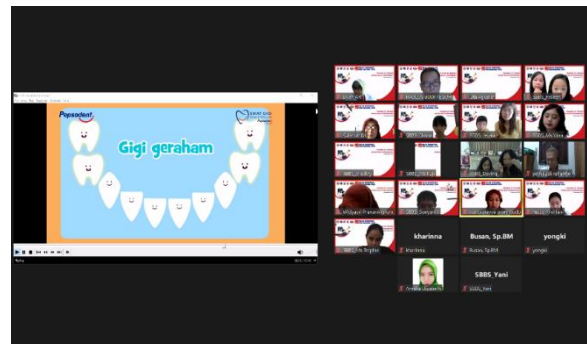
**Figure 1: Group preparation before the School Health Program starts**



**Figure 2: Implementation of Pre-Test**



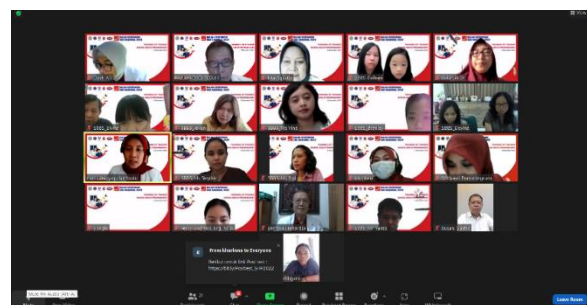
**Figure 3: Material presentation by dentists to teachers and parents of students**



**Figure 4: Play educational videos for teachers and parents**



**Figure 5: Question and answer session of parents and dentists**



**Figure 6: Implementation of Post-Test**

## CONCLUSION

Providing education to parents and teachers at Bunga Bangsa Elementary School in the School Health Program can increase knowledge about dental and oral health at Bunga Bangsa Elementary School. This activity is an effort for students at Bunga Bangsa Elementary School to maintain healthy teeth and mouth so that they can reduce the number of sufferers of dental caries.

## REFERENCES

- Ali RA, Wowor VNS, Mintjelungan CN. The Effectiveness of Dental Health Education Accompanied by a Demonstration of How to Brush Teeth at the Dental and Oral Levels of Elementary School Children. *Unsrat Pharmaceutical Scientific Journal* Vol 5 no 1 February 2016: 164-172
- Annisa A, Ahmad I. Mechanism of fluorine as caries control in children's teeth. *Indonesian Journal of Pediatrics*. March 2018; 1(1): 63-69
- ASEP US. Brushing Teeth Main Action For Dental Health. *Husada Scale Journal*. 2013 vol 10 no 2: 194-199
- Byeon S, Lee M, Bae T. The Effect of Different Fluoride Application Methods on the Remineralization of Initial Carious Lesions. *Restoration Dent Endod* 2016(41): 121-129
- Domen K, Sterbenk P, Artnik B. Fluoride: A Review of Use and Effects on Health. *Mater Sociomed*. 2016 (28): 133-137.
- Kumar B, Pawar P, Iyer A, Das P. Fluorides and Dental Health: A Review. *J Res Adv Dent* 2017; 6:3: 119-126
- Polat G, Akgun O, Simsek B. Fluoride Containing Anti Caries pH Sensitive Release System and Its effect on *Streptococcus mutans*. *red. Rep. Fluoride*. 20