

Article

Strategies To Improve The Adolescent's Reproductive Health Knowledge In The Traditional Islamic Boarding School In Sidoarjo, Indonesia

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A B S T R A C T

Adolescence is an important stage of the girl's life in which menstruation and pubertal occur. The peer nowadays has a crucial role in determining the proper health reproductive knowledge due to the lack of information from the family and education system. This study aimed to observe the effectiveness of the trained peer educator compared to the expert in delivering reproductive health knowledge. The study was using pre- and post-intervention (quasi-experimental) design. The sample was taken by random sampling with the pretest and posttest questionnaire that was applied to 98 female students aged 12 to 15 at a traditional Islamic boarding school in Sidoarjo, East Java. The participants consisting of 49 students were exposed by the trained peer educator compared to 49 students in which exposed by an expert. The statistical analysis indicated the significant difference between pretest-posttest in the group were exposed by the trained peer compared to the expert was significant ($p < 0.01$). Besides, there was no significant difference in reproductive health knowledge ($p > 0.05$) between the two groups. In conclusion, the information given by the trained peer educator as effective as the expert and significantly improved the adolescents' reproductive health knowledge. Therefore, designing the trained peer approach to increase adolescent reproductive health is effective to structure

I. INTRODUCTION

Adolescence is defined as a period of life between children and adults with the age range of 10-19 years old [1]. This time roughly corresponds to puberty, hormonal state switching, development of secondary sex characteristics, and guardian independence[2]. It is also associated with inadequate sleep, depression, unhealthy behaviors leading to the need for family-adolescence communication and guidance during this period [3].

Reproductive health is the state of complete physical, mental, and social well-being without the presence of the disease and fragility related to the system and function of the reproductive system [4]. The previous study suggests that teenagers showed a widespread lack of information about reproductive and sexual health [5].

Although the lack of correct information about reproductive and sexual health has been identified, the strategy to improve the adolescent's knowledge in the traditional Islamic boarding school was still limited. Traditional Islamic boarding school is one of the education systems in Indonesia designs graduates to be an expert in the Islam religious knowledge-based. This education system comprises of "pondok" or a boarding school and a school (elementary school equivalency and junior high school equivalency). In the pondok, the students generally interact, eat, sleep, learn, and do a religious activity, meanwhile in the school, they are taught the general and religious subject [6].

The common health problem faced by the traditional boarding school is the lack of a health education curriculum. Many students have a problem regarding reproductive health such as menstruation and menarche as the trigger for the girls to learn about menstruation, puberty, menstrual hygiene [7]. Interestingly, the information is primarily obtained from others who are not well prepared to fill the gap in their knowledge [8]. The major concern that they avoid discussing the problem since they do not consider these as either normal or abnormal. Thus the proper knowledge and information are necessary to be provided.

In the previous work, the peer educator in the schools informally increases the adolescence' knowledge towards the aspect of sexual health reflect the effectiveness of the peer educator in elevating the adolescence' knowledge towards health information [9].

In this study, the reproductive knowledge of the students was assessed and compared after the knowledge exposure obtained from the trained peer and the expert. In this report, we described the adolescent knowledge with pre and post-test questionnaires and comparing the student's knowledge between the two groups. The adolescent's reproductive health knowledge was different in the pretest and posttest. In addition, there was no statistical difference in the knowledge given by the trained peer educator or the expert

II. METHODS

Study design and setting

After the initial knowledge assessment, the pretest-posttest quasi-experiment study was conducted based on the new information about the reproductive knowledge obtained from either the trained peer or the expert educator. The post-test data were collected right afterward.

Participants

All participants were 98 female students aged 12 to 15 years old at Pondok Pesantren Darul Falah, a traditional Islamic boarding school at Sidoarjo, East Java, Indonesia who agreed voluntary to join the research, samples consisting of 49 students were exposed by the trained peer educator compared to 49 students in which exposed by the expert. The trained peer educator group consisted of 6 adolescents who received unofficial health reproduction educations for 1 day by the expert followed by phone and text discussion for 5 consecutive days. The experts were a team comprised of 3 midwifery lecturers from Universitas Airlangga, Surabaya, Indonesia. The small team comprised of 6-7 people were exposed to the new knowledge by 1 educator using the flip sheet. The education materials and questionnaire were adapted from Unicef [10].

Data collection

Data were collected by the team using a questionnaire that has been prepared before. A formal standardized questionnaire comprised of 10 questions reflecting the new information in line with the research hypothesis, the lecture materials preceding the objective. Pre-testing was carried out, involving 10.2 % of the populations (10 participants) in Pondok Pesantren Darul Falah, a traditional Islamic boarding school at Sidoarjo, East Java, Indonesia. The questionnaire accessed the knowledge of puberty, menstruation, and hygiene.

