



## The Effectiveness of Health Education Using Truth or Dare Cards on Motivation to Maintain Female Reproductive Health at SMKN 14 Samarinda

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### Abstrak

Kurangnya kebiasaan menjaga kebersihan pribadi pada remaja putri dapat meningkatkan risiko munculnya berbagai masalah kesehatan, khususnya yang berkaitan dengan sistem reproduksi wanita seperti kanker serviks. Berdasarkan data dari Global Center Observatory (2022), tercatat sebanyak 662.301 kasus kanker serviks di seluruh dunia (14,1%), dengan angka kematian mencapai 348.874 kasus atau sekitar 7,1%. Tujuan dari penelitian ini menganalisis efektivitas kartu Truth or Dare dalam meningkatkan motivasi remaja SMKN 14 Samarinda dalam menjaga kesehatan reproduksi wanita. Penelitian ini menggunakan jenis pre-eksperimental dengan desain One Group Pretest-Posttest. Penelitian ini melibatkan 67 siswi sebagai sampel, yang dipilih menggunakan teknik total sampling. Analisis data menggunakan uji Wilcoxon menunjukkan peningkatan motivasi siswi dalam kategori tinggi dari 69,8% menjadi 100%, serta peningkatan sikap positif dari 73% menjadi 96,8% setelah intervensi. Media kartu Truth or Dare terbukti efektif meningkatkan motivasi menjaga kesehatan reproduksi, dengan nilai signifikansi  $p = 0,000$ . Disimpulkan bahwa media ini berpengaruh terhadap peningkatan motivasi siswi di SMKN 14 Samarinda.

### Abstract

*The lack of personal hygiene habits among adolescent girls can increase the risk of various health problems, particularly those related to the female reproductive system, such as cervical cancer. According to data from the Global Cancer Observatory (2022), there were 662,301 cases of cervical cancer worldwide (14.1%), with 348,874 deaths or approximately 7.1%. This study aims to analyze the effectiveness of the Truth or Dare card media in increasing the motivation of female students at SMKN 14 Samarinda to maintain reproductive health. This research employed a pre-experimental method with a One Group Pretest-Posttest design. A total of 67 students were selected using total sampling. Data analysis using the Wilcoxon test showed an increase in the percentage of students with high motivation from 69.8% to 100%, and positive attitudes from 73% to 96.8% after the intervention. The Truth or Dare card media proved effective in enhancing motivation to maintain reproductive health, with a significance value of  $p = 0.000$ . It can be concluded that this media positively influences the motivation of female students at SMKN 14 Samarinda.*

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## INTRODUCTION

Adolescents are a group that needs more attention in the aspect of reproductive health because they have a high vulnerability to behaviors that are not in accordance with the principles of reproductive health. This period is a transitional period from childhood to adulthood, which is marked by the process of puberty and is characterized by rapid changes, both physically and in the development of reproductive organs (Sari, 2022).

Reproduction is a biological process that allows humans to produce offspring, while reproductive organs are parts of the body that function to carry out this process (Harnani in Wirenviona, 2020). Personal hygiene of the genital area or personal hygiene genitalia is the act of maintaining the cleanliness and health of the vulva (external genital area) to prevent infection and maintain the health of the reproductive organs. Reproductive health issues are not only related to pregnancy, but also include an understanding of the structure and function of reproductive organs and various diseases that are at risk of attacking the reproductive system (Wirenviona, 2020). One of the main factors to achieve reproductive health is maintaining personal hygiene, especially the reproductive organs which are very sensitive parts of the body and require special attention. Therefore, care for women's reproductive health must begin with maintaining the hygiene of the female area regularly.

Lack of hygiene care in the genital area can be a trigger factor for cervical cancer, especially when accompanied by a lack of understanding of how to maintain hygienic reproductive health. Based on information from the Indonesian Ministry of Health, unhealthy lifestyles-such as

smoking, having sexual intercourse at an early age, lack of exercise, and an unbalanced diet with consumption of high fat, low fiber, and foods containing preservatives-also contribute to the increased risk of cervical cancer (Purwani, 2022).

