



The influence of health training on teachers and students' knowledge of adolescent reproductive health

Widyatuti*, Fajar Tri Waluyanti, Budi Mulyadi and Astuti Yuni Nursasi

Faculty of Nursing, Universitas Indonesia, Depok, West Java, Indonesia

KEYWORDS

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Abstract

Objective: There are many adolescent health problems in Indonesia, particularly problems related to reproductive health. If adolescent reproductive health is not given adequate attention, this can lead to other adolescent health problems. Aside from parents, school staff also plays an important role in overcoming this health concern because educational staff is closer to adolescents than their parents. Teachers and friends can act as a resource for adolescents, providing them with reproductive health information. Therefore, the knowledge level of those at school, such as teachers and peer, about adolescent reproductive health is important. This research aims to determine the effects of adolescent reproductive health training on teacher and peer knowledge.

Method: This research used an experimental design. A purposive sampling technique was used to recruit 26 students and 24 teachers, and a pretest and posttest were administered to one group without control group and then analyzed by Wilcoxon test.

Results: The results showed that health training had a significant effect on teacher and peer knowledge with $P < \alpha$ (0.05).

Conclusions: It can be concluded that training on adolescent reproductive health for teachers and peers can be implemented at every school to increase their knowledge and skills and to prevent unsafely adolescent sexual behavior.

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Introduction

Adolescents are a large part of the population in Indonesia. According to a survey conducted in Indonesia in 2010, around 18.33% of the population was aged between 10 and 19 years¹. This percentage is projected to reach 19.26% by 2025². However, this large adolescent population is beset by many health problems, such as those associated with premarital sex (especially in urban areas). Premarital sex is

a behavior that can pose risks for adolescent health and development, for example, sexual transmitted diseases and unplanned pregnancy³. Adolescents' developmental stage, which prompts their desire to try new things to learn because they are developing capacity for higher-level thinking, most adolescents still need guidance from adults to develop their potential for rational decision making⁴. For example, premarital sex; which is considered an irresponsible behavior in Indonesia. Consequently, adolescents in Indone-

*Corresponding author.
Email: tuti@ui.ac.id (Widyatuti).

sia may also have limited knowledge about the potential risks of premarital sex to their reproductive health because as indicated by many micro studies, most Indonesian adolescents have little knowledge of reproductive and sexual health⁵.

In 2013 study, the number of adolescents who had premarital sex in some Indonesian provinces is projected to increase over the next few years⁶. In 2009, a survey participated by 45 students in one school in a district in West Java found that 44.4% of the students had a sexual partner, 42.2% agreed to have unprotected sex, and 8.9% watched pornography films⁷. Adolescent pregnancy can cause health problems for both mother and child. Hence, this issue needs more attention from many sectors, such as the government, community, teachers, parents, and related parties to adolescents.

The World Health Organization (WHO) estimated that 10-50% of maternal mortality is caused by failed/improper abortions. Data of Ministry of Health Republic of Indonesia (Kementrian Kesehatan RI)³ showed that 4.5% and 14.6% of boys aged 15-19 and 20-24 years engaged in premarital sex, respectively, while only 0.7% and 1.8% of girls aged 15-19 and 20-24 years engaged in premarital sex, respectively.

Adolescents can also engage in unprotected premarital sex because of a lack of knowledge about reproductive health. Such knowledge, which is related to the function and processes of the reproductive system, is holistic and includes physical, mental, and social health⁸. Many BKKBN (Indonesian population and family information network) programs, such as Pelayanan Kesehatan Peduli Remaja/PKPR (Adolescent Health Awareness Services) and Generasi Berencana/GenRe (Family Planning Programme), have been conducted by the government to educate adolescents about reproductive health and the risks of premarital sex⁸. The PKPR program includes counseling services and activities for increasing adolescents' reproductive health knowledge and skills so adolescents can applying these skills to their everyday life. The PKPR program is provided at community health centers, in secondary schools, and in other areas of the community. Similarly, Usaha Kesehatan Sekolah/UKS is a school health program that consists of health care services, education, and development in the school environment. It comprises promotional, preventive, curative, and rehabilitative elements so that nurses can take responsibility for giving nursing interventions.

