

The Effect of "MOLKESPRO" Educational Media on The Level of Knowledge of Early Adolescents about Reproductive Health

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ABSTRACT

Child marriage in Indonesia is a recurring reality in society. Early marriage is a form of gender inequality, especially for women. Globally, 21% of women living in 2020 were married before the age of 18, and 12 million girls under 18 are married each year, or about 23 girls married as children every minute. Various reasons for the high rate of early marriage are not only due to educational, economic, and stigmatizing factors but also due to the low understanding of adolescents about reproductive health, which causes adolescents to have no choice, especially for adolescent girls. The purpose of this study was to determine the effect of "MOLKESPRO" monopoly media on adolescents' knowledge about reproductive health. The design of this study was pre-experimental with a pre-post-test design approach. Using the purposive sampling technique, the population was grade 6 elementary school students, as many as 31. In this study, the instrument used was a questionnaire about reproductive health—data analysis using a paired t-test. The results showed that the respondents' knowledge got the less category (35%) before being given health education and got a good knowledge category (81%) after being given health education. The results obtained p value < 0.000 ($0.000 < \alpha$). Therefore, there is an effect of "MOLKESPRO" on the knowledge of early adolescents about reproductive health. Thus, the "MOLKESPRO" monopoly media can be used by midwives and other health workers in providing health education to early adolescents related to reproductive health, this is because its attractive design can make students enthusiastic to learn materials about reproductive health using the atmosphere created with fun.

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Introduction

Early marriage in Indonesia is a reality that continues to recur in society. Various reasons become the basis for carrying out early marriage. Early marriage is a form of gender inequality, especially for women. This gender inequality problem must be addressed immediately. The Sustainable Development Goals (SDGs) program issued by the United Nations aims to eliminate the practice of child marriage in society. One of the goals of the SDGs program is "To Eliminate All Harmful Practices, Including Child Marriage by 2030". The National Family Planning Coordination Body (BKKBN) supports the minimum marriage age of 21 for women and 25 for men. This policy ensures that each married couple has attained physical and mental maturity (Judiasih *et al.*, 2020).

Globally, 21% of women alive in 2020 were married before the age of 18, and 12 million girls under 18 are married each year, or about 23 girls married as children every minute. Today, one in five young women aged 20 to 24 were married as children compared to almost one in four ten years ago (UNICEF, 2023). In Indonesia, in 2018, one-tenth of girls were married. Data from the Ministry of

Women's Empowerment and Child Protection of the Republic of Indonesia department in 2018 found that among women aged 20-24 years who married before the age of 18, as many as 11.21%, even married before the age of 15 years by 0.56%. Children in rural areas are always more likely to experience early marriage than teenagers in urban areas (BPS, PUSKAPA, UNICEF, 2020).

Various reasons for the high rate of early marriage are in addition to educational, economic, and stigmatizing factors, also due to the low understanding of adolescents about reproductive health, which causes adolescents to have no choice or weak bargaining position, especially for adolescent girls. Girls from households with the lowest expenditure levels are almost three times more likely to marry before age 18 compared to girls from families with the highest expenditure levels. Girls in rural areas are twice as likely to be married before the age of 18 compared to girls in urban areas. Women aged 20-24 who married before age 18 were four times less likely to complete high school than those who married after age 18 (UNICEF Indonesia, 2020). The low knowledge of adolescents about reproductive health is the background of premarital sexual intercourse. Adolescent reproductive health is the main focus because adolescents are a group that does not utilize reproductive health services due to the lack of accessibility for adolescents, especially early adolescents. In addition, the adolescent reproductive health program has not been maximized in its implementation, so reproductive health needs to be provided to adolescents. Many problems arise from ignoring reproductive health. Problems that occur due to a lack of knowledge of reproductive health are unwanted pregnancy, abortion, early marriage, STIs or STDs, and HIV/AIDS. One of the efforts that can be made to reduce these numbers is by conducting health education on how to care for reproductive organs, education on adolescent development during puberty, health education on the impact of pornography, health education on unwanted pregnancy and abortion, health education on HIV/AIDS and sexually transmitted infections, and health education (Ardhiyanti, 2023).

This is related to the data from the preliminary study, which shows that some random students aged 10 to 13 said they did not know about reproductive health. According to the explanation of one of the teachers, information about reproductive health is only obtained through subjects such as science (puberty), PJOK (maintenance of reproductive hygiene), and religious education, so outside of these subjects, they have not received enough information related to reproductive health. From this description, information about reproductive health is needed to improve their knowledge. This study aims to determine the effect of monopoly media on respondents' knowledge before and after using the press. Monopoly is a well-known game, making it accessible and potentially more engaging for 10-13-year-olds than traditional educational materials. The game format can encourage active participation and knowledge retention through gameplay mechanics like buying properties (learning concepts), answering questions (demonstrating knowledge), and interacting with other players.