According to data from the Global Center Observatory (2022), the number of cervical cancer cases worldwide reached 662,301 cases or about 14.1%, with a mortality rate of 348,874 people (7.1%). Of these figures, China is the country with the most cases globally based on the World Cancer Research Fund report (2022), which is 150,659 cases (17.7%) and 55,694 deaths (4.5%). Meanwhile, in the United States, Siegel (2024) estimated that there were around 13,820 cases of cervical cancer with 4,360 deaths.

In Indonesia, women of childbearing age often face various reproductive health problems that are influenced by tropical climate conditions and limited knowledge about reproductive health. This lack of understanding can lead to inappropriate health behaviors, unplanned pregnancies, transmission of sexual diseases, and infections of the reproductive organs. Therefore, it is important to practice personal hygiene of the genital area. In 2022, cervical cancer ranked third as the cancer type with the highest number of cases in Indonesia, with 36,964 new cases (9.0%) and 20,078 deaths (8.5%). In addition, the prevalence of cases in the last five years reached 120,940 cases (Globocan, 2022). This data indicates that cervical cancer is still a serious challenge in the world of health in Indonesia. The high prevalence of cases at the national level is also reflected in various regions, including in East Kalimantan Province and Samarinda City.

According to Winardi in Khatimah (2023), motivation is an internal drive that moves individuals to act in order to achieve goals or obtain certain satisfaction. In addition, motivation also functions to direct a person to take action based on needs and determine the goals to be achieved (Sadirman in Khatimah, 2023).

To increase adolescent motivation in maintaining reproductive health, one of the efforts that can be made is through health education. Health education is designed to encourage positive behavior change, especially in caring for reproductive organs and preventing diseases such as cervical cancer.

According to Notoatmojo in Hanye (2023), health education is a process of delivering information aimed at changing unhealthy habits into better behavior. This process involves learning methods, use of media, and preparation of materials tailored to the characteristics of adolescents, with the main focus on increasing motivation and changing behavior in order to achieve an optimal level of health.

The delivery of health education to adolescents needs to use appropriate methods and media so that the material is easily understood (Candra, 2023). One effective alternative is educational games such as Truth or Dare cards, which are specifically designed to discuss the topic of reproductive health and cervical cancer prevention. This game creates an interactive and fun atmosphere, thereby reducing boredom and anxiety.

## METHOD

This study used a quantitative approach with a pre-experimental design of the One Group Pretest-Posttest type, which was conducted in February 2025 at SMKN 14 Samarinda. The general population in

this study included all students of SMKN 14 Samarinda in the 2024/2025 academic year, with a total of 620 students from 27 classes. Meanwhile, the target population focused on students majoring in Office Management and Business Services (MPLB), totaling 67 students. The total sampling technique was used in sampling, so that all students in grades X and XI majoring in MPLB were used as research samples.

The independent variable in this study is the Truth or Dare card game media, while the dependent variable is motivation in maintaining reproductive health. For bivariate analysis, the Wilcoxon Signed-Rank Test non-parametric statistical test was used to determine differences in motivation before and after the intervention.

## RESULT AND DISCUSSION

The number of research subjects who participated until the end of this study were 63 students consisting of 33 grade 10 students and 34 grade 11 students majoring in MPLB.

Table 1. 1 Characteristics of respondents

Characteristics	n	%
Age	< 15 years	8 12.7
	> 15 years	55 87.3
Complaints Related to Reproductive Health	Period Pain	50 79.4
	Excessive Vaginal Discharge	14 22.2
	Irregular menstrual cycle	22 34.9
	No complaints	5 7.9

Based on Table 1.1, it is known that most respondents (87.3%) are above 15 years old, while only 12.7% are under 15 years old. This age group falls into the category of middle adolescence, which is characterized by increasingly mature physical development, increased self-discovery, as well as increased attraction to the opposite sex and the emergence of

imaginations about sex. At this stage, adolescents often exhibit behaviors such as aggressiveness, emotional sensitivity, desire for independence, and reduced trust in adults (Smetana in Wirenviona, 2020).

