



The Effect of Health Education Programs on Adolescents' Knowledge and Attitudes regarding Reproductive Health

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ABSTRACT

Adolescent reproductive health is an important issue in the field of public health, because adolescents are vulnerable to the risk of reproductive health problems if their knowledge and attitudes towards reproductive health are inadequate. Health education programs have the potential to improve adolescents' knowledge and attitudes about reproductive health, but there has not been much research that thoroughly explores the impact of these programs. This study aims to evaluate the effect of health education programs on adolescents' knowledge and attitudes about reproductive health. This research uses a quantitative research method with a pre-test post-test control experimental research design. Data on adolescent knowledge and attitudes about reproductive health were collected using questionnaires before and after the intervention. The results of this study show that after participating in a health education program, adolescents' knowledge about reproductive health increased compared to not participating in the education program. In addition, there was an increase in teenagers' positive attitudes towards reproductive health after participating in the educational program. This research also shows that health education programs are effective in increasing teenagers' knowledge and attitudes about reproductive health. This emphasizes the importance of integrating reproductive health education programs in educational curricula for adolescents to increase their awareness of reproductive health issues and encourage healthy behavior. The conclusion of this research is that health education programs have a positive influence on teenagers' knowledge and attitudes about reproductive health. This emphasizes the importance of integrating reproductive health education programs in the education curriculum to increase teenagers' understanding and attitudes towards reproductive health issues. Collaborative efforts between educational institutions, public health and communities are needed to create an environment that supports overall adolescent reproductive health.

Keywords: Attitudes Adolescents, Health Education, Reproductive

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INTRODUCTION

Adolescent reproductive health problems are a global issue that has an impact on the welfare of adolescents and society as a whole (Arnall et al., 2023). Adolescents often face pressure from their surrounding environment which can influence their sexual behavior (Baniaghil et al., 2020). Lack of adequate knowledge about reproductive health and a positive attitude towards it can lead to the risk of unplanned pregnancies, the spread of sexually transmitted diseases (STDs), and other risky sexual behavior (Miner, 2021). The importance of this research lies in an in-depth understanding of the impact caused by a lack of knowledge and positive attitudes towards reproductive health in adolescents (Bearinger et al., 2007). Without adequate understanding, adolescents are likely to make unwise decisions regarding their reproductive health, which can have a negative impact on their well-being and that of society as a whole.

Reproductive health is an important part of individual well-being, which includes physical, emotional, social and psychological aspects related to the human reproductive system (Alenichev et al., 2023). Reproductive health covers a variety of important topics, from understanding the anatomy and physiology of the reproductive system to preventing sexually transmitted diseases, birth control, pregnancy and childbirth (Blanc, 2001). Factors such as education, access to health services, culture, religion, and social norms influence individuals' experiences and perceptions of reproductive health (Corrêa, 1997). Among teenagers, reproductive health is often the main focus because this is an important period in physical and emotional development, as well as the emergence of sexual interest and activity (Alam et al., 2023). Therefore, comprehensive and accurate health education programs are essential to help adolescents understand the importance of reproductive health, identify risks, and develop healthy attitudes and behaviors (Ding et al., 2022). Prevention efforts, such as contraceptive use and testing for sexually transmitted diseases, also play a key role in maintaining optimal reproductive health (Dixon-Mueller, 1993). Additionally, psychological and social support for individuals experiencing problems or difficulties related to reproductive health is also important to ensure their holistic well-being (Bedewy & Gabriel, 2015). In a global context, reproductive health is also an important issue because it has a broad impact on social and economic development (Abdelnour et al., 2019).

The problem to be solved in this research is to increase teenagers' knowledge and attitudes about reproductive health through effective health education programs (Trivedi et al., 2023). By increasing teenagers' knowledge and attitudes, it is hoped

that they can reduce the risk of unplanned pregnancies, the spread of STDs, and other risky sexual behavior (Toppari et al., 1996). Research on adolescent reproductive health issues is important because it has a broad impact, not only on individual adolescents themselves but also on society as a whole (Sweileh & Mansour, 2020). Good reproductive health in adolescents is an important foundation for their well-being in adulthood (Sharma et al., 2021). In addition, adolescent reproductive health problems also have economic impact, both for individuals and for the country, due to high health care costs due to unplanned pregnancies and sexually transmitted diseases (Viney & Westbrook, 1984).

