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Effectiveness of Reproductive Health Education Through Video Learning Multimedia on Changes in Attitudes About Prevention of Student Sexual Harassment

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The author(s) declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

ABSTRACT

Purpose: The study aims to determine the effectiveness of reproductive health education through Virtual Learning Media (VLM) on changes in early adolescent attitudes to prevent sexual harassment.

Research Design and Methodology: The research was conducted at the Nurul Fikri Integrated Islamic Elementary School, Makassar City, using quantitative research methods with a quasi-experimental approach. The study involved 50 students from SDIT Nurul Fikri.

Findings and Discussion: The results indicated no significant difference in the effectiveness of attitude change. This outcome was attributed to the short duration of the educational intervention, which needed to be increased to induce immediate changes in attitudes.

Implications: The study suggests the necessity for age-appropriate and sustainable sexual education through counseling or engaging media provided by schools to ensure long-term effectiveness in changing students' attitudes.

Introduction

Children are the next generation of the nation in the future, of course, they need to get good attention and education so that their potential can be channeled and developed properly so that they will grow and develop into human beings with various abilities and skills that are beneficial for life later. On the other hand, they are not the object (target) of arbitrariness and inhumane treatment from anyone or any party. Today, there are various phenomena of negative behavior in children. News that is rife in print and electronic media mentions many cases of children, such as physical, verbal, and mental violence, and even violence and sexual abuse of children. Family members or strangers who are well-known to the child can engage in this form of violence and sexual harassment. This incident occurred all over the world. It is estimated that more than 1 billion children in the world aged 2–17 years have experienced physical, sexual, and emotional violence and neglect in the African, Asian, and North American regions that have experienced violence in the past year (Journal of the American Academy of Pediatrics: 2016), and according to the United Nations International Children's Emergency Fund (UNICEF) (2014), around 120 million children worldwide, or more than 100 children, have become victims of sexual abuse under the age of 20. Low-income countries such as North Korea, Myanmar, and Cambodia have a prevalence of violence against children of as much as 13% for women and 7.87% for men.

In Indonesia itself, according to the Indonesian Child Protection Commission (KPAI), the last three years seem to be worrying years for the world of children. This is because the Indonesian Child Protection Commission (KPAI) found hundreds of cases of sexual violence against children allegedly committed by those closest to the perpetrators, such as stepfathers and biological fathers, closest family members, and friends. The KPAI commissioner said that there were 218 cases of sexual violence against children in 2015. Meanwhile, in 2016, KPAI recorded 120 cases of sexual violence against children. Then, in 2017, 116 cases were recorded. South Sulawesi, which is one of the provinces in Indonesia, has also experienced cases of increased violence against children. Bakti partners noted that in 2017, there were 152 cases. A total of 67 of them were sexual violence. Meanwhile, the data obtained from the Symphony of the South Sulawesi Province Women's Empowerment and Child Protection Service (DPPPA) in 2017 was also quite astonishing because there were 267 cases of sexual violence. The data only describes the number of cases because the actual data is much more than reported (DPPPA Sulsel, 2017). The high rate of sexual abuse in children shows that the problem of sexual violence is a severe one that must be resolved immediately. Several things can cause sexual harassment to occur, including parenting style, parental knowledge, children's knowledge of reproductive health, and fast-developing information technology. Prevention of the root causes of sexual violence can be done through education, especially in elementary schools. Meanwhile, sexual and reproductive health education provided in schools is still minimal (News Indonesia, 2016). Children aged 6–12 are in the intellectual or school harmony periods. During this period of school harmony, children are relatively more accessible to education than before and after. Children can react to intellectual stimulation at this age or carry out learning tasks that require cognitive abilities. The results of the statistical analysis showed that there was a significant effect of the age of the child on the understanding of elementary school-aged children about sexual education. According to the findings of the Pearson analysis, the correlation coefficient value was 41.12%, and age impacted children's understanding of sexual education. Wherever the child is, it will enable the child to understand more about sexual education. The results of this analysis show that it is very important to note that sexual education should be started as early as possible, not to delay or wait for children to grow up.