Statistical analysis

A comparative analysis was carried out to compare the knowledge on adolescent reproductive health after getting the new knowledge from the trained peer educator and the expert. Statistical analysis was performed using statistical package for social science (SPSS) version 20. Percentage of the correct answer was used to measure the knowledge among students using Wilcoxon Signed Rank Test. Moreover, Mann Whitney Test indicates there was no significant difference in reproductive health knowledge ($p>0.05$) between posttest in the group were exposed by peer and posttest in the group were exposed by the expert.

III. RESULT

Age of the participants

The result showed that among 98 female students, all of them were in adolescence age. Based on the purpose of this study, the mid-adolescence age was targeted to assess their perception towards menarche, menstruation, and the hygiene-related to menstruation.

Table 1: Age of the participants

Age (years)	Percentage (%)
12	18.37
13	36.73
14	28.57
15	16.32

The participants constituting 18.37% were aged 12 years old, 36.73% were 13 years old, 28.57% were 14 years old, and 16.32% were 15 years. None of the participants were under 12 and more than 15 years old. The mean (\pm SD) age of them was 13.818 ± 0.85 .

The current education

Our observation displayed the current education for the students at the time they were answering the questionnaire. The education was obtained in the school equivalency inside of the Pondok, thus the student did not necessarily go to the formal school outside of the Pondok.

Table 2: The current education of the participants

Education	Percentage (%)
Elementary school equivalency	22.45
Junior high school equivalency	77.55

The current education that obtained formally inside of the Pondok Pesantren Darul Falah, a traditional Islamic boarding school. Among respondents, all of them were still in the school with the focus on 22.45% were in the Elementary School Equivalency and 77.55% were in the Junior High School equivalency.

The local origin of the respondent

Our result indicated that before entering the Pondok, the participants were originated from 2 different areas, rural areas, and urban area. This assessment was important to observe the environmental influence on the health reproductive knowledge among the students. The urban area tends to have higher knowledge about health information related to better education, health facility, access to the network, and information. Table 3 displayed the origin of the respondents, indicating that their family was in a rural area.

Table 3: Local origin of the participants

Local origin	Percentage (%)
Rural area	96.94
Urban area	3.06

Table 3 showed the participants mostly from the rural area (96.94%) compared to the urban area (3.06%).

Overall pretest and posttest knowledge scores in the trained peer and expert educator

In this part, we observed the knowledge scores from pretest and posttest with the lecture about reproduction health in between. Besides, we also assessed the different knowledge score based on the educator: trained peer educator and expert educator. In this matter, the effectiveness of the trained peer educator in delivering the knowledge would be obtained. Figure.1 displayed the graph of the knowledge score between groups.

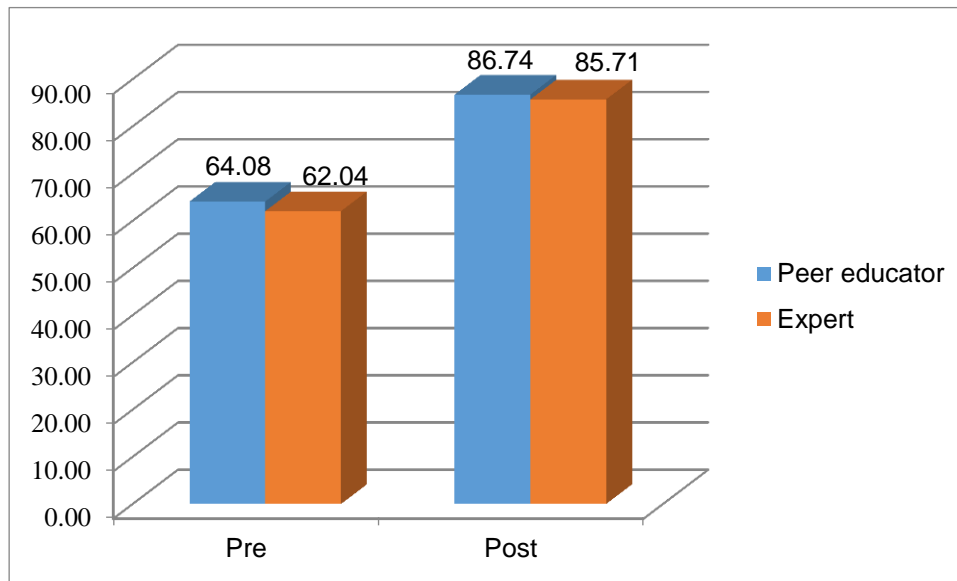


Figure 1. The knowledge score in the peer and expert educator

IV. DISCUSSION

A previous study showed the limitation of the adolescence to obtain the information regarding the reproduction health knowledge, especially for the menarche, menstruation, and hygiene-related menstruation [7, 11]. Although menstruation is a universal experience, their tendency to feel embarrassed to discuss their menstrual problem caused the unique challenges related to menstruation management. Limited access to adequate information about reproduction knowledge often impacts their perception about menstruation led to negative attitudes and misconceptions about menarche, menstruation, and hygiene-related to menstruation, and might have adverse effects on reproduction health [12]. Further, Chandra Mouli and colleagues suggested that lack of preparation, knowledge, and poor practice around them led to obstacles in the education, self-confidence, and personal development [8].