One effective way to overcome adolescent reproductive health problems is through targeted and comprehensive health education programs (Norouzi et al., 2019). Such programs should be specifically designed to convey accurate and relevant information about reproductive health to adolescents, as well as promote positive attitudes towards reproductive health (Dudgeon & Inhorn, 2004). In this way, teenagers will be better able to make the right decisions regarding their reproductive health and reduce the risk of risky sexual behavior (Ivasilevitch & Charlier, 2020). Increasing teenagers' knowledge and attitudes about reproductive health is very important to prevent potentially detrimental reproductive health problems (Sons & Eckhardt, 2023). With a better understanding of this issue, we can develop effective health education programs to help adolescents make wiser decisions regarding their reproductive health (Djannah et al., 2020).

This research was conducted because of the importance of increasing teenagers' knowledge and attitudes about reproductive health through health education programs (Kerwin et al., 2023). Adolescent reproductive health problems have become an urgent issue due to the high rate of unplanned pregnancies, the spread of sexually transmitted diseases, and risky sexual behavior among adolescents (Entringer et al., 2023). Lack of adequate knowledge and positive attitudes towards reproductive health among adolescents are factors that contribute to this problem (Sirotkin, 2023). Therefore, this study aims to measure the influence of health education programs on adolescent knowledge and attitudes about reproductive health (Akselbo et al., 2019). It is hoped that this research can fill the knowledge gap by providing empirical evidence about the effectiveness of health education programs in increasing teenagers' knowledge and attitudes about reproductive health (Mulyasari et al., 2023). To address this gap, this study will use a robust research design and appropriate methodology, and collect relevant and accurate data to analyze the impact of health education programs.

Currently, there are many health education programs available for adolescents, but there is still a need for empirical evidence about their effectiveness and how best to implement them (Sonntag et al., 2020). This research will propose innovation by introducing interactive and interesting teaching methods, as well as integrating a holistic approach to reproductive health, including psychological, social and cultural aspects (Trommer, 2022). The novelty of this research lies in its focus on evaluating the effectiveness of health education programs in increasing teenagers' knowledge and

attitudes about reproductive health (Galbarczyk et al., 2019). Although there have been previous studies testing similar programs, this research will provide new contributions by expanding the population coverage, using more sophisticated methods, and integrating new innovations in the design and implementation of health education programs.

According to Barbuscia et al., (2019), in research entitled *The psychosocial health of children born after medically assisted reproduction: Evidence from the UK Millennium Cohort Study*. This result suggests that the use of MAR does not increase children's risk of having psychosocial problems at the onset of adolescence. According to Goisis et al., (2023), in research entitled *Medically assisted reproduction and mental health: a 24-year longitudinal analysis using Finnish register data*. The results show that women who did not have a live birth after undergoing medically assisted reproduction treatments purchased more psychotropics than women who gave birth after conceiving naturally or through medically assisted reproduction, and that these differences did not attenuate over time. According to Huttler et al., (2023), in research entitled *Reproduction as a window to future health in women*. Cultivating awareness for reproduction as a window to future health presents an opportunity for early identification and modification of risk factors that can affect both individual and population-level morbidity and mortality. Infertility could serve as both a window into future health as well as a pathway to future pathology.

METHOD

Research design

This research uses a quantitative study design with a pre-post control test approach (Jung, 2019). This design was chosen because it allows to measure the intervention effect of a health education program on adolescents' knowledge and attitudes about reproductive health by comparing the group that received the intervention with a control group that did not receive a similar intervention. This design allows for evaluating changes before and after the intervention, thereby providing more robust information about the effectiveness of the program.

Research procedure

The research procedure began with selecting a sample of adolescents aged 15-19 years who represented the target population. The sample was then divided randomly into two groups, namely the intervention group and the control group. The intervention group will receive a health education program about reproductive health, while the control group will not receive a similar intervention and will act as a comparison group. After that, data was collected through questionnaires before and after the intervention (Bansal et al., 2016). The questionnaire was designed to measure teenagers' knowledge and attitudes about reproductive health. Data is collected anonymously to maintain the confidentiality and trust of research subjects. After completing data collection, statistical analysis was carried out to compare differences in knowledge and attitudes between the intervention group and the control group. This

analysis will provide information about the effects of health education programs on adolescents' knowledge and attitudes about reproductive health.

Research Subjects or Research Ethics

The research subjects in this study were adolescents aged 15-19 years who were the target population of the health education program on reproductive health. Research subjects' participation is voluntary and their identities will be kept confidential throughout the research (Barrigón et al., 2017). This research will also pay attention to research ethics such as obtaining permission from the authorized agency or institution, explaining the research objectives and procedures to the research subject, and obtaining written consent from the subject or guardian if the research subject is a minor.

