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Research Article

# Dental Healthy Creative Monopoly Game as a Media for Counseling on Increasing Dental and Oral Health Knowledge in Elementary School Students

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### Abstract



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Knowledge is the result of knowing through sensing and knowledge obtained from the teaching and learning process. The method of learning while playing is an interesting thing for children. Through play, children can get information about new things. Games are used to create an atmosphere of learning from passive to active, and from bored to happy, one of which is by using monopoly games. Monopoly is an effective and efficient media which was developed by modifying the game of monopoly according to the available materials and the learning materials to be implemented. The purpose of this study was to determine whether the dental healthy creative monopoly game was effective in increasing oral health knowledge. The research method used was a one group pretest-posttest design. Respondents in this study amounted to 66 students of Madrasah Ibtidaiyah Insani Tateli Minahasa Regency. From the results of this study, it was stated that the score of knowledge about dental and oral health was more (61%) in the less good criteria, after being given a monopoly game, the knowledge increased to 100% on the good criteria. The results of statistical tests, stated that there was a significant difference before and after being given the dental healthy creative monopoly game ( $p=0.000$ ). In conclusion, the dental healthy creative monopoly game is effective in increasing the knowledge of dental and oral health for elementary school students.

**Keywords:** Dental healthy creative, monopoly game, knowledge, dental and oral health

## INTRODUCTION

Dental and oral health problems are health problems that often occur among children, especially school-age children. Based on the results of Basic Health Research in 2018, it shows that dental and oral health problems in the Indonesian population are 57.6%. Based on the description above, it can be seen that dental and oral disease is a disease with a fairly high percentage, while the proportion who experience dental and oral health problems in the age group (10-14) is 55.6%, then in the elementary school education group it is 58, 4%, while in North Sulawesi Province, dental and oral health problems showed a result of 66.5%. For the 10-14 years age group it was 39.18%, then in the Elementary School education group it was 58.4%.<sup>1-3</sup>

One of the causes of dental and oral health problems is the lack of knowledge about dental and oral health. Knowledge is a result of knowing and after someone has sensed the object so as to produce new knowledge. Provision of dental and oral health knowledge should be given from an early age to school-age children, because the lack of knowledge and skills of school-age children regarding dental and oral health will lead to high rates of dental and oral health problems in children.<sup>4-6</sup>

Knowledge is needed by the media to convey messages, so that they are easy to understand. Learning media are everything that is used to convey messages to increase the level of learning in achieving targets. The learning method that is often used in providing dental and oral health education is the lecture method,

but by using the lecture method students become less active and less involved in learning.<sup>7-9</sup>

Extension is an effort to change human behavior which is carried out through an educational approach, namely a series of activities carried out in a systematic, planned and directed manner with the active participation of individuals and groups or communities, to solve community problems by considering socio-economic and cultural factors.<sup>10,11</sup>

Providing education there are various methods used by educators, one of which is the method of learning while playing. Learning while playing is an interesting thing for children. Through play, children can gain information about new things and learn through existing skills. Games are used to create an atmosphere of learning from passive to active, and from bored to happy. The purpose of the learning while playing method is that student learning outcomes increase and students gain social skills such as an attitude of working together. According to experts, games can shape the process of a child's personality and physical, intellectual, social, moral and emotional development. Through games, children can overcome difficulties and solve problems in a cheerful atmosphere, through information games and changes in behavior can occur. Sitanaya et al research, proves Snakes and Ladders Game Simulation can increase the knowledge of dental and oral health of elementary school age children.<sup>12-14</sup>

The game is a tool for children to explore the unknown world so

that what is known, from what has never been done to is able to do. Through playing activities, a person can interact with other people, goods (toys) both learning and recreational which are games. With games, a person gets benefits in finding identity, studying cause and effect, developing relationships, practicing abilities and influencing all factors and aspects of life.<sup>15-17</sup>

Monopoly is the most famous board game in the world. The game is to dominate all the tiles on the board through buying, renting and exchanging properties in a simplified economic system. Monopoly is one of the most popular board games in the world. The object of the game is to gain control of all the tiles on the board by buying, renting and trading properties in a simplified economic system. Each player takes turns tossing the dice to move his piece, and if it lands on a tile that other players don't already have, can buy that tile at a set price. If the plot has been purchased by another player, it must pay the player who owns it with a fixed amount of rent.<sup>18-20</sup>

## MATERIALS AND METHODS

The type of research used in this study is a quasi-experimental research with one group pretest posttest design. The sample used in this study amounted to 66 students of SD Madrasah Ibtidaiyah Insani Tateli. The data collection technique was that students were pre-tested to measure their initial knowledge of dental and oral health, then students were divided into six groups consisting of 11 people, and each group had one supervisor to supervise and guide the game. The technique of the game is that each participant is given a different piece and placed on the start box, then students are distributed toy money with a capital of IDR 200,000, the game is played for 90 minutes and in the first round each participant must succeed in one circle around the monopoly box. Participants can be said to win if they master one of the blocks in the monopoly game. After the game is finished, a post test is carried out to evaluate the understanding of the material given through the monopoly game. Then the data obtained were analyzed using the Paired Sample t-Test statistical test.

