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Adolescents and reproductive health: Promoting healthy habits for reproductive well-being

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ABSTRACT

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Adolescence is characterized by rapid physical, psychological, cognitive, emotional, and reproductive changes. Providing accurate and sufficient information is crucial in preparing young individuals to face these changes. This program aims to improve the understanding of reproductive health, namely puberty, among early adolescents in grades IV and V (aged 10-14 years) at Banyuurip Elementary School. The design utilized is a quasi-experimental method including pre-test and post-test assessments. Thirty-eight students were chosen for this study by purposive sampling. The program's effectiveness is evaluated by a questionnaire, and the data is analyzed using a paired t-test. The data shows a notable difference in knowledge levels before and after obtaining health education through lectures and chats. Prior to health education implementation, most students demonstrated low knowledge levels (52.6%), followed by moderate levels (42.3%), while a tiny proportion had high knowledge levels (5.1%). After health education interventions, students' knowledge levels showed considerable improvement: 29% high, 71% sufficient, and 0% low. The average score increased from 76.58 before therapy to 83.16 after treatment. The median values were 80 and 90. The paired t-test yielded a p-value of 0.049, suggesting that reproductive health education significantly improved students' knowledge at Banyuurip Elementary School. The study indicates that health education could improve students' understanding of puberty and the maintenance of reproductive health.

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INTRODUCTION

According to the World Health Organization (WHO), individuals aged between 10 and 19 are classified as adolescents. Globally, there are approximately 1.2 billion adolescents within this age group. Notably, in low- and middle-income countries (LMICs), the proportion of adolescents is expected to rise until 2050 (Engel et al., 2019). The Central Bureau of Statistics reports that there are 69.82 million adolescents out of a total population of 270.20 million in Indonesia. 23.75 million are 10 to 14 years old, 23.1 million are 15 to 19 years old, and 22.95 million are 20 to 24 years old. Current and prospective adolescent population size will have a substantial impact on social, economic, and demographic development (Badan Pusat Statistik, 2021).

Previous research findings highlight two primary issues concerning adolescent reproductive health in Indonesia: insufficient knowledge about reproductive health and the prevalence of shifting sexual behavior among adolescents. These findings are supported by prior research which indicates that the majority of respondents possess adequate to moderate knowledge of adolescent reproductive health. The same study reveals that knowledge of reproductive health among junior high school students tends to be limited, with around 57.58 percent for male students and 62.85 percent for female students (Widiyastuti & Hakiki, 2022). The Indonesian Demographic and Health Survey (Kementerian Kesehatan Republik Indonesia, 2020) indicates that the level of reproductive health knowledge among adolescents remains low, with 73.46 percent of male adolescents and 75.66 percent of female adolescents aged 15 to 19 lacking adequate reproductive health knowledge. Based on an initial survey, it was determined that Banyuurip Elementary School falls within the jurisdiction of the Dlingo II Health Center, which operates under the Kapanewon Dlingo Bantul. Kapanewon Dlingo is among the districts in the Bantul Regency with the highest rates of early childbearing and youth marriage. Bantul Regency comprises seventeen districts or Kapanewon. In 2019, there were 544 early marriages and youth marriages in Kapanewon Dlingo, Kasihan, and Banguntapan, accounting for 36.7% of the total 1525. In 2020, there were 459 such marriages, comprising 32% of the total 1433, and in 2021, there were 372 marriages, representing 32.4% of the total 1147.

All issues related to adolescent reproductive health stem from a lack of information, understanding, and awareness regarding reproductive health. Knowledge and cognitive ability play a crucial role in guiding individuals' actions. Therefore, expanding adolescents' knowledge is vital. There are various methods to increase adolescents' knowledge, starting with early education from parents and continuing through counseling activities (Jones et al. 2015). These efforts enable adolescents to better comprehend and apply acquired knowledge to real-life situations (Amalia et al., Carapia-Fierros, P., Tapia-Pancardo, 2021). Knowledge about reproductive health can be acquired through health education, counseling, personal experiences, reading materials such as magazines, pamphlets, health-related books, and electronic media, as well as through education at school and within the family. The majority of human knowledge is obtained through visual and auditory means. The lack of knowledge may be attributed to a lack of information about reproductive health, particularly regarding the provision and maintenance of reproductive organs. Many individuals rely solely on information from their peers, whose perceptions may not necessarily be accurate. This lack of comprehension arises from several factors, including customs, culture, religion, and a lack of information from reliable sources. Consequently, various negative consequences may arise for adolescent groups and their families (Asni & Dwihestie, 2018, Allen et al. 2016). In fact, many adolescents are hesitant to discuss reproductive health issues with their parents due to embarrassment, fear of reprimand or punishment, or both. Additionally, numerous adolescents are unaware of their reproductive health conditions and are reluctant to undergo examinations at healthcare facilities.