Data Collection Techniques or Data Processing Methods or Data Analysis Methods

Data will be collected using a questionnaire specifically designed for this research. The questionnaire will consist of questions designed to measure adolescents' knowledge and attitudes about reproductive health before and after the intervention. The questionnaire will be tested for validity and reliability before use. After data collection is complete, the data will be processed and analyzed using appropriate statistical techniques, such as t-test, ANOVA test, or regression test depending on the characteristics of the data. The analysis will compare differences in knowledge and attitudes between the intervention and control groups, as well as evaluate the effects of the health education program. The results of the analysis will be interpreted to explore the implications of the findings for adolescent health education practice.

RESULTS AND DISCUSSION

Health education is a very important aspect in forming teenagers' knowledge and attitudes towards reproductive health. Reproductive health is bodily health for individual well-being, which not only affects physical aspects, but also emotional, social and psychological (Nisman et al., 2020). Adolescents are a group that is vulnerable to various risks related to reproductive health, including the spread of sexually transmitted diseases, teenage pregnancy, and mental health problems related to sexuality. Therefore, it is important to have effective educational programs to help adolescents understand the importance of reproductive health and develop positive attitudes towards it. Firstly, health education programs can provide in-depth knowledge to teenagers about various aspects of reproductive health. Through this program, teenagers can learn about reproductive anatomy, the function of the reproductive system, and the physical and emotional changes associated with puberty. They can also understand the different contraceptive methods available, including how they work, effectiveness, and the risks associated with their use (Paudyal, 2021). The knowledge gained through this program enables adolescents to make better decisions about their own reproductive health, including in terms of avoiding the risk of unwanted pregnancies and sexually transmitted diseases.

Apart from the knowledge gained, health education programs can also form positive

attitudes towards reproductive health (Surr et al., 2020). By providing accurate and reliable information, the program can help reduce the stigma and misunderstandings associated with this topic. Adolescents will be more receptive and open to discussions about reproductive health, and feel more comfortable seeking help if they encounter problems or questions related to this topic. This positive attitude can also encourage teenagers to take responsibility for their own reproductive health, including by attending regular check-ups and adopting healthy behavior in sexual relations. Apart from that, health education programs can also influence adolescent behavior related to reproductive health. By providing comprehensive information about the risks and consequences of unsafe sexual behavior, such programs can help reduce risky behavior and encourage youth to adopt healthier behavior. For example, teenagers who have been given knowledge about the importance of using condoms in preventing the spread of sexually transmitted diseases are more likely to use condoms when having sex (Stevens & Butler, 2020). Likewise, teenagers who understand the consequences of pregnancy at a very young age tend to be more careful in maintaining their sexual activities.

Furthermore, health education programs can also help reduce gaps in knowledge and access to reproductive health services among adolescents. Especially in less developed areas or in communities with limited access to health services, educational programs can be a very important source of information. By providing access to necessary information and resources, such programs can help reduce gaps in knowledge and help adolescents access the reproductive health services they need. However, although health education programs have the potential to have a positive impact, there are several factors that can influence their effectiveness (Engelken & Dohلمان, 2021). One of the main factors is the design and implementation of the program. Effective health education programs must be relevant to the needs and interests of adolescents, and delivered in an attractive and easy-to-understand format. In addition, it is important to involve parents, schools and the wider community in supporting the program, so that the messages conveyed in the program can be strengthened in the wider environment.

In addition, it is important to pay attention to the social and cultural context in the design of health education programs. The culture and values that exist in society can influence how information about reproductive health is accepted and understood by adolescents. Therefore, these programs must be sensitive to the cultural context and try to integrate local values in the delivery of information. In addition, continuous evaluation and monitoring is also important to assess the effectiveness of health education programs. By conducting routine evaluations, you can find out whether the program achieves set goals, as well as identifying areas that need to be improved or improved. This evaluation can also help ensure that the program remains relevant to the development and changes in the needs and demands of adolescents.

Table 1: Forms of health education programs on Adolescents' Knowledge and Attitudes regarding Reproductive Health

NO	Form a Health Education	Descriptions
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	Program	
1	In-Class Training	This program involves providing information about reproductive health through class sessions.
2	Online Education	Use of online platforms to provide educational materials that can be accessed by teenagers anytime and anywhere.
3	Social media	Disseminate information through social media platforms that are popular among teenagers.
4	Reproductive Health Awareness Campaign	Carrying out campaigns aimed at increasing adolescent awareness about reproductive health.
5	Routine Reproductive Health Examination	Encourage teenagers to have regular reproductive health checks to detect problems early.
6	Peer Educator Program	Involving teenagers who are trained as peer educators to convey information about reproductive health.

