



**Effective Methods of Brushing Teeth on Reducing Plaque
Score at the Fifth Class of Semen Padang Elementary
Schooling Indarung Village Lubuk Kilangan Sub district,
Indonesia**

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Abstract

Dental health problems in Indonesia are still attractive, because many of the Indonesian people who still poor in dental hygiene and mouth. Dental health efforts need to be reviewed from the aspects of the environment, education, public awareness, and handling of dental health including the prevention and treatment. Dental health education that has been recognized with DHE (Dental Health Education) is the primary level of prevention needs to be done in school. Tooth brushing methods plays an important role in maintaining the cleanliness and health of teeth and mouth. The aim of this study was to discover methods of brushing teeth is effective in lowering plaque scores to student in the fifth class of Semen Padang elementary school in Indarung Village Lubuk Kilangan Sub-district. This study is observational analytic with the cross sectional design. Subject of the research consisted of 24 students who selected the non-probability sampling divided into 2 groups of 12 students who perform Bass method of brushing teeth, while the remaining 12 people to do the brushing Charter method. Data be obtained using the t-test analysis program SPSS.

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The results indicate a score Bass method 73.3992%, while the method Charter 66.7308%. The conclusion; the Bass method was more effective in reducing plaque score compared to Charter method.

Keywords: plaque scores, brushing teeth, Bass method, Charter method

1. Introduction

Dental health problem in Indonesia is interesting, because until recently the people of Indonesia still less concerned about dental health and hygiene of the mouth [1,2]. The problems faced today is poor oral hygiene society of Indonesia, namely 80% had oral hygiene Index [2,3]. This condition has begun to be found at a young age, almost 1/3 of a whole segment of the dental there are calculus [4,5].

Education on dental health and oral hygiene in children, affected the role and economic background, mother, parent education as well as the habit of maintaining dental health in families.⁴Educational Approach is one of the most important ways to prevent problems in dental hygiene [6]. One of the principles of education is instilling habits to children at a young age, it is easier than changing it in adulthood [4,5]. This research aims to show of the level of children's oral hygiene that is seen from the plaque score numbers are measured before and after tooth brushing method is done. Know which tooth brushing method more effective for lowering the score plaque.

Method of brushing teeth plays an important role in maintaining hygiene and oral health, therefore please note methods effective in doing the brushing of the teeth. This research is to know the tooth brushing Method which is more effective in lowering the index particularly oral hygiene score plaque at Semen Padang students at the fifth class of Semen Padang elementary schooling Indarung village Lubuk Kilangan sub district.

2. Materials and Methods

This research is observational analytical research design with cross sectional. The subject consists of 24 students at the fifth class of Semen Padang elementary school that was taken using a non-probability sampling techniques. Subjects who meet the inclusion criteria included in the study were divided into 2 groups consisted of 12 disciples do the brushing teeth with Bass method, 12 other students brushing teeth with Charter method. Measurement of score plaque disclosing solution by using the method of O'leary. Measurement of score the plaque was done before and after tooth brushing methods with t-test analytic.

3. Results

The results showed a mean score of plaque before brushing teeth using Bass method obtained $90.7925\% \pm 2.96897$ and after brushing teeth $17.3933\% \pm 3.78234$. The results showed significant differences ($p = 0.000$) (table 1). This plaque score decrease occurred mainly on the surface of the cervical and sulcus of the gingival.

Table 1: Difference Score Plaque before and after brushingteeth using the method of Bass

| Bass Method | n | Mean ± SD | Min | Max | P |
|-------------|----|-----------------|-------|-------|-------|
| Before | 12 | 90.7925±2.96897 | 86.45 | 94.79 | 0.000 |
| After | 12 | 17.3933±3.78234 | 10.22 | 22.91 | 0.000 |

Table 2: The difference of plaque before and after brushing teeth using the method of Charter

| Charter Method | N | Mean ±SD | Min | Max | P |
|----------------|----|-------------------|-------|-------|-------|
| Before | 12 | 88.0067 ± 4.20267 | 79.16 | 94.79 | 0.000 |
| After | 12 | 21.2758± 3.59540 | 14.58 | 28.00 | 0.000 |

Difference score of plaque before and after brushing teeth is performed by using methods of the Charter, it can be seen that the average score of plaque before brushing teeth using Charter method obtained 88.0067% ± 4.20267 and after brushing teeth 21.2758% ± 3.59540. The results showed significant differences (p = 0.000)(Table 2).