This condition reflects the low awareness of reproductive health among adolescents. Research by Belayneh & Mekuriaw in Muna (2023) reported that of 791 adolescent girls who participated, 68.3% had poor knowledge of reproductive health, and 60.3% had inadequate personal hygiene practices. This shows that lack of understanding directly affects adolescents' habits and behaviors in maintaining their body hygiene and health.

Regarding reproductive health complaints, most respondents (79.4%) reported experiencing menstrual pain, 34.9% experienced irregular menstrual cycles, and 22.2% experienced excessive vaginal discharge. This finding is reinforced by research by Pandelaki (2020) which stated that 77% of adolescent respondents were 15 years old and 60.8% of them experienced excessive vaginal discharge, confirming the vulnerability of adolescent girls to reproductive health problems due to lack of knowledge about proper genital hygiene practices.

These results are in line with other studies, such as by Putri (2022) which reported 91.7% of 36 respondents experienced vaginal discharge, Pretiynda (2022) who found 55% of respondents had irregular menstrual cycles, and Riona (2021) who reported various levels of menstrual pain severity in 49 respondents, namely 42.9% mild pain, 34.7% moderate pain, and 22.4% severe pain.

Based on these findings, it can be concluded that complaints such as menstrual pain, excessive vaginal discharge, and irregular menstrual cycles

are common problems experienced by adolescent girls. The high prevalence of these complaints indicates the lack of knowledge of adolescents regarding reproductive health and how to deal with biological changes in their bodies. Therefore, providing appropriate reproductive health education is very important to equip adolescents with an understanding of the factors that affect reproductive health and how to manage them.

The importance of this education is in line with the opinion of Syamsulhuda in Hapsari (2019), which states that adolescents have high curiosity and tend to try new things, especially related to sexual behavior and reproductive health. Therefore, effective reproductive health education interventions are needed to deliver accurate information and encourage correct personal hygiene behavior.

Table 1. 2 Results of the Wilcoxon Signed-Rank Test Analysis on the Motivation Variable

Motivation Variable	Indicator			$\rho$ -value
	High	Medium	Low	
<i>Pretest</i>	45 (71,4%)	18 (28,6%)	0	0,000
<i>Posttest</i>	63 (100%)	0	0	

The data in the table shows that before the intervention, most respondents (71.4% or 45 people) had high motivation, while 28.6% (18 respondents) were in the medium motivation category, and there were no respondents with low motivation. After the intervention, the motivation of all respondents increased so that 100% were in the high motivation category. The statistical analysis showed a  $\rho$  value of 0.000, indicating a significant difference in motivation levels before and after the intervention. This indicates that the

intervention was successful in increasing respondents' motivation.

Adolescence is an important period characterized by the search for self-identity and a sense of existence in the world. This stage is also prone to experiencing challenges in adjusting to changes that occur in oneself (Revika in Deviliawati, 2023). Therefore, the application of effective educational strategies is needed. The Wilcoxon test results showed a p value of 0.000 ( $p < 0.05$ ) on the motivation variable, which proved that the intervention had a significant effect. Before the intervention, most respondents were already well motivated, but the posttest results showed an increase in motivation in all categories to be more optimal. This improvement is supported by the fact that the majority of respondents experience menstrual pain, so innovative educational methods such as Truth or Dare are the right approach to increase their motivation.

According to Tanuwibowo in Khatimah (2023), there are several indicators in motivation, namely drivers, willingness, skills, expertise, and goals. Drivers are instincts that arise to drive a person's desire, which motivates them to take action or achieve certain goals. Will is the desire to do something that is influenced by the environment or advice from others. Skills are the ability to do something using reason, thought, ideas and creativity. Meanwhile, expertise is the ability to apply complex and contextual patterns and behaviors to achieve goals. Finally, purpose refers to the state that an individual or organization is expected to achieve in order to meet predetermined goals.

