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DESCRIPTION OF TOOTH-BRUSHING BEHAVIOR BEFORE AND AFTER COUNSELING WITH ROLLING TECHNIQUE IN SDN MELONG ASIH CIMAHI

(DESKRIPSI PERILAKU MENYIKAT GIGI SEBELUM DAN SESUDAH KONSELING DENGAN TEKNIK ROLLING PADA SISWA SDN MELONG ASIH CIMAHI)

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ABSTRACT

Correct and routine brushing behavior is very influential on oral cavity health. The knowledge possessed by the individual will determine his health behavior so that someone with good knowledge will know the right attitude and behavior when exposed to disease. Brushing your teeth properly and regularly is very influential on the health of the oral cavity, so there needs to be counseling on how to brush your teeth properly and correctly. This study aimed to determine the picture of brushing behavior before and after counseling with *Rolling Technique* in Grade 3 Students of SDN Melong Asih 5. This study used an analytical descriptive study design by conducting counseling followed by dental and oral hygiene examination with the *Oral Hygiene Index Simplified (OHI-S)* index method. Based on the results obtained, it can be concluded that the OHI-S index in grade 3 students of SD Melong Asih

5 has decreased after counseling with poster media and dental pantum props that showed promising results; the rolling technique is quite effective in reducing the OHI-S index in SD Melong Asih 5 Cimahi students.

Keywords: : brushing behavior; OHI-S index; tooth brushing technique

ABSTRAK

Perilaku menyikat gigi yang benar dan rutin sangat berpengaruh terhadap kesehatan pada rongga mulut. Pengetahuan yang dimiliki oleh individu tersebut akan menentukan perilakunya dalam hal kesehatan sehingga seseorang yang memiliki pengetahuan yang baik akan tahu sikap dan perilaku yang tepat bila terkena penyakit. Menyikat gigi yang benar dan rutin sangat berpengaruh terhadap kesehatan pada rongga mulut sehingga perlu adanya penyuluhan mengenai cara menyikat gigi yang baik dan benar. Tujuan dari penelitian ini adalah untuk mengetahui gambaran perilaku menyikat gigi sebelum dan sesudah penyuluhan dengan Teknik Rolling pada Siswa Kelas 3 SDN Melong Asih 5. Penelitian ini menggunakan rancangan studi deskriptif analitik dengan cara dilakukan penyuluhan dilanjutkan dengan pemeriksaan kebersihan gigi dan mulut dengan metode indeks Oral Hygiene Index Simplified (OHI-S). Berdasarkan hasil yang didapatkan dapat disimpulkan bahwa indeks OHI-S pada siswa kelas 3 SD Melong Asih 5 mengalami penurunan setelah dilakukan pemberian penyuluhan dengan media poster dan alat peraga pantum gigi yang menunjukan hasil baik, teknik rolling cukup efektif dalam penurunan indeks OHI-S pada siswa SD Melong Asih 5.

***Kata kunci** Indeks OHI-S; perilaku menyikat gigi; teknik menyikat gigi*

INTRODUCTION

Based on the results of data from

Basic Health Research (Riskesdas) in 2018, it is stated that the most significant proportion of dental problems in Indonesia is damaged / cavity / sick teeth (45.3%). Risk data also shows the prevalence of dental caries in children aged 3-4 years as much as 81.1%, at the age of 5-9 years as much as 92.6%, and at the age of 10-14 as much as 73.4%. Half of the 75 million children in Indonesia have dental caries, which is growing yearly.[1] The cause of the disease is due to the consumption of sweet and sticky foods, laziness or wrong brushing of teeth, lack of attention to dental and oral health, or even never checking dental health.

Dental health knowledge also influences individual behavior in maintaining oral and dental health. Correct and routine brushing behavior is very influential on oral cavity health. Brushing behavior that is done correctly, such as brushing teeth regularly two times a day, brushing teeth after meals, the length of the brushing process 2-3 minutes, and using fluoride toothpaste, are factors that can prevent dental caries that cause tooth loss. Community dental maintenance behavior in maintaining dental and oral health indicators is variable brushing, while brushing is the most recommended primary preventive measure. Brushing your teeth is cleaning from food debris, bacteria and plaque. You must pay attention to the right time to clean your teeth, the right tools to clean your teeth, and the right way to clean your teeth.[3.4]

Based on this, the importance of maintaining healthy teeth and mouth by brushing your teeth properly and correctly to avoid dental and oral diseases. Brushing your teeth properly and regularly is very influential on the health of the oral cavity, so there needs to be counseling on how to brush your teeth properly and correctly. So, we are interested in conducting a study to determine the picture of brushing behavior before and after counseling with the Rolling Technique in Grade 3 Students of SDN Melong Asih 5 Cimahi.