Therefore, it is essential to provide adolescents with precise reproductive health information. The need for education on reproductive health among adolescents has become a national issue requiring attention. Reproductive health education will aid adolescents in acquiring accurate knowledge about their bodies and various reproduction and sexuality-related topics (Yuri et al., 2022, Maslowski et al. 2023). Therefore, the role of educational institutions and health agencies in educating adolescents about early reproductive health will be extremely beneficial in preparing them for current global developments. Effective reproductive health and sexuality education must be tailored to the age, culture, and context of young people's lives to ensure that the information is properly understood and promotes positive relationships in the modern era. This community service activity seeks to provide students with information about reproductive health in order to enhance their knowledge of this subject. In the context of sustainable development, this approach is expected to make a positive contribution to some of the Sustainable Development Goals (SDGs), is term of quality health and education. The programme also supports the achievement of gender equality since it provides knowledge to male and female students equally about reproductive health is an important step towards achieving gender equality at level of primary education.

METHOD

This study employs a quasi-experimental methodology with a one-group pre- and post-test design. The population of interest consists of students in the fourth and fifth grades at Banyuurip Elementary School in Yogyakarta. The sample size for the study was 38 students, selected using purposive sampling technique with the inclusion criterion of minors aged between 10 and 14 who were present during the research. As part of the program implementation, a needs analysis was conducted through surveys and focus group discussions involving teachers, students, and parents. The program was executed in stages. The program started by conducting a thorough evaluation of issues and requirements using focus group discussion. Subsequently, teaching resources were created and a timeline for implementation was set up. Based on the assessment of requirements, an educational health program focusing on puberty was developed for the students at

Banyuurip Elementary School to facilitate knowledge transfer. The methods employed for health education implementation included lectures and discussions. Data were collected using a questionnaire as the data instrument. The effectiveness of the program was evaluated by comparing pre- and post-test scores on a questionnaire. Data analysis was conducted using the paired t-test. The success of the program was further assessed by interviewing representative participants to gain insights into their perspective on the program's impact.

RESULTS AND DISCUSSION

Initial qualifications for participation in this investigation were met by a total of 42 individuals. However, only 38 students, or 90.1% of the eligible participants, participated actively in our study. There were 21 males, or 55.3% of the sample, and 17 girls, or 44.7%. The characteristics of respondents are summarized in Table 1.

Table 1. The characteristics of respondents

Characteristics	Number	Frequency	
Gender			
Female	17	44,7%	
Male	21	55,3%	
Puberty status			
Not yet	24	63,2%	
Yes	14	36,8%	

The study collected data on respondents' knowledge before and after receiving reproductive health education is the derived. The results are shown in Table 2. The results of categorization on the level of reproductive health knowledge shows that before getting reproductive education respondents had knowledge of reproductive health in minimum score was 50, maximum score was 100, mean was 76.58 and standard deviation score was 13.209. After providing reproductive health education, the scores ranged from 60 to 100, with a mean score of 83.16 and a standard deviation of 11.415. This indicates the need for efforts to increase knowledge of reproductive health for students at Banyuurip Elementary School in Yogyakarta.

Table 2. Distribution of minimum, maximum, mean and standar deviation of knowledge pre and post health education

Knowledge	N	Minimum	Maximum	Mean	Std. Deviation
Pre test	38	50	100	76.58	13.209
Pos test	38	60	100	83.16	11.415

According to the findings of the study, the majority of respondents' prior knowledge of reproductive health fell into three categories: insufficient (52%), sufficient (42%), and competent (5%) (shown in Table 3). Following education on reproductive health, 71% of students had adequate knowledge, 29% had sufficient knowledge, and none had insufficient knowledge. This suggests that reproductive health education has a positive effect on the knowledge of adolescents. Before and after receiving reproductive health education, the mean knowledge score of adolescents was 76.58 (SD 13.209) and 83.58 (SD 11.58), respectively. These results are consistent with those of another study which also reported an increase in mean score before and after receiving sexual and reproductive health education, with a mean difference of 3.83 and SD 2.57 (Hastuti et al., 2023).

