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by Ujang Abdul Muis

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Smile Card as a Breakthrough to Increase Dental and Oral Hygiene Level in Primary School Students in Jakarta

Jusuf Kristianto¹, Ita Yulita¹, Dwi Priharti¹, Heru Santoso Wahito Nugroho²

¹Health Polytechnic of Jakarta I, Indonesia, ²Health Polytechnic of Surabaya, Indonesia

ABSTRACT

School dental health services are implemented in an integrated manner through primary dental and oral health activities at the Public Health Center with the activities in the form of the School Dental Health Unit (UKGS) program. Various methods are used to achieve maximum dental and oral health, such as promotion and demonstration of toothbrushes for elementary school children. One way to improve children's behavior in maintaining dental and oral hygiene is by providing dental health education on how to brush teeth properly and correctly by using appropriate and appropriate aids or media. A Smile Card is one of the right methods to change children's behavior in maintaining dental and oral hygiene. This study aims to determine the effect of Smile Card on the oral and dental health of children. The sample were 150 people divided into groups of intervention and control. The results showed that there were differences in the influence of knowledge and the role of parents in improving dental and oral hygiene between the groups given the Smile Card intervention with the group not given the Smile Card, where $p = 0.001 < 0.05$. It can be concluded that the knowledge and role of parents influence the improvement of children's oral and dental hygiene.

Keywords: Smile cards, Oral and dental hygiene, Elementary school students

INTRODUCTION

School Dental Health Unit (UKGS) activities are part of the activities of the School Health Unit (UKS) which are routinely carried out in schools with the aim of fostering and realizing student independence for healthy living that enables the realization of optimal community health.

The presentation of the population who had dental and oral problems according to Basic Health Research (Rikesdas) in 2007 and 2013 increased from 23.2% to 25.9%. Among people who have dental and oral health problems, the percentage of the population who received dental medical care increased from 29.7% in 2007 to 31.1% in 2013. Similar to the Effective Medical Demand (EMD) which is defined as the percentage of the problematic population with teeth and mouth

in the last 12 months multiplied by the percentage of residents who received dental care or treatment from dental medical personnel increased from 6.9% in 2007 to 8.1% in 2013. Most of the population aged ≥ 10 years (93.8%) brush their teeth every day. Most residents also brush their teeth during an afternoon shower, which is 79.7%. Most residents brush their teeth every day during a morning shower or an afternoon bath. The true habit of brushing the Indonesian population is only 2.3%⁽¹⁾. The proportion of people who brush their teeth every day after breakfast is only 12.6% and before going to bed at night only 28.7%. This may be due to a lack of knowledge and awareness of the teeth-mouth hygiene, as well as areas that are still difficult to reach information due to varying geographical conditions. Three provinces that had the highest percentage in brushing their teeth were DKI Jakarta Province (98.5%), West Java Province (95.8%), and East Kalimantan Province (95.5%), while the lowest was in NTT Province (74.7%) and Papua Province (58.4%)⁽¹⁾. Factors of economic and income levels, as well as knowledge, show that low socioeconomic conditions have little awareness and knowledge of the importance of maintaining dental health compared to people who have a higher socioeconomic life. Other

Corresponding author:

Heru Santoso Wahito Nugroho

Health Polytechnic of Surabaya, Indonesia

Jalan Pucang Jajar Tengah 56 Surabaya, Indonesia

Email: heruswn@gmail.com

factors are attitudes and behavior towards dental health maintenance such as oral hygiene related to the frequency and habits of brushing teeth, the number and frequency of cariogenic foods that cause caries ⁽²⁾.

MATERIALS AND METHOD

This research was an attempt to create a new method by using a Smile Card to improve the degree of dental and oral hygiene in elementary school students in Jakarta. This research was conducted in Elementary School in Jakarta in 2016 with a total sample of 150 people. The first group was the intervention group that was given dental health education with a demonstration of brushing their teeth with a jaw model aids and accompanied by a Smile Card and the control group was given a tooth brushing education using a jaw model without Smile Card. The main sources needed in this study are 1) toothbrush, 2) students, 3) parents of students, and 4) Smile Cards.

The making of this new method was carried out in several steps: 1) promotion by demonstration and giving a Smile Card, 2) improving the family's ability in early prevention of cavities, 3) monitoring brushing teeth with the Smile Card, 4) testing methods through field research, 5) conclusion and submission of recommendations.

FINDINGS

The Role of Smile Card to Knowledge of Dental and Oral Care

The choice of method is based on the theory that dental health care by brushing teeth using a jaw model, as well as mentoring using a Smile Card has better results than without mentoring. Parental participation is very necessary for caring for, educating, encouraging and supervising. Mother plays an important role in maintaining the health of the child's teeth in underlying the formation of positive behaviors that support children's dental health. The attitude and behavior of parents in maintaining dental health has a significant influence on children's behavior⁽³⁾. Giving a Smile Card will help in monitoring the child's brushing habits by the teacher and parents. Children's oral and dental health depends on children's adherence and mentoring parents in caring for them⁽⁴⁾. With the willingness of parents to start treatment on the child's teeth, a better child's oral and dental health will be obtained⁽⁵⁾. For more details, see Table 1.