METHOD

This study used an analytical descriptive study design to obtain an overview of brushing behavior before and after counseling on rolling techniques in grade 3 students of SDN 5 Melong Asih in the Melong Asih Cimahi Health Center area. The sample in this study was grade 3 elementary school students at SDN 5 Melong Asih who met the inclusion and exclusion criteria.

The inclusion criteria for this study are all grade 3 elementary school students, cooperative students and present at the research. The exclusion criteria for the

study were disapproving parents and uncooperative students. Large samples were taken, as many as 24 people. The independent variable in this study is the level of OHI-S in grade 3 students. The dependent variable in this study is the behavior of brushing habits in grade 3 students of SDN 5 Melong Asih Cimahi in 2023. The tools and materials used are OHI-S examination forms, masks, gloves, mouth glass, sonde, tray, *disclosing* solution, tissue, alcohol, mouthwash, and dental phantum.

This study examined dental and oral hygiene with the *Oral Hygiene Index Simplified (OHI-S)* index method. Researchers examined the OHI-S index before and after counseling on how to brush teeth with *rolling techniques* on grade 3 students of SDN 5 Melong Asih. This research procedure is to examine and assess the accumulation of debris, calculus visually and using an explorer starting from the incisal/occlusal dental index examined (16,11,26,36,31,46), calculate the overall debris and calculus values according to the formula, then calculate the OHI-S value.

The data obtained from the results of this study were analyzed using *Microsoft Excel* and presented in tabular form so that it became a result and conclusion. The research was conducted on October 27, 2023, at SDN 5 Melong Asih in the Melong Asih Cimahi Health Center.

RESULT

Counseling activities carried out in the Melong Asih Health Center area were carried out at SDN 5 Melong Asih for grade 3 elementary school children, totaling 24 people. Hygiene checks and dental and oral health were performed using the *Oral Hygiene Index Simplified (OHI-S) index method*.

Dental and oral health surveys are used to determine the status of dental and oral hygiene through the *Oral Hygiene Index (OHI) method.* OHI calculation is obtained by adding up the *Debris Index (DI)* and *Calculus Index (CI),* which are measured by examining all teeth.

A person's oral hygiene state is assessed by the presence of food waste and calculus on the surface of the teeth using the *Oral Hygiene Index Simplified (*OHI-S) index from Green and Vermilion (1964). The *Simplified Oral Hygiene Index* (OHI-S) is an index to measure the area of tooth surface covered by oral debris and calculus. The following are the results of OHI-S conducted on SDN 5 Melong Asih children.

Table 1. OHI-S index examination results before counseling and toothbrush

No	Name	Debris Index			Calculus Index			OHI-S Index	
		JML	ID	Category	JML	IK	Category	OHI-S	Category
1.	F	10	1.6	Keep	0	0	Good	1.6	(Medium)
2.	S	8	1.3	Keep	3	0.5	Good	1.8	(Medium)
3.	R.P.	6	1	Keep	4	0.6	Good	1.6	(Medium)
4.	H	6	1	Keep	5	0.8	Keep	1.8	(Medium)
5.	S.A.	15	2.5	Keep	3	0.5	Good	3.0	(Bad)
6.	S	6	1	Keep	4	0.6	Good	1.6	(Medium)
7.	S.S.	17	2.8	Bad	1	0.1	Good	2.9	(Bad)
8.	S.F.	2	0.3	Good	0	0	Good	0.3	(Ok)
9.	H	6	1	Keep	5	0.8	Keep	1.8	(Medium)
10.	MFA	3	0.5	Good	1	0.1	Good	0.6	(Ok)
11.	N	4	0.6	Good	3	0.5	Good	1.1	(Medium)
12.	F	18	3	Bad	0	0	Good	3	(Bad)
13.	R	14	2.3	Bad	0	0	Good	2.3	(Bad)
14.	R.S.	4	0.6	Good	0	0	Good	0.6	(Ok)
15.	MP	12	2	Bad	4	0.6	Good	2.6	(Bad)
16.	RMA	6	1	Keep	0	0	Good	1	(Medium)
17.	D.R.	11	1.8	Keep	1	0.1	Good	1.9	(Bad)
18.	MI	15	2.5	Bad	6	1	Keep	3.5	(Bad)
19.	KRA	14	2.3	Bad	4	0.6	Good	2.9	(Bad)
20.	AXLE	8	1.3	Keep	1	0.1	Good	1.4	(Medium)
21.	M	7	1.1	Keep	1	0.1	Good	1.2	(Medium)
22.	Y	13	2.1	Bad	3	0.5	Good	2.6	(Bad)
23.	Z	8	1.3	Keep	3	0.5	Good	1.8	(Medium)

