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Effectiveness "Who Is It?" Game In Improving Children's Oral Health Knowledge At Sd 126 Palembang

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Abstract : Background: The 2018 Riskesdas recorded the proportion of oral and dental problems at 57.6%. The prevalence of oral health problems in South Sumatra is 52.41% with the highest percentage of 62.01% occurring in the 5-9 year age group and the second rank of 49.69% occurring in the 10-14 year age group. Preventive action using health promotion since children were still in elementary school was one of the efforts that can be done to prevent tooth decay and periodontal damage in the future. Games were one of the effective methods for children to increase their knowledge. **Methods:** Quantitative research with a quasi-experimental design with one group pre-test-post test method conducted at SD 126 Palembang. The sample in this study was class IV students aged 10 years at SD 126 Palembang totaling 50 samples. Oral health knowledge before and after playing the "who is it?" game was measured using a questionnaire totaling 6 questions. Data analysis using the Wilcoxon singed rank test. **Results:** It is known that the knowledge scores before playing the 'Who is it?' game were dominated by samples in the 'poor' category, totaling 31 samples (62%), followed by 16 samples (32%) in the 'fair' category, and 3 samples (6%) in the 'good' category. After playing the 'Who is it?' game, 12 samples (24%) were in the 'fair' category, and 38 samples (76%) were in the 'good' category. There was a significant difference in knowledge scores before and after playing the "who is it?" game with a p-value = 0.000. **Conclusion:** There was a significant increase in knowledge scores before and after playing the "who is it?" game which shows that the "who is it?" game was effective in increasing the oral health knowledge of elementary school children 126 Palembang.

Keywords: children, "who is it?" game

INTRODUCTION

Knowledge is a factor that form a person's behavior. A lack of knowledge leads to poor behavior in maintaining oral and dental health. Healthy teeth and mouth can be achieved if the knowledge and behavior related to oral and dental hygiene are proper and correct.[1] According to the World Health Organization (WHO), oral health is essential for improving quality of life, meaning a condition free from oral problems, throat cancer, oral infections and sores, periodontal disease, tooth decay, tooth loss, and other diseases.[2]

The 2018 Riset Kesehatan Dasar (Riskesdas) results recorded the proportion of dental and oral health problems at 57.6%. The prevalence of oral and dental health problems in South Sumatra was 52.41%, with the highest percentage of 62.01% occurring in the 5–9-year-old age group, followed by 49.69% in the 10–14-year-old age group.[3]

Research by Wahyuni et al. showed a significant relationship between children's attitudes and dental caries (def-t index), influenced by poor dental care habits. Consuming sweet and sticky foods and drinks, as well as not brushing teeth after eating or before bedtime at night, are habitual factors that contribute to a high plaque index and cause dental caries. The high incidence of dental caries in children is caused by their lack of understanding of the importance of maintaining oral health.[4] [5]

An effort to overcome this problem is through health promotion. Preventive measures through health promotion starting in elementary school are one of the efforts that can be made to prevent future tooth decay and periodontal disease.[6] The researcher chose elementary school children as the target group because elementary education forms the foundation for child development.[7]

One effective method for children to improve their knowledge is through learning and play. Various media can be used in health promotion for elementary school students, one of which is a game that is attractive, fun, and easy for children to understand.[8]

According to research by Hutami et al., the MOLEGI game (Dental Health Monopoly Puzzle) was effective in increasing students' knowledge about oral and dental health.[9] Narulita et al. stated that serial puzzle media could help improve toothbrushing skills in children with autism in elementary school.[10] This aligns with research by Afdilla et al., which found that children’s knowledge of oral health improved after playing a snakes and ladders game.[11]

In this study, the researcher used the “Who is it?” game as a media for oral and dental health education for elementary school children. “Who is it?” is a board game played by reading a question and then covering the images that are incorrect answers. Based on the above description, the researcher is interested in conducting a study on the effectiveness of the “Who is it?” game in improving oral health knowledge among students at SD 126 Palembang.

METHOD

This type of research is quantitative research with a quasi-experimental design. The research design used is one group pre-test-post-test. In this study, the subject group was measured once at the beginning (pre-test) before the intervention was carried out, after which the measurement was carried out again at the end (post-test). The research was conducted at SD 126 Palembang. The sampling technique in this study was by purposive sampling. The number of respondents in this study was 50 samples. The research sample is part of the population, namely grade IV students of SD 126 Palembang aged 10 years who meet the inclusion and exclusion criteria. The inclusion criteria are as follows: 1) Students who can read, 2) Students who can play the game "who is it?" well after being given a demonstration, 3) Students who are willing to be respondents. Exclusion criteria: 1) Students who are not cooperative. The tool used in this study is the "who is it?" game media. The respondents played the game in small groups of 2 people and then the respondents were asked to answer 6 questions provided by closing the picture which was the wrong answer. The game is played for 15 minutes.