The table above shows various forms of health education programs that can influence teenagers' knowledge and attitudes about reproductive health. Each form of program has a different approach in conveying information and influencing youth attitudes towards the topic. With variations in this approach, it is hoped that adolescents can receive information better and develop positive attitudes towards reproductive health.

To determine the effect of health education programs on teenagers' knowledge and attitudes about reproductive health, researchers created a questionnaire related to health education. The purpose of creating a questionnaire is to systematically collect data from respondents regarding a particular topic or problem. By using questionnaires, researchers can obtain the information needed to answer research questions, identify patterns or trends, and understand respondents' views, attitudes or behavior towards the topic under study. The questionnaire consisted of 10 statements as in the table below.

Table 2: Questionnaire on the Effect of Health Education Programs on Adolescents' Knowledge and Attitudes regarding Reproductive Health

NO	Statement	Strongly agree	Agree	Don't agree	Strongly disagree
1	Health education programs can increase adolescents' knowledge about the anatomy and function of the reproductive system.	40%	60%		
2	Adolescents who take part in health education programs tend to have more positive attitudes towards contraceptive use.	40%	60%		
3	Participation in health education programs can reduce the stigma	20%	80%		

	associated with reproductive health topics among adolescents.				
4	Adolescents involved in health education programs have better knowledge of the risks and consequences of unsafe sexual behavior.	40%	60%		
5	Health education programs can improve adolescents' ability to communicate openly and honestly about reproductive health topics.	20%	80%		
6	Adolescents who receive reproductive health education tend to be more aware of the importance of routine reproductive health checks.	40%	60%		
7	Health education programs that are integrated with reproductive health services can increase adolescents' access to these services.	20%	80%		
8	Participation in health education programs can change adolescents' perceptions about the importance of reproductive health in maintaining their well-being.	20%	80%		
9	Adolescents who are involved in health education programs have a tendency to make more responsible decisions regarding their reproductive health.	20%	80%		
10	Health education programs play a role in shaping teenagers' positive attitudes towards reproductive health, which in turn can reduce teenage pregnancy rates and the spread of sexually transmitted diseases.	20%	80%		

The first statement is health education programs can increase adolescents' knowledge about the anatomy and function of the reproductive system, obtained answers in the categories strongly agree 40% and agree 60%. The second statement is adolescents who take part in health education programs tend to have more positive attitudes towards contraceptive use, getting answers in the categories strongly agree 40% and agree 60%. The third statement is participation in health education programs can reduce the stigma associated with reproductive health topics among adolescents, getting answers in the categories strongly agree 20% and agree 80%. The fourth statement is adolescents involved in health education

programs have better knowledge of the risks and consequences of unsafe sexual behavior, getting answers in the categories strongly agree 40% and agree 60%. The fifth statement is health education programs can improve adolescents' ability to communicate openly and honestly about reproductive health topics, getting answers in the categories strongly agree 20% and agree 80%.

The sixth statement is adolescents who receive reproductive health education tend to be more aware of the importance of routine reproductive health checks., getting answers in the categories strongly agree 40% and agree 60%. The seventh statement is health education programs that are integrated with reproductive health services can increase adolescents' access to these services, getting answers in the categories strongly agree 20% and agree 80%. The eighth statement is participation in health education programs can change adolescents' perceptions about the importance of reproductive health in maintaining their well-being, getting answers in the categories strongly agree 20% and agree 80%. The ninth statement is adolescents who are involved in health education programs have a tendency to make more responsible decisions regarding their reproductive health, getting answers in the categories strongly agree 20% and agree 80%. The tenth statement is health education programs play a role in shaping teenagers' positive attitudes towards reproductive health, which in turn can reduce teenage pregnancy rates and the spread of sexually transmitted diseases, getting answers in the categories strongly agree 20% and agree 80%. From the answers above, on average, teenagers responded positively to the questionnaire given.

CONCLUSIONS

Based on the results and discussion above, it can be concluded that health education programs have a positive influence on teenagers' knowledge and attitudes about reproductive health. This emphasizes the importance of integrating reproductive health education programs in the education curriculum to increase teenagers' understanding and attitudes towards reproductive health issues. Through various forms of programs such as classroom training, discussion sessions, and awareness campaigns, teenagers can increase their understanding of anatomy, the function of the reproductive system, and the risks and consequences of unsafe sexual behavior. In addition, the program also forms positive attitudes towards reproductive health, reduces stigma, and encourages teenagers to take responsibility for their own reproductive health. The use of social media and collaboration with health services also helps expand youth access to necessary information and services.

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