Table 1. Distribution of knowledge of respondents given smile cards with control group respondents against dental and oral health elementary school children in Jakarta

Variable	Mean	SD	p-value	n
Knowledge				
Treatment	14.2800	1.0042	0.001	75
Control	13.4733	1.6777		75

The Table 1 shows that there was a significant difference of knowledge between the respondents given the Smile Card intervention with the respondents who are not given the Smile Card (control), namely $p = 0.001$. The mean score of knowledge of the respondents given the smiling card $14.2800 + 1.0042$ and control group $13.4733 + 1.6777$. Thus granting a Smile Card can increase elementary students' knowledge about dental and oral health.

Effect of Smile Cards on the Role of Parents in the Dental and Oral Care

With the health promotion intervention program by demonstrating and giving a Smile Card, as well as improving the ability of families to make early prevention of cavities with the habit of brushing their teeth regularly, will improve the ability of the community, especially elementary school students and can be observed the habit of brushing their teeth. Health promotion intervention program with the resulting Smile Card can be used as dental and oral health services in order to carry out various promotive and preventive activities in dental and oral health. This intervention will be strongly related to family empowerment as the smallest group in society, as an effort to improve the quality of dental and oral health in various dental and oral health services, both in rural and urban areas. Therefore, knowledge, especially of the mother's knowledge of dental and oral hygiene, greatly determines the cleanliness of the child's teeth and mouth^{(6), (7)}. For more details can be seen in Table 2.

Table 2. Distribution of parent roles in children given a smile card with control group on dental and oral health of primary school children in Jakarta

Variable	Mean	SD	p-value	n
The role of parents				
Treatment	6.63	0.700	0.001	75
Control	5.84	0.883		75

The results of the analysis showed that there were significant differences in the role of parents between students who were given a Smile Card intervention and those who were not given a Smile Card (control), namely $p = 0.001$. The mean score of role of parents was given Smile Card 6.63 ± 0.700 and control group 5.84 ± 0.883 . Thus giving Smile Card can improve the role of parents in maintaining oral hygiene.

Recommendations

From the results of the analysis, it was concluded that the Smile Card accompanied by a demonstration of brushing teeth proven to improve the dental and oral hygiene of elementary school students in Jakarta. The most powerful influence in improving oral hygiene is the sole factor of parents and is shown to interact strongly with knowledge in efforts to improve dental hygiene of primary school students in Jakarta. It is recommended that educators or extension workers, both dental health workers and dental health cadres, conduct dental and oral health promotions and demonstrations to be accompanied by a Smile Card so that optimal goals can be obtained for improving the level of dental and oral hygiene of elementary school children.

DISCUSSION

This study presents the use of smile cards as a method to improve the dental and oral health of elementary school students. Child and parent knowledge about dental and oral health is very important in shaping behaviors that support oral and dental hygiene of parents' children with low knowledge of dental and oral health are predisposing factors for behavior that does not support children's oral and dental health^{(4),(8)}. This can happen because parents are the main social force that influences children's development, including dental and oral health care for children^{(3),(9),(10)}. Knowledge is influenced by education, especially promotion and demonstration of dental and oral hygiene care. Health education is the simplest and

most cost-effective approach^{(11),(12)}. Extension education in the form of promotions and demonstrations equipped with a smile card will make it easier for children and parents, especially mothers, to adhere to children's oral and dental health care. Health education increases awareness of the importance of dental and oral health⁽⁶⁾. Therefore the existence of a smile card will help children and mothers to care for the health of their teeth and mouth. The attention of parents, especially mothers, to the health of the teeth and mouth of children begins early so that a habit is obtained to obtain general health.

Likewise, the role of parents has an influence on the cleanliness of the teeth and mouth of children. Family, that is, the attitude of parents to the importance of oral hygiene, plays a major role in the preservation of healthy children's teeth. The family creates the environment necessary for a healthy lifestyle, increases self-confidence, and helps shape habits⁽⁷⁾. This can occur because the behavior and health practices of parents generally have an influence on the dental health of children⁽⁵⁾. The role of parents has a big influence because children also learn from what they see, hear, and from experience about an event. Children learn through their observations of an activity carried out by their mother-father or teacher. Children learn from what they hear from parents and people around them and their environment. Children will imitate mother-father activities so that they gain experience about an event⁽¹³⁾. The more active the role of parents towards their children, the better the behavior of children. In this case, parents not only play a role but also act. Dental health status is influenced by health behavioral factors which include factors of knowledge, attitude, and action (practice). Therefore, the role of parents is very important in guiding, understanding, reminding and setting an example so that children are able to develop their personal growth, parental responsibilities, and loving care and provide facilities for children so that children can maintain the health of their teeth and

mouth. Parents, especially the mother, are the closest figure to the child since the child was born, besides that the child's behavior also plays a role in maintaining the health of his teeth and mouth⁽¹⁴⁾.

CONCLUSION

This study has recommended the Smile Card method as a breakthrough in improving dental and oral hygiene in elementary school students. This method can be used in promotions accompanied by tooth brushing demonstrations to improve the degree of dental and oral hygiene of elementary school students. The results of the study prove that the knowledge and role of parents have an influence on improving children's oral hygiene.

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