Method

This study's research design and participants employed a pre-experimental design with a pre-test-post-test approach. A purposive sample of 31 sixth-grade students (aged 10-13 years) participated. In

this study, before the intervention, a pre-test assessed participants' initial knowledge about reproductive health using a validated questionnaire covering understanding, goals, influencing factors, physical changes, and hygiene practices. The questionnaire's validity and reliability were established beforehand. The intervention involved "Monopoli Kesehatan Reproduksi" (MOLKESPRO) – a specifically designed Monopoly-based educational media. The MOLKESPRO's feasibility was confirmed through evaluations by respondents (95% feasibility) and media experts (100% feasibility). In treatment delivery in this study, participants completed the pre-test. Then, they played MOLKESPRO in groups of 5-6 for two sessions, each lasting 75 minutes. Seven days after the second session, a post-test measured their post-intervention knowledge. Statistical analysis in this study, with the Wilcoxon signed-rank test, was used to analyze the knowledge change between pre-test and post-test. This research has passed ethical review with number 385/KEPK-POLKESMA/2022.



Figure 1. MOLKESPRO Media

Results

This research was conducted at public elementary school 3 Jedong in Wagir District, Malang Regency. The school is located inland and far from the city. The community, especially early adolescents, has difficulty accessing information and learning optimally, especially related to reproductive health. The results of the study are presented in the form of data tables, including the frequency distribution of students' knowledge before being given health education using monopoly media, the frequency distribution of students' knowledge after being given health education using monopoly media, and the paired t-test analysis table in tables 1 and 2.

Table 1. Frequency Distribution of Students' Knowledge Before and After Being Given Health Education Using Monopoly Media

Students' knowledge	Before education with MOLKESPRO		After education with MOLKESPRO	
	Frequency	Percentage	Frequency	Percentage
Good	11	35	25	81
Fair	9	30	6	19
Less	11	35	-	-

Based on Table 1, it can be seen that the category of knowledge of respondents—the categorization of knowledge in this study into three groups, namely good, sufficient, and less. The category is good if the pretest and post-test scores are in the value range "Good" if the value goes into the range 76-100, "Fair" if the value goes into the range 56-75, "Less" if the value goes into the range

<56. Table 1 shows students' knowledge about reproductive health before being given health education using monopoly media. Almost half of the respondents' knowledge got the less category with a percentage of 35% as many as 11 people. Almost all respondents get a good knowledge category, with a percentage of 81%.

Table 2. The Effect of "MOLKESPRO" Educational Media on The Level of Knowledge of Early Adolescents About Reproductive Health

Educational MOLKESPRO	N	Mean	Std. Deviation	Minimum	Maximum	Asymp. Sig. (2-tailed)
Pretest	31	64.61	13.6	36.3	86.36	0.000
Post-test	31	81.63	8.7	63.6	100	

Based on Table 2 above, the value asymp can be seen. Sig. (2-tailed) was 0.000, of which $0.000 < 0.05$. Because the value is less than 0.05, it can be concluded that there is an effect of "MOLKESPRO" reproductive health monopoly media on early adolescents' knowledge about reproductive health.

Discussion

The results showed that almost half of the respondents had poor knowledge before using the reproductive health monopoly. Poor knowledge can be caused by a lack of reproductive health information. One of the things that can affect a person's knowledge is information (Mubarak, 2011). This is supported by the results of an interview with one of the teachers that information about reproductive health is only obtained through subjects such as science (puberty), PJOK (maintenance of reproductive hygiene), and religious education, so outside of these subjects, they have not received enough information related to reproductive health.

Previous research explains that the information received influences the level of knowledge. As many as 56% of respondents have a poor level of knowledge due to almost all respondents having never received information (Suparno, 2021). In addition to information, age can also affect a person's level of knowledge. Based on the study results, the respondents ranged from 11-13 years old, with the majority being 12. This is due to previous research that the older the age, the more developed the power of capture and mindset so that the knowledge obtained is getting better (Raidanti, 2022). Therefore, the information obtained can affect the respondents' answers when answering pre-test questions, the majority of which show less and sufficient categories.

Monopoly media is a tool for respondents to do sensing so that the process produces knowledge. Based on the study results, almost all respondents had good category knowledge after receiving an intervention in the form of a monopoly game in groups. According to the researcher, one of the factors that can underlie the process of changing respondents' knowledge is due to interest. This is shown by 93.1% of respondents being interested in learning about reproductive health, so it can be seen that interest is one of the factors that make a person gain more profound knowledge (Mubarak, 2011).

