Increasing Interest in Dental and Oral Health Through Pop Up Castle Media as an Effort to Prevent The Spread of Caries Among School Children

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ABSTRACT

Early childhood is the most appropriate time to instill values to instill positive behavior in children. Prevention of caries in children needs to be instilled early on seeing the impact of caries which can interfere with chewing function which leads to a lack of nutritional intake received by children. Prevention of caries can be done by maintaining dental health, one of which is done by brushing teeth. By brushing your teeth, you can maintain the cleanliness and strength of your teeth, but the wrong way of brushing cannot maximize oral hygiene. Therefore, knowledge of how to brush teeth properly and correctly is needed, in order to improve the quality of oral hygiene to the maximum. Making innovative media is very useful for increasing knowledge and attracting school-age children to pay attention to oral health. The author makes media in the form of a popup castle as an effort to prevent rampant caries in school-age children so that this media can make it easier for school-age children to understand efforts to maintain oral health. Objective: To describe the increase in school-age children's interest in maintaining oral health and hygiene by using castle popup media. Methods: The method we use in this counseling is game-based learning. The game method that we use is also based on the media that we offer in the form of a pop-up castle where in this media there are several materials including foods that are good for dental health and how to brush teeth properly and correctly and the right time to brush teeth. The game that we apply aims to review the material that has been explained during counseling. Results: 1) There is an increase in the knowledge of fourth grade students of SD Islam Maryam about oral health. 2) There is an increase in the interest of school-age children in maintaining oral health and hygiene by using castle popup media. 3) There is an improvement in the oral health status and behavior (knowledge, attitudes and actions) of elementary school students so that it can support general health. 4) This counseling activity is effective because it uses castle pop up media with a predetermined design and dental phantom so that the message conveyed can be understood by the target. 5) The final report and article will be included as a scientific publication in an accredited journal after the service. 6) The weakness of this activity is that it does not use other conventional counseling as a comparison.

INDEX TERMS

Caries, Dental, Oral Health, Media, Pop Up Castle, School Children

I. INTRODUCTION

Early childhood is the most appropriate time to instill values to instill positive behavior in children. Prevention of caries in children needs to be instilled early on seeing the impact of caries which can interfere with chewing function which leads to a lack of nutritional intake received by children.

The results of the initial survey from SDI Maryam, Gubeng District, Surabaya City, obtained data information from the school with approximately 50 students in class IV. The data results show that about 92% of the total number of students have dental caries. About 8% do not have dental caries, but still have other dental problems such as persistence, loose teeth, gingivitis and so on. Efforts to prevent dental caries can be done through the most important and recommended dental maintenance behavior by brushing teeth.

Most children still do not understand the correct way and duration of brushing teeth, it is supported by children's laziness which makes brushing teeth difficult to do.
Moreover, brushing teeth activities that are carried out routinely can provide a sense of boredom due to repetitive routines without an interesting process, as we know children are very interested in colors, shapes, and prominent images.

The cause of caries can be influenced by environmental factors. Children are in the school environment for a maximum of 8 hours a day and the rest will return to the family, the food consumed at school is very influential on dental health in children, while parents cannot monitor what food is consumed by children while at school. And one of the causes of caries in children is that when they finish eating, children do not immediately brush their teeth, so that food residue accumulates.

Based on the description that has been conveyed above, SDI Maryam, Gubeng District, Surabaya City still needs a Community Service Program in the form of counseling for school-age children related to oral health problems based on the data obtained, especially Dental Caries. The author is interested in creating edutainment media in the form of a popup castle where school-age children can play while getting the right education about the importance of maintaining oral health, especially Dental Caries so that efforts to prevent caries in school-age children can be carried out.

II. METHOD

Counseling in the "Student Creativity Program" is carried out in several methods so that the information conveyed can be easily understood and applied. The method we use is game-based learning. In a class there are various characteristics of students, some are active and some are passive, so to foster motivation so that students or classes that are vacuum can receive lessons on par with others, it must use methods that can foster student motivation, one of which is the game method (Widigda et al., 2023). Games are one of the choices for learning for children. Learning using games is one model that is considered effective because it makes players linger in playing (Nurdiana & Suryadi, 2018).

We can know that children generally like games, and Generation Z likes something creative, practical and fun in various activities, including in learning activities, so the use of Game Base Learning is very suitable for learning media in the digital generation like now. Play is an important part of the learning environment as it can enhance memorable learning experiences, heighten mood and make learning effective. Children's cognitive skills are still in the early start-up phase and it is important to emphasize the value of game-based learning during this developmental period (Pujayanti et al., 2023).

The game method we use is also based on the media we offer in the form of a pop-up castle where in this media there are several materials including foods that are good for dental health and how to brush teeth properly and correctly and the right time to brush teeth. The game that we apply aims to review the material that has been explained in the following way.

1. Prepare questions based on the pop-up castle media.

2. Divided the class members into 3 groups to keep it conducive.
3. Asked questions by taking turns from group 1 to group.
4. Students who wanted to answer were required to raise their hands first so that the class atmosphere could be conducive.
5. Students who dare to answer will get a snack prize and the correct answer will be appreciated by being given a gift in the form of a special children's toothbrush.

With this method we got a positive response in the form of increased interest in answering the questions given. However, as an appreciation for participating in the "Student Creativity Program" all students still get food at the end of the event. The application of gifts also has a positive impact on children because it is a reinforcement strategy that affects the relationship between stimulus and response (Erika et al., 2023).