The results showed that the data regarding children's attitudes about reproductive health were 42 (40.8%) very unfavorable attitudes, 25 (24.3%) unfavorable attitudes, 20 (19.4%) excellent attitudes, and 16 (15) good attitudes. Early sexual education for children is the provision of information in the form of the development of sexuality, reproductive health, and personal safety skills. Ideally, sex education for children is given for the first time by parents at home or within the family. However, not all parents want to be open with their children when discussing sexual issues. In addition, more than 40% of children's time is spent at school with various academic and non-academic activities. Children spend most of their time at school; this is where the school plays a role in providing sex education to children according to what they need. Several studies have shown that the prevention of sexual violence will not be optimal if sexual education is only carried out by parents. However, it will be more effective if schools also support sexual education for school-age children. If families and schools do not take charge of the problem, children will turn to other sources of information. Health interventions in education are many efforts made to increase knowledge. Many health education media can be used, including audiovisual media. Audiovisual media is a type of media that contains sound elements and visual elements, such as video recordings, sound slides, and so on. One of the other media is a leaflet. Leaflets are a way of conveying health information or messages through folded sheets. Information content can be in pictures, sentences, or a combination. The results of Tindaon's research, R. L. (2017), showed a change in students' attitudes before and after the video media was used: positive by 90% to 100% and unfavorable by 10% to nothing. Providing information in the form of video playback was able to increase student's knowledge, which had a positive impact on the attitudes formed. Another study conducted by Kapti et al. (2013) stated that audiovisual media and discussion are effective in increasing knowledge and attitudes. Based on this, this study recommends further research to be carried out to find out the effectiveness of the media without discussion. The research results conducted by Shorea, Agrina, and Woferst (2011) stated that using engaging video media and not watching to increase young women's knowledge in the

experimental group increased knowledge by 4.28%. Meanwhile, the effectiveness of leaflet media in Budiyanto's research (2016) concluded that leaflet media was effective in increasing knowledge. According to Meliyanti (2015), using leaflets effectively increases adolescent knowledge by 63.5%.

The integrated Islamic school Nurul Fikri Makassar is located in Jl. Meranti No. 1, Panakukang District, Makassar, has a population of 6th-grade elementary school students in the 2018–2019 school year of 91 students (SIT Profile Data Nurul Fikri Makassar, 2019). The results of interviews with ten elementary school students in grade 6 at the school said that their knowledge of reproductive health, especially regarding the prevention of sexual harassment, was still shallow; some did not even know at all, so it greatly influenced their attitude toward preventing sexual harassment, This was because talking about reproductive health was still taboo in the Islamic school environment. Hence, this impacts the low knowledge of students (adolescents) about reproductive health. In addition to students, interviews were also held with one of the homeroom teachers for grade 6 at the Nurul Fikri Makassar Integrated Islamic School, who stated that the main obstacle for class teachers in providing sexual education to children was not being included in the curriculum, and the lessons at this school were based on religion.

Literature Review

Health Education Models

Health education is a motivation-based effort to change the three main factors that determine behavior: attitudes, social influence, and ability through communication (Smith et al., 2022). Its main goal is to raise awareness about the harm caused by an unhealthy environment and the sources of disease that can harm health. Health education plays an important role in helping people take control of their health by influencing, facilitating, and reinforcing healthy decision-making (Grigorovich & Kontos, 2019). Health education serves not only as a tool to convey information but also as a means to promote positive and sustainable behavior change. It empowers individuals to understand their health conditions, recognize possible health risks, and take appropriate preventive actions. This includes adopting a healthy lifestyle, maintaining environmental hygiene, and avoiding bad habits that may increase disease risk. In addition, health education can also help people understand the importance of early disease detection and access to quality health services. In this study, the health education model used is the health promotion model (HPM) which serves as the theoretical framework. HPM was first developed by Nola Pender, a professor of nursing at the University of Michigan in 1982 (Phillips et al., 2019). Pender believed that the delivery of quality health care in the context of health promotion would integrally improve the health system (Brown & Battle, 2019). In other words, Pender saw that health efforts focused on prevention and health promotion had great potential to improve the community's overall health.