## RESULT

**Table 1. Frequency distribution of knowledge before intervention**

Knowledge	N	Percentage (%)
Good	26	39
Not good	40	61
Total	100	100

The data in Table 1 above shows that prior to providing counseling through playing monopoly, more respondents were in the not good category (61%) of knowledge.

**Table 2. Frequency distribution of knowledge after intervention**

Knowledge	N	Percentage (%)
Good	66	100
Not good	0	0
Total	100	100

The data in Table 2 above shows that the post test results of all respondents are in good criteria (100%).

**Table 3. The results of the effectiveness test of knowledge before and after the intervention**

Knowledge	Mean±SD	p-value
Pretest	30.6±2.64	0.000
Posttest	38.3±1.04	

Based on the data in Table 3 shows that the value of knowledge before being treated is 30.6 points while the value of knowledge after being treated is 38.3 points. Based on the results of the Paired Sample t-Test, there was a significant difference ( $p=0.000$ ) before and after being given counseling through the Monopoly Creative Dental Healthy media.

## DISCUSION

Knowledge is the result of human sensing, or the result of someone knowing about objects through their senses (eyes, nose, ears and so on). By itself, at the time of sensing to create this knowledge which is influenced by the intensity of attention and perception of the object. Most of the knowledge about a person is obtained through the sense of hearing (ears), and the sense of sight (eyes).<sup>21</sup>

Health counseling aims to increase knowledge, willingness, awareness, renew attitudes and awareness to behave better so that they can carry out better behaviors or actions in daily life so that a person's behavior remains healthy that supports his health or to achieve the goal of healthy life by influence the behavior of the community either individually or in groups by conveying messages.<sup>10</sup>

When providing counseling can use media or tools, to clarify the message. So learning media is anything that can be used to channel messages (learning media), so that it can generate students' attention, interests, thoughts, and feelings in learning activities to achieve learning goals.<sup>22</sup>

Based on the results of research conducted on students of Madrasah Ibtidaiyah Insani Tateli, from the results of the pre test, where the knowledge of the respondents was mostly in the poor category (61%), this was due to the fact that these students rarely listened to counseling about dental and oral health. According to Puspita et al stated that the knowledge of fourth grade students at SDN Wage I Sidoarjo before being given counseling in the intervention group and control group was still classified in the poor category. Students' knowledge is classified as lacking due to the lack of health socialization in schools.<sup>23</sup>

The data found in post-test activities, where after counseling by playing dental healthy creative monopoly, all respondents reached good criteria (100%), this indicates there is a significant increase in knowledge about dental and oral health from grade 5 students.

Learning while playing is an interesting thing for children. Through play, children can gain information about new things and learn through existing skills. Games are used to create an atmosphere of learning from passive to active, and from bored to happy. The purpose of the learning while playing method is that student learning outcomes increase and students gain social skills such as an attitude of working together. The learning while playing method also has another goal, namely so that learning goals can be achieved efficiently and effectively in a happy atmosphere even though discussing difficult or heavy things.<sup>13</sup> Game media shows a more significant increase in knowledge, because game media uses more of the sense of hearing and the sense of sight, and involves the direct participation of students, so that information is easy to digest.<sup>24</sup>

The results of the analysis using the Paired Sample t-Test showed that there was a significant difference ( $p = 0.000$ ) before and after being given counseling through the Monopoly Creative Dental Healthy media. The results of this study are in line with research conducted by Marini et al, who stated that there was an effect of the game of monopoly in increasing knowledge, attitudes and actions of fruit and vegetable consumption patterns in students of SDN 021 Sungai Kunjang Samarinda.<sup>25</sup>

The function of learning media, namely overcoming the

limitations of experience possessed by students, can establish a direct correlation between students and their environment, can produce uniformity of observations, through the media can instill the right basic concepts, foster desires and interests, and can motivate children to learn. This statement is also supported by Hutami et al, who stated that the monopoly puzzle game was able to increase students' knowledge about dental and oral health. Likewise, the statement from Wahyuningtyas, which concluded that the game of monopoly can increase the knowledge, attitudes and actions of brushing teeth in elementary school students.<sup>26,27</sup>

Health counseling aims to increase knowledge, willingness, awareness, renew attitudes and awareness to behave better so that they can carry out better behaviors or actions in daily life so that a person's behavior remains healthy that supports his health or to achieve the goal of healthy life by influence the behavior of the community either individually or in groups by conveying messages.<sup>10</sup> In order for the purpose of this counseling to be achieved, it is recommended to use learning media, because learning media is a tool that can be used to channel messages (learning media), so that it can generate attention, interest, thoughts and feelings of students in learning activities to achieve learning goals.<sup>22</sup> The use of media in the promotion of dental and oral health is effective in increasing the knowledge of elementary school children.<sup>28</sup>

## CONCLUSION

Based on the results of the research conducted, it can be concluded that, before being given treatment, the condition of their knowledge with good criteria was 39%, but after being given treatment it increased to 100% for good criteria. This shows that there is a significant difference ( $p=0.000$ ) before and after being given treatment in increasing knowledge about dental and oral health through counseling using the media of the dental healthy creative monopoly game for elementary school students.

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## CONFLICT OF INTEREST

The authors declare that they have no conflict interests.

## ETHICAL CLEARANCE

This research has received ethical approval from the Research Ethics Committee, Manado Health Polytechnic No.KEPK.01/10/194/2022.

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