This progress indicates that the use of game-based media in reproductive health education is an effective approach to increase student motivation. Potter & Perry

in Magdalena (2024) stated that health promotion can form beliefs that encourage individuals to learn and apply the information provided. In this context, game-based media not only conveys knowledge, but also increases students' active participation, thus increasing their motivation to maintain reproductive health.

This result is in line with previous research which shows that game-based learning media effectively increases students' learning motivation by making the learning process more interesting and interactive. Research by Permana (2022) showed that the use of Wordwall media in learning succeeded in increasing the average value of student motivation from 59.20 in the pretest to 82.73 in the posttest after the intervention.

In addition, research by Harwini (2020) reported similar findings, namely the use of snakes and ladders game media effectively increased student learning motivation. The average pretest score in the experimental group was 57.53 before intervention, and increased to 72.96 on the posttest after intervention. Research by Nurhayati (2020) is also in line with these results, showing that the use of engklek game as an intervention effectively increases students' learning motivation. The pretest and posttest data showed an increase in the average value from 29.65 to 48.77, which indicates that game-based learning methods can increase student involvement in the learning process.

This increase in motivation can be understood through the theory of motivation indicators from Tanuwibowo cited in Khatimah (2023). In this case, the Truth or Dare card acts as a stimulus that triggers an internal drive to pay more attention to reproductive health. In addition, social interaction in the game and support

from peers serve as factors that increase willingness, encouraging participants to more actively seek information and deepen their understanding.

Research by Harwini & Khaerudin (2020) reported similar findings, indicating that the use of snakes and ladders game as a learning tool significantly increased learning motivation compared to those taught without using the game. Statistical analysis showed a t value of 3.278, which exceeded the critical t value of 1.676. In accordance with Tanuwibowo's theory, this educational game helps students develop more creative skills in understanding and managing reproductive health information.

This finding was further strengthened by Permana & Kasriman's (2022) study, which used the Paired Sample t-test and found a significant p value of 0.000 ( $p < \alpha = 0.05$ ), indicating a significant difference between pretest and posttest scores after the intervention. This improvement illustrates the role of skills according to Tanuwibowo's theory, where participants are able to adopt better mindsets and behaviors related to reproductive health. Ultimately, this intervention effectively helped respondents increase their awareness and concern for reproductive health.

Overall, these results indicate that the increase in respondents' motivation to maintain reproductive health was influenced by the interactive method applied in the Truth or Dare game. The game fosters internal motivation by increasing willingness through social interaction and helps improve skills and knowledge in understanding reproductive health information. In addition, this approach is effective because it encourages active engagement, dialog, and reflection

that deepens understanding and motivates respondents to achieve the main goal of increasing awareness and attention to reproductive health.

## CONCLUSION

The use of game-based educational media such as Truth or Dare cards is significantly effective in increasing adolescents' motivation to maintain reproductive health. This interactive method not only triggers internal drive and willingness through social interaction, but also develops participants' skills and understanding of reproductive health, thus encouraging positive behavior change. This significant increase in motivation is also supported by the high prevalence of reproductive health complaints in adolescents, so an engaging and participatory educational approach is needed to equip them with better knowledge and awareness in caring for reproductive health.

Based on the results of this study which showed an increase in adolescent motivation through Truth or Dare card game media, it is recommended for educators and health practitioners to implement similar interactive learning media to increase adolescent knowledge and motivation in maintaining reproductive health. However, this study has limitations because it only uses a pre-experiment design without a control group, so it is recommended for future researchers to use experimental methods with larger control groups to obtain more valid results and broader generalization. In addition, this study has not examined other variables that may affect motivation such as family support or psychological factors, so future

researchers can include these variables to get a more comprehensive picture. This suggestion is intended for researchers in the field of reproductive health education in order to develop more effective educational media and validate the results in more depth.

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