Table 1 shows that the OHI-S index in most of the 60% of children before counseling was moderate, 40% bad, and 10% good. After the examination, counseling was then carried out using poster media.

Table 2. OHI-S index test results before counseling and after toothbrush

No	Name	Debris Index			Calculus Index			OHI-S Index	
		JML	ID	Category	JML	IK	Category	OHI-S	Category
1.	F	5	0.8	Keep	0	0	Good	0.8	(Medium)
2.	S	7	1.1	Keep	3	0.5	Good	1.6	(Medium)
3.	R.P.	4	0.6	Good	4	0.6	Good	1.2	(Medium)
4.	H	6	1	Keep	5	0.8	Keep	1.8	(Medium)
5.	S.A.	3	0.5	Good	3	0.5	Good	1.0	(Medium)
6.	S	1	0.1	Good	4	0.6	Good	0.7	(Ok)
7.	S.S.	13	2.1	Bad	1	0.1	Good	2.2	(Bad)
8.	S.F.	2	0.3	Good	0	0	Good	0.3	(Ok)
9.	H	3	0.5	Good	5	0.8	Keep	1.3	(Medium)
10.	MFA	2	0.3	Good	1	0.1	Good	0.6	(Ok)
11.	N	3	0.5	Good	3	0.5	Good	1	(Medium)
12.	F	7	1.1	Keep	0	0	Good	1.1	(Medium)
13.	R	7	1.1	Keep	0	0	Good	1.1	(Medium)

14.	R.S.	2	0.3	Good	0	0	Good	0.3	(Ok)
15.	MP	7	1.1	Bad	4	0.6	Good	1.7	(Medium)
16.	RMA	7	1.1	Keep	0	0	Good	1.1	(Medium)
17.	D.R.	7	1.1	Keep	1	0.1	Good	1.2	(Medium)
18.	MI	11	1.8	Keep	6	1	Keep	2.8	(Bad)
19.	KRA	5	0.8	Keep	4	0.6	Good	1.4	(Medium)
20.	AXLE	0	0	Good	1	0.1	Good	0.1	(Ok)
21.	M	4	0.6	Good	1	0.1	Good	0.7	(Medium)
22.	Y	4	0.6	Good	3	0.5	Good	1.1	(Medium)
23.	Z	8	1.3	Keep	3	0.5	Good	1.8	(Medium)

Table 2 shows that the OHI-S index in most of the 70% of children before counseling is moderate, 25% good, and 5% bad. After the examination, re-education was conducted for students who got bad results.

Table 3. OHI-S index examination results after counseling and after toothbrush

		Debris Index			**Calculus Index**			**OHI-S Index**	
No	**Name**	JML	ID	Category	JML	IK	Category	OHI-S	Category
1.	F	3	0.5	Good	0	0	Good	0.5	(Ok)
2.	S	1	0.1	Good	3	0.5	Good	0.6	(Ok)
3.	R.P.	3	0.5	Good	4	0.6	Good	1.1	(Medium)
4.	H	1	0.1	Good	5	0.8	Keep	0.9	(Medium)
5.	S.A.	1	0.1	Good	3	0.5	Good	0.6	(Ok)
6.	S	2	0.3	Good	4	0.6	Good	0.9	(Medium)
7.	S.S.	1	0.1	Good	1	0.1	Good	0.2	(Ok)
8.	S.F.	0	0	Good	0	0	Good	0	(Ok)
9.	H	2	0.3	Good	5	0.8	Keep	1.1	(Medium)
10.	MFA	2	0.3	Good	1	0.1	Good	0.4	(Ok)
11.	N	1	0.1	Good	3	0.5	Good	0.6	(Ok)
12.	F	4	0.6	Good	0	0	Good	0.6	(Ok)
13.	R	1	0.1	Good	0	0	Good	0.1	(Ok)
14.	R.S.	0	0	Good	0	0	Good	0	(Ok)
15.	MP	6	1	Keep	4	0.6	Good	1.6	(Medium)
16.	RMA	2	0.3	Good	0	0	Good	0.3	(Ok)
17.	D.R.	3	0.5	Good	1	0.1	Good	0.6	(Ok)
18.	MI	0	0	Good	6	1	Keep	1	(Medium)
19.	KRA	4	0.6	Good	4	0.6	Good	1.2	(Medium)
20.	AXLE	0	0	Good	1	0.1	Good	0.1	(Ok)
21.	M	5	0.8	Keep	1	0.1	Good	0.9	(Medium)
22.	Y	3	0.5	Good	3	0.5	Good	1	(Medium)
23.	Z	2	0.3	Good	3	0.5	Good	0.8	(Medium)