Picture 1. “Who is It?” game

RESULT

The study was conducted in February 2024 at SD 126 Palembang. Validity and reliability tests have been carried out. The results of the validity test that has been carried out, all question items in the questionnaire are declared valid because the calculated R value is > R table. The results of the reliability test that has been carried out, all questions in the questionnaire are reliable because the Cronbach's alpha value is > 0.60. The normality test using Shapiro Wilk in this study obtained results that the data was not

normally distributed. In the pre-test data, p = 0.006, while the post-test data p = 0.000. Based on the results of the normality test, data analysis used the Wilcoxon signed rank test.

Table 1. Frequency distribution based on gender of grade IV students age 10 years SD 126 Palembang

Gender	Frequency	Percentage (%)
Male	22	44
Female	28	56
Total	50	100

Based on table 1, the total sample was 50. There were 22 samples (44%) male and 28 samples (56%) female.

Tabel 2. Frequency distribution based on knowledge scores before and after playing the "who is it?" game

Category	**Pre Test**		**Post Test**	
	Frequency	%	Frequency	%
Less	31	62	0	0
Sufficient	16	32	12	24
Good	3	6	38	76
Total	50	100	50	100

Based on Table 2 above, it is known that the knowledge score before playing the game "who is it?" is dominated by samples that have the less category, namely 31 samples (62%), samples with the sufficient category are 16 samples (32%) and samples with the good category are 3 samples (6%). It is known that the knowledge score after playing the game "who is it?", a number of 12 samples (24%) are in the sufficient category and 38 samples (76%) are in the good category.

Tabel 3. Comparison of knowledge scores before and after playing the game "who is it?" using the Wilcoxon signed rank test.

Kategori	***Negative ranks***		***Positive ranks***		***Ties***	***p-value***
Pre test –	N	*Mean rank*	N	*Mean rank*		
Post test	0	0.00	49	25.00	1	0.000

Table 3 shows that the negative ranks value is 0.00, meaning there is no decrease from the pre-test to the post-test score. The positive ranks value shows that 49 samples

experienced an increase in scores from the pre-test to the post-test with an average increase in score of 25.00. The table shows that the ties value is 1, meaning there is 1 sample that has the same score on the e-test to the post-test. The p-value is 0.000 (<0.05), so it can be concluded that the game "who is it?" is effective in increasing knowledge of oral health.

DISCUSSION

The results of the analyzed data show that the average knowledge value after playing the game "who is it?" there is a significant increase (p value <0.05) then Ha is accepted and Ho is rejected meaning that the game "who is it?" is effective in increasing knowledge of oral health. This can be caused because educational games support the learning process with the concept of playing while learning. 12 In line with the research of Himmamie et al. that educational board games are said to be suitable for use as a medium for educational health of school-age children. 13 Educational games have great potential to motivate the learning process. 14 Game media can improve abilities in several aspects of learning including psychomotor aspects, affective aspects and cognitive aspects. The psychomotor aspect in a game can improve motor skills, for example the sensitivity of the five senses that children have increases. The affective aspect can find out the child's character in communicating, cooperation, sportsmanship, and responsibility can be trained through games. In the cognitive aspect, games have a very large role, although competitive but learning activities using game media are more fun and interesting. 15,16 This is supported by research by Liu, et al. that changes in oral hygiene of participants improved after a board game intervention program based on oral hygiene education. 17 Education in oral health using the game "who is it?" received a good response from elementary school children 126 Palembang because they were very enthusiastic about the game "who is it?" containing knowledge of dental and oral health provided. Education media game "who is it?" is effective for use in elementary school children in grade IV because the learning mechanism is collaborative in a small group, so that it can train children to communicate, exchange ideas with friends to find solutions and then solve a problem through the learning system. 18 The limitation of this study is that the researcher made only 20 "who is it?" games, so the intervention was carried out in 3 sessions, namely 20 students in the first session, 20 students in the second session

and 10 students in the third session so that the intervention was not carried out simultaneously and made other students wait their turn to play the game "who is it?". Based on the results of the research and the theory above, it shows that there is an effectiveness of the game "who is it?" in improving the knowledge of oral health of children at SD 126 Palembang.

CONCLUSION

There was a significant increase in knowledge scores before and after playing the game ‘who is it?” which shows that the game “who is it?” is effective in improving the knowledge of oral health of elementary school children 126 Palembang. It is hoped that further research can use a different research design by including a control group as a comparison. It is hoped that dental students can conduct oral health education using various innovative, creative and effective methods. It is hoped that further research can develop question items in the game “who is it?” regarding oral health. It is hoped that further research can be carried out using other media so that oral health education can develop.

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