Table 3: Difference score plaque brushing with Bass and method of using the method of Charter

| Method | n | Mean ± SD | t-table | t-count | p |
|---------|----|------------------|---------|---------|-------|
| Bass | 12 | 73.3992± 5.44519 | 2.179 | 3.361 | 0.003 |
| Charter | 12 | 66.7308±4.19237 | 2.179 | 3.361 | 0.003 |

Difference score plaque brushing teeth using the method of Bass and Charter are shown table 3. On the method of the average score obtained Bass plaque 73.3992% with a standard deviation of 5.44519. Charter method 66.7308% with a standard deviation of 4.19237. Results of statistical tests taken value of $p = 0.003$ 5% alpha ($p < 0.05$) where t 3.361 count greater than t -table 2.179. Decrease in plaque score higher on the Bass method of the Charter on the method because the method of Bass not only can get of the plaques on the surface of the buccal and labial areas but also in the area of the sulcus of the gingival. Charter method can also get of the plaques on the buccal and labial areas but cannot get of the plaques on the sulcus of the gingival and the method is more concentrated on regions proximal.

Table 4: Difference Score Plaque brushing teeth using the method of Bass and Charter method based on the sex

| Method | Boy | Girl |
|---------|--------|--------|
| Bass | 74.75% | 72.04% |
| Charter | 64.45% | 68.17% |

Difference score plaque brushing teeth with using methods of bass and Charter based on the gender of the attempted on table 4. Male students brushing teeth using the method of the average score obtained Bass plaque 74.75% and 72.04% female students. Male students brushing teeth using methods Charter obtained average scores 64.45% and female plaque 68.17%. There is no meaningful difference between the decreases in plaque score his men as well as women who are brushing your teeth by using the method or method of Bass Charter.

4. Discussion

Decrease in score plaque before and after tooth brushing is done by the method of Bass obtained 73.3992%, and 66.7308% Charter methods, the results show significant differences. Bass method is more effective in lowering the score the plaque rather than Charter method. Gibson and his colleagues [7] say that brushing teeth with Bass more effective methods of cleaning debris and plaque which is part of the cervix of the gingival.

A group of students who use the Bass method there are many removal of plaque on the buccal and labial areas especially in the cervical area while on the gingival distal there is still a little plaque that has yet to be removed in some regio teeth posterior, but this method is more effective in lowering the score plaque from the Charter, only the methods needed to exercise better tooth brushing again. The students use a Charter there are many methods of removal of plaque on the labial and buccal but not so much on the cervix gingival distal area while in the posterior teeth still present a little plaque that has yet to be removed. It can be concluded also that between the two methods of brushing teeth has a difference in lowering the score plaque.

Most of the students have already realized that brushing your teeth is good and right is 2-3 times a day, as well as the most appropriate time brushing your teeth after a meal, but is in practice still not regularly, but it can still be repaired it only takes a little time to familiarize the students do so regularly every day.

Bass methods are highly recommended by the Health Department/Directorate dental health because in addition to clearing the area of interproximal gingival sulcus, region, this method can also massage the gums resulting in blood vessel hyperaemia, good nutrition, secretion, and good absorption so that the gum tissue to become healthy and functioning properly [8,9]. The use Charter of methods requires a detailed instruction, time consuming and difficult to do especially for children, this method cannot clean the sulcus of the gingival but concentrate on the proximal and interdental areas [11,13,14]

Bass method is one of the popular methods of tooth brushing method recommended by most dentist lately. Particularly for children because efficiently over time, it is also effective in its use. This method is used because it is proven effective would be the creation of oral hygiene conditions, because these methods are not only clean the surface of the teeth, but also cleans the surface of the gums where the gum is one of the favorite places for germs to germinate [12,15]. Improving oral health in children need to do outreach and training of mass through the dental health education which is carried out annually [4,10].

Any method used from the many recommended methods, the most important is the pursuit for all dental surfaces are always free from dental plaque. In earlier studies found that there was not any one method is better than the other because each method has its own advantages [8,9].

5. Conclusion

Conclusion of this study that Bass method was more effective in reducing plaque score compare to Charter method.

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