From an interview with 24 teachers in one of Indonesia's high school, around 50% students had a partner. In the early stages of our study, 484 adolescents were asked where they got their information about reproductive health, and the responses were as follows: from parents (56.2%), from friends (60.1%), from teachers (82.4%), and from the media (TV, radio, newspapers, magazines, and the Internet; 86.8%). Positive behaviors were supported by accurate knowledge for 379 of the participants (78.31%). Taking part in discussions with parents or peers was one way in which adolescents sought the information about reproductive health they needed; 46.6% and 80% of the adolescents shared their story with their parents and friends, respectively. From the early study, the main resource with the potential for delivering promotive and preventive advice regarding premarital sex was peers and teachers, who can

provide necessary information about reproductive health to adolescents through counselor training.

Preventive programs have been developed by Comprehensive School Health Program theory. Comprehensive School Health Model (CSHM) is an organization that produces a policy, procedure, and planning program to prevent, protect, and improve student and staff health so that students can increase their skills while studying in school⁹. There are 8 components to coordinate school health programs¹⁰: 1) health; 2) physical education; 3) health; 4) nutrition; 5) psychosocial services and counseling; 6) school health care; 7) health promotion for school staff, and 8) family and community involvement. Health education can be conducted anytime for any adolescent who wants to understand their developmental stage. At the high school in this study, no educational programs about preventing premarital sex are currently offered.

Lou and Chen¹¹ argued promotion of an education about reproductive health are still needed for adolescent. Therefore, training related to health education or health promotion to the adolescents needs to be conducted. It is important to apply prevention measures for high-risk sexual behaviors in many secondary schools, particularly in Jakarta, which is a metropolitan city. The objective of this research is to determine the impact of health training on peer educators and teachers with regard to their knowledge about reproductive health among adolescents.

Method

This research applied a quantitative, quasi-experimental design with a pretest and post-test for one group. This design is fit for the research objective, which is to determine the impact of training on one group of teachers and peer educators in comparison with the group which did not receive the training. The inclusion criteria for teachers were having bachelor degree, available during study period, able to monitor and guide peer educators, and ready to accept referred student. Peer educators were included in the study if they met the following criteria: were students in their 10th-12th grade, were available to act as a peer educator, represented each classroom, achieved an above-average score on pretest and post-test, and were recommended by a teacher and/or a student coach.

The researchers used the purposive sampling technique, with a simple random selection of 30 students from a list of around 107 students who met the inclusion criteria. From 30 students chosen, only 26 peer educators followed the process until the end. All the teachers had a chance to participate, but only 24 of the 30 teachers who qualified for the study completed the process. This accords with the sampling theory proposed by Fraenkel and Wallen¹², who explained that the minimum experimental sample size is 30 (or 15 for each group).

Peer educators were trained for 3 sessions by the researcher. Training materials include reproductive health, adolescent development, and counseling which was developed by the researcher according to standardized material from Ministry of Health. Meanwhile, the teachers received two sessions training about reproductive health in light of adolescent development and counseling. Teachers' and peer

educators' knowledge was measured by a pretest in the first session and a posttest in the last session about reproductive health, and adolescent development. During the training process, the participants' counseling skills were observed by the researcher using simple check list form based on what had been taught during the training. All participants were able to provide counseling to adolescents according to the training result. A post-test session was conducted in the fourth week at the end of the training period.

Results

The study participants included 39 teachers and 606 students from a high school in capitol city of Indonesia. For the students, the age ranged between 15-17 years old with 84.6% female and 15.4% male. While for the teachers, their age ranged between 21-60 years old, with 91.6% female and 8.4% male. The results of the identified participants, who completed 3 training sessions, which consisted of lectures, discussion, and counseling practice, are shown in Tables 1 and 2.

Table 1 shows that peer educators' knowledge about reproductive health increased after the training. According to the Wilcoxon test, the score was $P < \alpha$ (0.05). Therefore, there is a significant difference between the peer educators' knowledge levels before and after training.

Table 2 shows an increase of peer educators' knowledge about adolescent development after the training. The result of paired t-test showed that the score was $P < \alpha$ (0.05), so

there is a significant difference between the peer educators' knowledge levels before and after training.

For the teachers' training about reproductive health and adolescent development, which was conducted two times with lectures, discussion, and counseling practice, the results are shown below.

As can be seen from the Table 3, there was an increase in the teachers' knowledge of reproductive health among adolescents and adolescent development. With a score of $P < \alpha$ (0.05) on the statistic test, it can be concluded that there is a significant difference between the teachers' knowledge levels before and after the training.