Table 4.3 shows that the OHI-S index in most 20% of children before counseling is moderate, 0% bad, and 80% good. After examination and counseling of the student.

DISCUSSION

Dental caries is a disease of the hard tissues of the teeth characterized by tissue damage ranging from enamel dentin to pulp. The clinical symptom of dental caries is demineralization of the tooth's hard tissues, which is then followed by damage to its organic matter, resulting in bacterial

invasion and pulp death and causing the spread of infection to periapical tissue, which can cause pain.[5,9]

Dental caries can occur due to the influence of brushing habits such as frequency of brushing teeth, brushing time, and how to brush teeth incorrectly, like consuming sweet and sticky foods but not rinsing your mouth immediately; there are also external factors as predisposing factors including age, gender, geographical location, economic level, as well as knowledge, attitudes, and behaviors towards dental health maintenance.[6]

Dental and oral health is the state in which the oral cavity, including the teeth and supporting tissue structures are free from disease and pain, functioning optimally, bringing confidence and interpersonal relationships to the highest level. Riskesdas 2018 shows that 57.6% of Indonesians experience dental and oral problems. The prevalence of caries in Indonesia also reached 88.8%, with an average DMF-T index of 7.1.[7,8]

Oral Hygiene Index Simplified (OHI-S) is a method to measure the state of dental and oral hygiene assessed from the presence of debris index (food waste) and calculus (tartar) on the tooth surface by examining only six index teeth, namely teeth 16, 11, 26, 36, 31 and 46.

In this study, the preparation of tools and materials was carried out in advance such as examination forms, masks, gloves, examination instruments (mouth glass, sonde), trays for placing instruments, *disclosing solutions, tissue, alcohol, mouthwashes, dental phantum, brushes, and toothpaste.*

After that, prepare the plaque index check form and start performing debris index and calculus checks. The examination is visually performed using an explorer applied to the tooth surface starting from the incision/occlusal surface, then scored based on criteria. You were conducting counseling on brushing techniques, rolling teeth and how to maintain healthy teeth and mouth using posters and dental Phantum. Use the correct rolling technique to brush your teeth together again and finally check again.

The age factor affects the level of knowledge; the older the respondents, the more experience and information they will receive to increase their understanding of the function of dental maintenance. Environment and socio-cultural relationships can also affect the learning process and help respondents gain more experience. It affects the way respondents think. According to Suryani (2017), the factor causing the OHI-S index is medium/poor due to a lack of attention in choosing a toothbrush with a small brush

head size to better reach all parts of the teeth well, including the most difficult-to-reach. Puspita and Sirat (2016) stated that another factor causing respondents to have a moderate/wrong OHI-S index was caused by improper brushing time. Adequate toothbrush time should be done 30 minutes–1 hour after breakfast and night before going to bed, while the effective length of time in brushing teeth is at least 2 minutes.

CONCLUSION

Based on the results of research by students of SD Grade 3 SD 5 Melong Asih, it can be concluded that the brushing technique used is a rolling technique with a relatively good average plaque index. It is recommended for schools to be active by UKS teachers to improve the degree of dental and oral hygiene.[10] Further research is needed to determine the factors that affect dental and oral health in elementary school children to further enhance the status of dental and oral hygiene by providing counseling on dental and oral health and teaching children to brush their teeth properly and correctly.

CONFLICT OF INTEREST

The author has stated that in this article, there is no potential conflict of interest from both the author and agencies in connection with the research that has been carried out, both based on authorship and publication.

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