Table 3. The impact of reproductive health education on elementary school students

Knowledge –	Р	Pretest		Post test	
	Number	Frequency	Number	Frequency	Pvalue
High/Good	2	5,3%	27	71%	
Moderate/Average	16	42,1%	11	29%	
Low/Deficient	20	52,6%	0	0%	0,049
Total	38	100%	38	100%	

Adolescence is a distinct developmental stage between childhood and adulthood, encompassing the ages of 10 to 19. It is a crucial time for establishing healthy habits and requires age-appropriate sexual education. It is essential that adolescents develop life skills in a secure and supportive environment and receive equitable, appropriate, and effective healthcare. Teenagers should have meaningful opportunities to participate in the design and delivery of health promotion and maintenance interventions (Morris & Rushwan, 2015, Lassi et al., 2022). This period of transition to maturity is marked by physical, psychological, and social transformations. Teenagers, who are still figuring out their identities, are prone to impulsive behavior, and reproductive health issues, such as sexuality, become prevalent obstacles for them (Leekuan et al., 2022). Given the significance of reproductive health knowledge, it is essential that adolescents receive accurate information, so they can make informed decisions and avoid negative outcomes (Amalia et al., 2021).

Previous research has demonstrated that adolescents have a limited understanding of reproductive health, particularly with regard to menarche, menstruation, and menstrual hygiene (Eghbal et al., 2023). In the absence of accurate knowledge, negative attitudes and misconceptions about these topics can have negative effects on reproductive health. Inadequate preparation, knowledge, and practices regarding these matters can impede education, self-confidence, and personal development (Sanghirun et al., 2021; Sunarsih et al., 2020). In addition, the stigma and prohibition surrounding reproduction can limit the amount of information provided by families to young women, thereby preventing them from acquiring accurate reproductive health knowledge (Amalia et al., 2021, Baigry et al. 2023). In contrast, providing accurate information can improve adolescents' comprehension of reproductive system changes. Physically and psychologically preparing adolescents requires early provision of reproductive health education (Chandra-Mouli et al., 2019; Kohan et al., 2021). This approach focuses on improving early adolescents' understanding of reproductive health through early education. It not only improves individual knowledge but also aligns with the pursuit of many Sustainable Development Goals (SDGs). This program can help achieve excellent health and gender equality. Early education on topics such as reproductive health for students is a crucial step in achieving Sustainable Development Goals (SDGs).

This investigation focused on students in the fourth and fifth grades at Banyuurip Elementary School, with an average age of 10 to 11 years. According to the World Health Organization, puberty and the advent of menstruation typically occur between 10 and 19 years of age, during early to late adolescence. At this age, adolescents require reproductive health education and counseling, including age- and culturally appropriate information about puberty (World Health Organization, 2018). Providing adolescents with information during puberty is essential for enhancing their knowledge. Without sufficient information, adolescents may find it difficult to fathom reproductive health and develop a positive attitude toward it. Therefore, it is necessary to provide information and education on reproductive health in schools in order to increase adolescents' knowledge and encourage preventative actions. Early education on sexual and reproductive health is of the utmost importance (Lehtimaki et al., 2019).

The findings of the study indicate that students' knowledge of reproductive health increased both before and after receiving education on the topic. Previous research has demonstrated that adolescents who receive education regarding sexual and reproductive health are more likely to practice personal hygiene and maintain sanitation during menstruation (Djunaedi & Sulistyorini, 2021). The function of reproductive health education in assisting adolescents in acquiring knowledge, awareness, attitudes, and healthy and responsible lifestyle behaviors is crucial. In terms of reproductive health, adolescent knowledge of healthful behaviors can affect their actions and choices. Successful reproductive health education programs increase reproductive health knowledge and encourage positive behaviors (Eghbal et al., 2023; Pasay-an et al., 2020)

Students with adequate knowledge of reproductive health require special attention as they near the conclusion of their social preparation for adulthood, according to a notable finding of this study. The increase in reproductive health knowledge is influenced not only by education but also by parental involvement in preparing children for maturity, according to previous research (Eghbal et al., 2023). Age is also regarded as a predictor of a person's level of maturity and comprehension of their sexual orientation. In this study, respondents' sexuality and reproductive health knowledge increased linearly with age, indicating that age influences the quantity and type of information they acquire. The development of appropriate attitudes results from adolescents' increasing awareness of how others perceive them and the expected behaviors in various roles or contexts as they mature (Asni & Dwihestie, 2018).

CONCLUSION

Following reproductive health education, the majority of students demonstrated a significant increase in knowledge, according to this study. Based on the reproductive health education, there was increasing the level of student knowledge according to mean score level from 76.58 to 83.16. It means that reproductive health education can improve knowledge and comprehension of reproductive health among fourth- and fifth-grade students at Banyuurip Elementary School. This is evident from the pre-test and post-test questionnaires that the dedicated team distributed. Effective reproductive health education is provided in order to increase students' knowledge. This study's findings can also be applied to the creation of a reproductive health promotion model.

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