The Health Promotion Model (HPM) is based on empowering individuals or families to improve their health status (Dobbin & Kalev, 2019). It focuses not only on the treatment of disease, but also on prevention and improving quality of life through behavior change. HPM encompasses behaviors aimed at improving health and can be applied throughout a person's life, from childhood to old age (Medeiros & Griffith, 2019). This means that HPM is relevant at different stages of life, and can be used to guide individuals or groups towards healthier lifestyles. In its application, HPM involves various factors influencing an individual's health, including lifestyle, way of thinking, and psychological health such as self-motivation, health status, and self-esteem. In addition, social and cultural aspects such as ethnicity, education, and economic status also play an important role in determining one's health behaviors (Freyd & Smidt, 2019). For example, a person with a higher education level tends to be more aware of the importance of health and is more likely to adopt healthy living behaviors. In contrast, individuals with low economic status may have limited access to health information and health services, putting them at a higher risk of developing diseases.

In addition to these factors, a person's knowledge and experience are also very influential in forming health behaviors. A person with direct experience or in-depth knowledge of a disease tends to be more cautious and proactive in maintaining their health. For example, individuals who have suffered from chronic diseases such as diabetes or hypertension will usually be more motivated to

lead a healthy lifestyle and regularly check their health. This experience provides a strong foundation for individuals to make wiser decisions regarding their health.

Biological factors such as age and gender are also important components of HPM. Age affects the level of susceptibility to certain diseases and the body's ability to recover from illness. For example, older people tend to be more susceptible to degenerative diseases such as osteoporosis or heart disease, so they require a more intensive preventive approach. Meanwhile, gender can influence certain health risks; for example, women are more prone to osteoporosis than men, so gender-tailored health interventions can be more effective.

Interpersonal factors such as family support, peer groups, and healthcare providers also play an important role in this model. Support from family and friends can influence a person's decision to adopt healthy behaviors. For example, someone with family or friends who support a healthy lifestyle is more likely to be motivated to maintain the behavior. Conversely, a lack of social support can hinder behavior change. Health care providers also play a key role in providing accurate information and assisting individuals in making informed decisions regarding their health.

In the context of health education, HPM provides a comprehensive framework for designing programs aimed at improving public health. Educators and healthcare providers can design more effective and targeted interventions by understanding the factors that influence health behaviors. For example, education programs that focus on increasing knowledge and awareness about specific health risks can be complemented with strategies to change behavior, such as providing social support, increasing self-motivation, and providing better access to health services.

The application of HPM can also help evaluate the effectiveness of health education programs. By measuring behavior change before and after an intervention, researchers can determine the extent to which the program successfully achieved its objectives. In addition, HPM allows for a more holistic evaluation by considering the various factors that influence an individual's health, providing greater insight into program effectiveness and areas for improvement.

HPM-based health education can significantly improve communities' health status by promoting positive and sustainable behavior change. In the long term, this approach can reduce disease prevalence and improve the overall quality of life. Therefore, policymakers, healthcare providers, and educators need to continue to develop and implement health education programs based on this health promotion model. By doing so, we can create a healthier society, increase awareness of the importance of disease prevention, and encourage people to take care of their health more proactively.

Learning Media & Audio-Visual Media (Video)

The word media comes from the Latin Medius, which means middle, intermediary, or introduction. Media can also be interpreted as anything that can be used to channel messages and stimulate students' thoughts, feelings, concerns, and willingness to encourage them to be involved in the learning process (Rossetto et al., 2020). According to Derry et al. (2014), the benefits of learning media are: 1) capturing an object or events. 2) Manipulate certain circumstances, events, or objects. 3) Add enthusiasm and motivation to the students. 4) Has practical value, meaning that learning media can overcome the limitations of experience that students have, classroom boundaries, allow direct interaction between participants and the environment, produce uniformity, observation, generate motivation and stimulate participants to study well, generate new desires and interests, controlling student learning speed, and provide comprehensive experiences and things that are concrete to abstract (Mayer, 2019).

Audiovisual media is a type of media that contains sound elements and image elements that can be seen, such as video recordings, various film sizes, sound slides, and so on (Nan & Zhang, 2019). According to research, media like audiovisual media have a relatively high level of effectiveness, above 60% to 80%. Teaching through audiovisual means using hardware during the learning process, such as film projector machines, televisions, tape recorders, and wide visual projectors (Mutlu-Bayraktar et al., 2019).