III. RESULTS

<table>
<thead>
<tr>
<th>Statement</th>
<th>Correct Answer</th>
<th>Wrong Answer</th>
<th>Assessment Criteria</th>
</tr>
</thead>
</table>
| Knowledge About Dental Caries      | 358            | 262          | Good: 76-100%
Fair: 56-75%
Less: <56%
(Nursalam, 2017) |
| Average                           | 17.9           | 13.1         | Less                |

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<tr>
<th>Statement</th>
<th>Correct Answer</th>
<th>Wrong Answer</th>
<th>Assessment Criteria</th>
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</table>
| Knowledge About Dental Caries      | 584            | 36           | Good: 76-100%
Fair: 56-75%
Less: <56%
(Nursalam, 2017) |
| Average                           | 29.4           | 1.8          | Good                |
students who answered correctly only 57% and students who answered incorrectly by 42%.

Based on the table above, it can be seen that the score obtained based on the questionnaire given after counseling was 94% correct from the average before counseling was 57%. This shows that the knowledge of fourth grade students of SD Islam Maryam about dental caries has increased by 37%.

IV. DISCUSSION

Caries or commonly called a tooth hole is a tooth tissue damage that starts from the surface to the tooth root. The result of caries can be a way for bacteria to enter the tooth tissue and can cause pain (Edwin, 1992). The 2018 Basic Health Research (Riskesdas) states that the largest proportion of dental problems in Indonesia is damaged or cavities or pain (45.3%). Meanwhile, the majority of oral health problems experienced by the Indonesian population are swollen gums and/or abscesses (14%) (KemenKes RI, 2019).

According to Blum in Notoatmodjo (2012), elementary school children are one of the age groups that are vulnerable to dental caries. Caries in school-age children needs greater attention, because generally elementary school children do not know how to maintain their own oral health. Children generally enjoy cariogenic foods and drinks but rarely clean them, so that their teeth experience a lot of caries or cavities.

The group of elementary school children (aged 6-12 years) is a group that often experiences oral health problems, so it requires vigilance and good and correct dental care. At the age of 6-12 years, children's teeth require more intensive care (Mukhbitin, 2018). This is because at that age there is a change of teeth. Milk teeth begin to fall out, the first permanent teeth begin to grow (age 6-8 years). This situation indicates that the child's teeth are at the mixed dental stage. At this stage, permanent teeth will be easily damaged, because the condition of the teeth has just grown immature. Darwita et al, in (Mukhbitin, 2018).

The impact of dental caries experienced by grade 6 students, namely, will lose chewing power and disruption of digestion, and can also result in disruption of children's health. Then it can result in disruption of the child's learning process (Rahena, 2020). Children's knowledge is very important in terms of maintaining dental health. Children's knowledge about oral health maintenance is currently lacking, especially in brushing teeth and the right time to brush their teeth, therefore it requires assistance from parents and teachers at school. If children's knowledge is high, it is likely that children will avoid dental caries or other dental health problems (Kaban & Setiaji, 2022). According to Ghofur (2012) Prevention of dental caries can be done by brushing your teeth and paying attention to the right way to brush your teeth, rinsing your mouth after eating, using dental floss to remove food debris, doing dental fillings at the dental treatment center, and checking the dental clinic regularly every 6 months.

Generally, promotive activities such as counseling are carried out using media such as posters and flipcharts, also when conducting counseling, extension workers often use the lecture method where this method has the disadvantage of being too monotonous and children become passive. Therefore, the selection of appropriate media and methods with the target is very influential on the understanding that will be received by the target.

We can know that children generally like games or games, and Generation Z likes something creative, practical and fun in various activities, including in learning activities. so the use of Game Based Learning is very suitable for learning media in the digital generation like now. Media castle pop up is a media in the form of a pop up book containing the journey of Prince Denta and Princess Denti in maintaining oral health. This media is also equipped with a tooth pantum, toothbrush, imitation fruits and vegetables, and imitation cariogenic foods that support the target to more quickly understand what the communicator is saying.

The method we use is the Game Based Learning method where in this media castle pop up there are several materials including foods that are good for dental health and how to brush your teeth properly and the right time to brush your teeth. The game that we apply aims to review the material that has been explained.

The implementation of PKM activities in the form of dental examinations, counseling, and toothbrushing practices together aims to increase interest in maintaining oral health. The implementation of these activities proved effective in increasing interest in maintaining oral health. This can be seen by the existence of 1) increased knowledge before being given counseling in and after being given counseling through PKM activities 2) differences in how to brush teeth before and after being given counseling. With an increase in knowledge and attitudes, it is believed that it can stimulate interest in individuals so that it creates interest in them.

V. CONCLUSION

This service activity was attended by 31 students of SD Islam Maryam Surabaya City in class IV. They participated in the implementation of this program by attending counseling, training and mentoring activities. After this activity is completed, students can apply how to maintain oral health to prevent caries. The conclusions from the results of counseling activities in the Student Creativity Program include; there is an increase in the knowledge of fourth grade students of SD Islam Maryam about oral health from 57% to 94%. There is an increase in the interest of school-age children in maintaining oral health and hygiene by using castle popup media. There is an improvement in the oral health status and behavior (knowledge, attitudes and actions) of elementary school students so that it can support general health. This counseling activity is effective because it uses castle pop up media with a customized design and dental phantom so that the message conveyed can be understood by the target. The weakness of this activity is that it does not other conventional counseling as a comparison.
REFERENCES


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