Discussion

The findings of this research showed a significant difference in regards to level of knowledge on reproductive health and adolescent development before and after training. This aligns with previous research by Sari et al¹³, who noted a difference in students' knowledge before and after health education was presented using a mentoring method by researcher. As Setyowati explained, providing reproductive health education or training can be effective for improving adolescents' knowledge in this area, which, in turn, can help improve sexual behaviors among adolescents¹⁴.

Research by Prawestri et al¹⁵ attests that efforts for improving the reproductive health knowledge and sexual behavior of adolescents are important. A study by Juliani et al¹⁶ showed a significant correlation among sexual behaviors

Table 1 Comparison of peer educators' knowledge about reproductive health among adolescents before and after training (n = 26)

Knowledge	Mean	SD	SE mean	P value
Before	10.12	1.98	0.39	.001
After	11.88	1.63	0.32	

SD, standard deviation; SE, standard error.

Table 2 Comparison of peer educators' knowledge about adolescent development before and after training (n = 26)

Knowledge	Mean	SD	SE mean	P value
Before	13.54	0.94	0.18	.006
After	14.12	1.07	0.21	

SD, standard deviation; SE, standard error.

Table 3 Comparison of teachers' knowledge about reproductive health among adolescents and adolescent development in X senior high school before and after training (n = 24)

Knowledge	Mean	SD	SE mean	P value
Before	7.83	1.68	0.34	.0001
After	9.17	1.05	0.21	

SD, standard deviation; SE, standard error.

and lack of knowledge, so training of adolescents is important to prevent problematic sexual behaviors among this group. Adolescents that have been trained can become counselors for their own friends; this was supported by the early stages of our study on adolescents, which found that more of the participants told their story to their friends (80%) than to their parents (46.6%).

Furthermore, at this stage of development, adolescents need a friend as their counselor. Potter and Perry explained that adolescents tend to be more comfortable with their peers¹⁷. As Wong¹⁸ explained, adolescents seek autonomy from their families and develop their own identity through peer interactions. Hence, peer educators are a valuable information resource that can be accessed by adolescents, so it is important to be train their knowledge about reproductive health and adolescent development so their knowledge can be improved.

The finding that teachers can support and increase the level of adolescent knowledge, helping them increase health knowledge, is also significant. As a central component of schools, teachers play a primary role in adolescent health and information seeking through counseling. This accords with Ekin and Oksal¹⁹; who argued that teacher positive attitude can impact the effectiveness of school counseling services. Another researcher suggested that adolescent health problems can be addressed at school by developing the teachers' counseling skills²⁰. This training is helpful because, according to the early stages of this study, 82.4% of adolescents identified teachers as their main information resource about reproductive health.

Teachers can become involved in the UKS program, and nurses, who are responsible for school health, will be able to apply the CSHM easily. Training for teachers and peer educators, beside its effects on participants, can also be incorporated into the UKS program. The role of teachers who have had training is to help peer educators to become counselors for their peers. Teachers can also play a direct role to be information resources among adolescents. The continuation of this research would be useful because more than 50% of the teachers have been trained from the early stage of this study. Once peer educators graduate, teachers can still be information resources for adolescents in subsequent years. Veronica²¹ has also described the difference between teachers' knowledge and attitude levels before and after reproductive health education for counseling students. So, optimizing adolescent roles as peer educators and using teachers as an information resource for teens can be important ways to help adolescents to better understand reproduction health.

Conclusions

In this study, a significant difference was found in the reproductive health knowledge of teachers and peer educators before and after they received training, which used the lecture method, discussion, and counseling practice. It is recommended that peer educators distribute their knowledge and help their peers to choose the right solution for themselves, and teachers can act as counselors and coaches for peer educators. Hopefully, an increase in adolescents' knowledge about reproductive health will result from this

research, preventing adolescents from engaging in risky sexual behaviors.

School administrators and teachers have roles to play in support of students who take the UKS program, especially in preventing high-risk sexual behaviors through direct coaching, such as becoming an expert counselor or arranging consultation schedules. Peer educators are recommended to receive continuous supervision and coaching by a health care team. Future research is needed to measure the effectiveness of training and counseling skills on sexual behavior among adolescents for both peer educators and teachers.

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