This type of audiovisual media has better capabilities because it includes the first and second types of media (Vina, 2011). This media is divided into two: 1) Audiovisual silence, which displays

sound and still images such as sound slides, sound films, and sound prints (Sreenu & Durai, 2019). Motion audiovisuals can display moving sound and image elements, such as sound films and video cassettes (X. Li et al., 2019). According to Harjanto (2000), the advantages of audiovisuals are that teaching materials will have more apparent meaning so that students can understand them better and master teaching objectives better (J. Li et al., 2019). Then, teaching will be more varied, not merely verbal communication through the teacher's utterance of words. So that students do not get bored, and the teacher does not run out of energy, primarily if the teacher teaches for every hour of lessons, Students carry out more learning activities because they listen to the teacher's explanation, observe, do, demonstrate, and so on (van Daal et al., 2019). Teaching will attract more students' attention to foster learning motivation.

Reproduction health

The United Nations Population Fund (UNFPA) defines reproductive health as a complete physical, mental, and social well-being related to the reproductive system (Thurston et al., 2019). This includes where a person can have a safe and satisfying sexual life, the capability to reproduce, and the freedom to reproduce (Leemis et al., 2019). WHO also defines reproductive health as a state of complete physical, mental, and social well-being related to reproductive health that is not only free from disabilities and limitations but also includes reproductive processes, functions, and systems that are running well at every stage of life (WHO, 2015). In addition, the Ministry of Health defines reproductive health as a state of complete physical, mental, and social health, not solely free from disease or disability related to the reproductive system, functions, and processes (Chowdhury et al., 2019). The definition of reproductive health according to the International Conference on Population and Development (ICPD) is Reproductive health is a state of complete physical, mental, and social well-being related to reproductive health, not only being free from disabilities and limitations but also including the processes, functions, and functioning of the reproductive system. Well, at every stage of life (Smith et al., 2022). Implicit in this statement is the right of both men and women to be informed and access the safe, practical, affordable, and acceptable method of family planning of their choice. This includes other methods of fertility regulation of their choice that do not violate the law and the right to access appropriate health services that will enable women to safely go through pregnancy and childbirth and give couples the best chance of having a healthy baby (UNFPA, 2014).

Attitude

Attitude is a person's closed response to a specific stimulus or object that already involves the opinion and emotional factors (happy-unhappy, agree-disagree, good-bad, and so on) (Phillips et al., 2019). As with knowledge, attitudes also have levels based on intensity: 1) Receiving and receiving means that the person or subject is willing to accept the stimulation given (object) (Brown & Battle, 2019). 2) Respond (responding). Responding here means giving answers or responses to questions or objects encountered. 3) Appreciate (valuing). Appreciating means that the subject or someone gives a positive value to the object or stimulation by discussing it with others, inviting, influencing, or encouraging others to respond (Medeiros & Griffith, 2019). 4) Responsible (responsible). The highest level of attitude is being responsible for what one believes. Someone with a confident attitude based on his beliefs must take risks if other people ridicule him or there are other risks (Chowdhury et al., 2019).

There are forms of violence according to WHO, the first of which is maltreatment (including cruel punishment) involving physical, sexual and psychological/emotional violence and neglect of infants, children and adolescents by parents, caregivers and other authority figures, most often at home but also in environments such as schools and orphanages (Dobbin & Kalev, 2019). The second form of violence is bullying/bullying (including cyberbullying), harmful, aggressive behavior by other children or groups of children who are not siblings or have a relationship with the victim. It involves repeated physical, psychological, or social disturbances and often occurs in schools and other places where children congregate or via online media (Phillips et al., 2019). Third, youth violence, which is concentrated among children and young adults aged 10-29 years, occurs most frequently in the

setting of introductions to new children, including bullying and physical attacks with or without weapons (such as knives or other sharp weapons) and may involve intergroup (gang) violence. Moreover, sexual violence which includes sexual intercourse or non-sexual sexual relations (sexual acts that do not involve contact (such as voyeurism or sexual harassment); acts of sexual trafficking committed against someone who cannot consent or refuse; and exploitation through social media (Thurston et al., 2019). In addition, emotional or psychological violence includes limiting children's movements, defamation, ridicule, threats and intimidation, discrimination, rejection, and other non-physical forms of unfriendly treatment.