This is due to the advantages of monopoly media in the form of media collaboration with games that can attract the attention and interest of students (Lestari et al., 2021). If the subject matter is not attractive, boredom and laziness arise, so education must endeavor to make the given subject matter

attract students' attention. This is shown by the respondents' assessment related to this monopoly media, which obtained a score of 92% on the assessment criteria about the monopoly design used. It is interesting from the score that it is interpreted that this media is feasible and does not need to be revised, therefore, it can attract their attention to learning about reproductive health.

Another opinion that explains the changes in respondents' knowledge is that the frequency of giving tests that are carried out repeatedly can improve the long-term memory of respondents related to reproductive health material (Jayani and Dicky Hastjarjo, 2016). In this study, the frequency of treatment was repeated twice with an interval from the first repetition for one week, and after one week from the second repetition, a post-test was conducted. This study is in line with previous research, which explains that after being given health education in the form of educational monopoly twice, the level of knowledge increased from 11% to 81% in the good knowledge category and from 56% to 4% in the poor category.

Monopoly games have become a common form of social interaction games. In modern times, board games such as Monopoly have become a popular pastime to play with friends and family, partly due to the added in-person engagement of playing the game face-to-face versus looking at a screen. Board and card games like Monopoly can have many benefits, including an exciting game, a peer challenge, a collaborative social experience between friends, or a way for family members to spend quality time together. However, the design of many board games, such as Monopoly, is rarely used as a medium for education, especially reproductive health education (Johnson & Kane, 2020).

Without modification, most board and card games or Monopoly are only used for entertainment because of the attractive colors, text, visual textures, and symbols. Researchers have studied how social interactions are formed during games. Much of this research has focused on social play, which is defined as active engagement with a game (through controls or observation and attention to ongoing play) by more than one person. Monopoly games have found that games must balance social interaction with feelings. Social play in board and card games or monopoly can occur five types of social communication during gameplay: 1) Task: interactions that arise from activities required to maintain or update game status; 2) Game reflection: reacting or reflecting on the game after making a move; 3) Strategy: discussion of the game before making a move; 4) Interaction outside the game: talking about topics outside the game; 5) Discussing the game itself: commenting on the game (Johnson & Kane, 2020).

This study aims to explore technology or games as educational media by making existing games more accessible and used as a medium in delivering information, especially to early adolescents, about reproductive health. In developing the MOLKESPRO monopoly, we tried to add materials related to reproductive health without disturbing the social aspects of the existing game.

Designing an accessible version of the game has its challenges. In making a game easy to understand and play, it is essential not to disturb the balance of the game design, put players in an unequal position, or reduce the game's entertainment value.

Monopoly media that can influence respondents in the form of increased reproductive health knowledge can be caused by several internal and external factors. According to the researcher, some of

these internal factors come from the media, such as design, color selection, image characters, and the ease of respondents using the media for the learning process. Some internal factors will trigger external factors from respondents, such as interest in the media, to increase interest and motivation and create a pleasant learning atmosphere. These internal and external factors prove that monopoly media can increase respondents' knowledge related to the health education material in the form of reproductive health.

Previous research shows that the harmony of color selection and the selection of appropriate and easy-to-read fonts can make the media more attractive (Suparno, 2021; Putri, 2022). Material that is packaged with an attractive design can arouse the interest and attention of students to learn the material. Previous research also proved that monopoly media can increase student learning motivation and make students more active and creative in the learning process (Agustin, 2021). This is because Monopoly can create exciting learning activities and help the learning atmosphere to be happy, lively, and relaxed (Suciati, 2015).

The results of the research that has been conducted and supported by previous research prove that the provision of monopoly as a learning media can increase adolescents' knowledge related to reproductive health. This is evidenced by previous research that using Monopoly as a learning medium whose material is presented through questions, commands, and challenges can raise curiosity and emphasize high thinking skills (Lestari, 2021). The media used by researchers has been by its function in the form of cognitive functions, previous research explains that the cognitive function is that visual symbols or images facilitate the achievement of goals to understand and remember the information or messages contained in the image (Nurdyansyah, 2019).

Conclusions

The existence of MOLKESPRO, a monopoly-based educational media, has had a significant positive effect on respondents' knowledge of reproductive health. Before the intervention, a higher proportion of respondents fell into the "less knowledge" category compared to the "sufficient" and "good" categories. However, after using MOLKESPRO, the "less knowledge" category became nonexistent, while the "good knowledge" category increased significantly compared to "sufficient." These findings suggest that MOLKESPRO is an effective tool for improving knowledge about reproductive health among early adolescents—factors influencing knowledge acquisition include information access, age, interest, and media design. The research demonstrates that using Monopoly media focusing on design, repetition, and social interaction significantly improved students' knowledge compared to pre-intervention levels.

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