Developing the new strategy to increase the proper knowledge for the adolescence regarding menstruation by approaching the peer influence is important both in the effectiveness and efficiency in terms of strategy, budget and goal-oriented, especially in the rural and developed area with the limitation of human resources and network access. With the properly trained peer, the knowledge of the targeted group might be increased as expected. The previous study showed that peer has an important role in delivering health information towards teenagers and adolescence [9]. Because the peer has a strong influence toward them both positively and negatively [13], enhancing the effect is important to improve the reproductive health knowledge positively.

Reproductive health knowledge is important for women from an early age to prepare for their reproductive life. In our study, the age range of the participants was around 12-15 years. The early and older adolescence (10-19 years) are correlated with the most age of starting puberty and menstruation. At this age, they need the accepted education about health reproduction and guidance including information that appropriate to their age, the cultural relevance of puberty

and menstruation [7]. Besides, the lack of information that the family should provide for the young adolescent girls was limited because of the “taboo” stigma or “feeling shame” to discuss reproduction could be the limitation to obtain the proper knowledge about reproduction health.

In our study, most of the participants were undergoing junior high school equivalency inside of the boarding school. In this traditional school setting, insufficient detail about this knowledge was provided thus it would be less beneficial for the young adolescent girl to seek the proper information about reproductive health. Uddin and colleagues have been explained that the young girls would try to obtain the health reproduction information mostly from mothers, residence, and mass media [14]. When this information is lack, they would probably seek the information from their peer. Based on our interview with the students, internet access was very limited since the students were not allowed to have an access to the hardware such as mobile phone, laptop, or computer and internet access (the data was not showed). Further, since they were living in Pondok, access to the family member as the information sources were also limited. In this setting, the knowledge about reproduction health completely relied on the peer and the Ustazah, the female teacher in the Pondok. The recent finding suggested that the majority of the Pondok in East Java has bad sanitation with 73.70% of students has bad personal hygiene reflected their lack of health information. This result displayed the importance of the correct health education including menstruation and hygiene.

Furthermore, the study found that the observation about the origin of the participants led to the conclusion that our respondents, mostly from rural areas. A previous study suggested that in a rural area, the health knowledge awareness was quite low in line with the low educational level, limited access to the health services, and health seeing behavior [15, 16]. Since our respondents left their homes to go on Pondok at an early age, their behavior towards health reproduction would not be changed and it might be a challenging situation for the health service.

One special characteristic of the teenager is their tendency to exchange the information among them, it has made the peer are a valuable informant to their group. Although studies have shown the peer approach is necessary for influencing the new knowledge to the adolescent, their knowledge is still limited. It is important to build the well-trained peer to provide the correct information to their circle to collect the significant result. In our study, well-trained peer has been provided to give the correct information to the samples comprised of a small group. Our result strongly indicated that there was a significant difference of the knowledge between pretest and posttest with no significant difference of knowledge ($p=0,718$) between posttest in the group were exposed by peer and posttest in the group were exposed by the expert. This result indicated that the knowledge that was delivered with the peer as effective as the knowledge delivered by the expert. This result was in line with the narrative review article since 1999-2013 that has been stated that peer education is an effective tool in delivering healthy behaviors among adolescence [17].

In the years, at the national level, various meetings and regulations reaffirmed the central role in reproductive health in adolescence. Such regulations, meetings, and instruction such as government regulation number 52 of 2009, the government regulation number 61 of 2014, and technical instruction for the health elementary school 2018 [18, 19]. These regulation has been focused on the health reproduction started from the elementary school to prepare the adolescence for their reproductive life. Following these summits, the international regulation and meeting also have a role in reproductive health such as The Global early adolescence study (GEAS) and youth voice research in 2018 and 2019. However, despite these initiatives in the national government and international regulation, meeting, and instruction, our result showed the lack of

focus in early adolescence to prepare the menarche, menstruation, and hygiene-related menstruation as shown by Figure.1. They continued being exposed to incorrect or absent information about their menstruation and they still have limited access to the proper health information. Thus designing this process would be valuable that requires proper preparation, supervision, and evaluation.

V. CONCLUSION

The study found that adolescence did not have adequate access to the proper health reproduction information. The post-test questionnaire showed that there is a statistically improved knowledge after the lecture. The knowledge about health reproductive delivered by the peer is effective as the expert. Furthermore, peer influence to increase the adolescence' knowledge is effective and efficient, therefore it would be beneficial to use this approach to improve adolescent knowledge.

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