Research Design and Methodology

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Findings and Discussion

Findings

It was found that the age characteristics of the entire sample group V1 (n = 23) were mostly ten years old (56.6%), which amounted to 13 students, while only a small proportion were 12 years old (4.3%), which amounted to 1 person. For sample group V2 (n = 27), there were 13 ten-year-olds (48.1%) and only 1 12-year-old (3.7%).

Based on gender, it was found that almost half of the V1 group (47.8%) consisting of 11 people were female, while most of the study sample (52.2%) consisting of 12 people were male. For group V2, it was found that almost half (48.1%) of the 13 students were female, while most of the research sample (51.9%) consisting of 14 people were male. Based on the class division, it was found that group V1 consisted of 15 students in class 5A (65.2%) and 8 students in class 5C (34.8%). While group V2 consisted of 10 students in class 5B (37.0%) and 17 students in class 5D (63.0%).

Based on their experience hearing the term reproductive health education, the majority of students in group V1 (95.7%), as many as 22 people, had never heard the term, and only a small proportion (4.3%), namely 1 person, had heard it. In group V2, it was found that all samples (100%) of 27 students had never heard of the term.

Based on the experience of receiving socialization about reproductive health education, it is known that all samples have never received socialization about reproductive health education. The positive attitude of both groups towards the aspect of the impact of early reproductive health education and victims of sexual violence was still low before the intervention. However, after the intervention, positive attitudes towards the impact aspect of early reproductive health education remained low, while positive attitudes towards the aspect of victims of sexual violence increased. Positive attitudes before the intervention were higher in group V1 compared to group V2. After the intervention, positive attitudes in group V1 decreased, while in group V2 there was no change in the decrease in positive attitudes.

After testing the data's normality, all data were normal. Thus, it can be concluded that all variables were in normal condition after the normality test, with a result of $p>0.05$, which meets the requirements for parametric tests.

The average percentage correlation between the attitude of the samples before and after the intervention was higher in group V1 compared to group V2. However, the difference in score improvement was more significant in group V2 (7.97) compared to group V1 (2.68). Meanwhile, at posttest 2, the decrease was higher in group V1 compared to group V2.

The mean attitude change score in group V2 was greater than group V1 (7.980 vs. 2.765) at pretest-posttest-1; the change in attitude between groups V1 and V2 was not significant ($p>0.05$). Similarly, at pretest-posttest-2, the mean attitude change score in group V2 was greater than group V1 (6.555 vs. 2.009) but also not significant ($p>0.05$).

Independent test results showed no difference in the effectiveness of knowledge improvement and attitude change between groups V1 and V2 after the intervention. This suggests that although there was a change in attitude, the difference in frequency of intervention did not significantly affect the outcome of this study. This could be due to various other factors such as the intervention method, students' emotional engagement, and prior understanding of the topic.

Discussion

This study investigates the effect of reproductive health education through multimedia video learning intervention on students' attitudes, both before and after the intervention provided once (V1) and twice (V2). Attitude is a person's closed response to a certain stimulus or object that involves opinion and emotion factors, such as happy-displeased, agree-disagree, good-not good, and so on. According to Walgito in Kapti (2010), attitude formation is influenced by several factors, including physiological factors, experience, and social communication. Physiological factors are related to age and health; generally, younger individuals will have a freer and bolder attitude than older individuals. Experiential factors also affect a person's attitude; direct experience with the attitude object will shape perceptions and attitudes towards the object. Meanwhile, social communication factors can take the form of information passed from one person to another, affecting attitudes.

This confirms that changes in attitudes and behaviors do not always occur directly after receiving information or educational interventions. The success of an educational program in changing attitudes can be influenced by various factors, including pre-existing information and educational experiences. In this study, the respondents had never been exposed to reproductive health education before, and the information provided through this intervention was new to them. New attitudes tend to form when a person is repeatedly exposed to information, which creates understanding and ultimately forms an attitude. This attitude is a form of a person's reaction or response that is still closed to a stimulus or object and is a form of evaluation of the surrounding aspects. Thus, previous experience is a determining factor in changing one's attitude. Experiences that leave a strong impression will be a solid basis for attitude formation. Attitudes are easier to form if emotional factors are involved, because the appreciation of the information will be deeper.

In this study, the sample's experience showed that they had never been given structured education on the basics of reproductive health. This led to the lack of a strong impression for forming new attitudes. When a person has received education before, this will greatly influence their opinions and beliefs. The fact that there was no significant difference in respondents' attitudes after being given the intervention is supported by the study of Kanicka et al. (2013), which examined the effects of an anti-tobacco education program on knowledge, attitudes and behaviors related to nicotinism among men and women. In the study, attitudes did not improve significantly in male respondents. The absence of significant differences in attitudes was attributed to the lack of an educational process considering gender factors, including the methods, techniques, and instruments used.

The analysis showed that reproductive health education through Video Learning Multimedia was ineffective in significantly changing the attitudes of the study subjects. However, attitudinal changes occurred in the research subjects, although not significant. This is most likely due to the lack of prior exposure to structured education on the basics of reproductive health, which led to the lack of a strong impression as a basis for forming attitudes. The curriculum at school, which is still focused on religious materials, without including reproductive health education, is also a contributing factor to students' lack of significant attitude change. The absence of reproductive health materials in the school curriculum indicates a gap in the educational approach that could have a greater impact in shaping more positive and informative attitudes about reproductive health among students.

In addition, the effectiveness of educational interventions can also be influenced by the frequency and intensity of exposure to learning materials. In this study, subjects who received the intervention twice (V2) may have a greater chance of experiencing attitude change than those who received only one intervention (V1). However, the change may still not be significant enough to be measured on the scale used by this study. This indicates that a more intensive and sustained educational approach is needed to produce more significant attitude changes. In addition, factors such as teaching methods, the quality of the learning videos, and the relevance of the material to students' daily lives also play an important role in the success of this educational intervention.

The results of this study suggest that reproductive health education requires a more holistic and sustainable approach to be truly effective. This education should involve not only the delivery of information, but also building deep understanding through direct experience and ongoing interaction with the material. Thus, positive attitudes towards reproductive health can be more easily formed and maintained in the long run. In addition, the integration of reproductive health education into the broader school curriculum is also an urgent need, so that students can gain comprehensive and relevant knowledge that will influence their attitudes and behaviors related to reproductive health. Future research should consider using more varied and intensive intervention methods, such as group discussions, simulations, or other interactive activities to deepen students' understanding and form stronger positive attitudes. In addition, research can also explore the role of teachers, parents, and communities in supporting more effective reproductive health education. Thus, reproductive health education is not only the responsibility of schools, but also involves various parties to form a healthier and more knowledgeable young generation about reproductive health.

Conclusion

The conclusion of this study shows that reproductive health education through multimedia video learning intervention does not significantly change students' attitudes. Although there was a change in attitude in the study subjects after the intervention, the change was not significant enough to be measured. This may be due to the lack of prior exposure to structured reproductive health education, which led to the absence of a strong impression for forming new attitudes. In addition, other factors such as teaching methods and intervention intensity also play a role in the success of attitude change.

This study has important value from both scientific and practical perspectives. Scientifically, it adds to understanding how reproductive health education can influence students' attitudes, especially through video media. In terms of practice, it highlights the importance of a more intensive and sustainable educational approach in shaping positive attitudes towards reproductive health. This study also shows the need to integrate reproductive health education into the broader school curriculum, which will provide students with more comprehensive and relevant knowledge.

However, this study has several limitations that need to be considered. One of the main limitations is the lack of more in-depth measurement of other factors that may influence students' attitudes, such as emotional engagement and the relevance of the material to students' daily lives. In addition, this study was also limited to using video media as the only intervention method, without involving other more interactive methods. For future research, it is recommended that more varied and intensive intervention methods be used, as well as involving the role of teachers, parents, and communities in supporting more effective reproductive health education. Thus, reproductive health education can be a shared responsibility involving various parties in shaping a healthier and more knowledgeable young generation.

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