

The effectiveness of “PEKA BERAKSI” programs in improving self-efficacy to prevent the risky sexual behavior in adolescents

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ABSTRACT

Risky sexual behavior is a health problem among adolescents whose cases continue to increase along with technological developments. It needs to be overcome by increasing self-efficacy among adolescents. The purpose of this study was to provide an overview and influence of the implementation of “PEKA BERAKSI” on self-efficacy in adolescents to prevent risky sexual behavior. This study used quasi-experimental design with pre and posttest without control group method. The study involved 275 students. The instrument used to measure the variables of self-efficacy was measured with the instrument developed by researchers. The variable risky sexual behaviour was measured with the instrument sexual risk survey. The finding showed that there was a significant difference in self-efficacy in adolescents in preventing risky sexual behavior before and after the intervention 0.001. The results of statistical tests found a p-value of 0.006 which means that there is a significant effect between the “PEKA BERAKSI” intervention and risky sexual behavior. Based on these results, recommended for health services to make the innovation program that focuses health education for adolescents and health promotion at schools. Furthermore, the results of this intervention as basic data in developing school health clinics and integrating subjects with health education for adolescents.

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1. INTRODUCTION

Improving life skills is best done since a teenager enters the adolescent phase. This is because this phase is the time to form life-long healthy habits. In addition, the use of health services by adolescents is very minimal and usually only oriented to physical health problems, so adolescents need good life skills to maintain their health [1]. Life skills in question are related to the 10 competencies of skills-based health education (PKHS), including decision making, problem solving, creative thinking, critical thinking, effective communication, interpersonal relationships, self-awareness, empathy, controlling emotions, and coping with stress. Therefore, if adolescents develop skills to create or maintain healthy lifestyles, it is assumed that they can avoid aberrations such as risky sexual behavior.

The tendency for risky sexual behavior in the adolescent phase varies widely. Research conducted by Pastor *et al.* [2] from 2010-2014 on adolescents aged 14-15 in the Czech Republic found an annual increase in the number of adolescents who have had sexual intercourse. Furthermore, it was explained that sexual intercourse was 1.69 times more common in women than men. Research related to risky behavior conducted on school students in the Czech Republic from 2010 to 2014 discovered that 16% of boys and 19.4% of girls had sexual intercourse before the age of 15. Another study found that as many as 47% of

teenagers have masturbated [3]. The 2017 Indonesia demographic and health survey (IDHS) discovered forms of risky sexual behavior among adolescents, including holding hands (64% women, 75% men), hugging (17% women, 33% men), kissing on the lips (30% women, 50% men), groping or being groped (5% women, 22% men), and premarital sex (8% men, 2% women). Various reasons why adolescents have undertaken these activities include loving each other (47%), being curious (30%), just happening (16%), and being forced and influenced by friends (3%). Therefore, self-efficacy in adolescents is necessary so that they can avoid these activities.

Self-efficacy is an important thing for adolescents. This is evidenced by research that explained that increasing self-efficacy can limit adolescents to risky sexual behavior [4]. Furthermore, Jones *et al.* [5] that there is a significant relationship between positive self-efficacy and adolescents who do not engage in sexual activity. It means that when adolescents engage in risky sexual activity, they have negative or low self-efficacy. However, the theory of health promotion model explains that to improve health promotion behavior for individual groups or communities, self-efficacy is needed as the key [6]. Therefore, to increase self-efficacy in adolescents, it is necessary to have the role of nurses in providing care for adolescents through interventions that are continuously developed.

Intervention that is developed as a promotional and preventive medium for adolescents to be protected from risky sexual behavior is “PEKA BERAKSI”, which stands for *pendidikan kesehatan, kontrol orang tua, pemberdayaan, keterampilan negosiasi* (health education, parental control, empowerment, and negotiation skills). The development of this intervention is based on previous research. Research conducted by Tortolero *et al.* [7] and Megersa and Teshome [8] explained the benefits of health education on reproductive health for adolescents, adolescent growth and development, and risky sexual behavior. The results showed increased knowledge of adolescents in maintaining their health by 38%. This research is in line with research conducted by Tortolero *et al.* which aimed to increase knowledge and motivation of adolescents regarding the risk of sexually transmitted infections [7]. Another intervention that has been developed is parental monitoring or parental control. Dávila *et al.* [9] and Wang *et al.* [10] explained that the purpose and objective of this intervention is related to monitoring adolescent activities. The results of this research can reduce the incidence of risky sexual behavior in the family and school community. This intervention was developed in a community setting by monitoring smartphone use. This is because of the characteristics of adolescents that are more focused on peers so that the intervention is very important to be applied to them in the community or school.

Other interventions are empowerment and negotiation skills. Ssewamala *et al.* and Alimoradi *et al.* [11], [12] described that empowerment intervention is expected to build self-efficacy in adolescents to take a stand in behavior. Furthermore, this intervention is very effective in being applied in school settings because it relates to policies for implementing school health programs, such as peer teaching. The next intervention involves negotiation skill. This intervention is developed based on research conducted by Amin *et al.* [13], which described life skills of adolescents that focus on assertive or negotiation techniques to refuse negative invitations to engage in risky sexual behavior. The results of this research had an impact of 18% in reducing risky sexual behavior that led to early marriage. The novelty is shown from the “PEKA BERAKSI” intervention and that distinguishes it from previous interventions is the implementation process which is carried out in the school setting and combines the implementation of follow-up to the family setting. This is because there is not enough information received at school, so that some of the interventions described are not permanent. In addition to the place of implementation, the model of intervention that was developed and adapted to the characteristics of adolescents in Indonesia is a new form of this study. Along with the increase in cases related to adolescent health problems, especially risky sexual behavior and in line with changes in the modernization era, it is certainly necessary to maintain and maintain the quality of life of adolescents so that the age that is expected to become the nation's next generation can be avoided from behaviors that can threaten health problems. The purpose of this paper is to analyze the effectiveness of the “PEKA BERAKSI” intervention as a promotive and preventive form of risky sexual behavior in adolescents.

2. RESEARCH METHOD

This research employed a quasi-experimental design using pretest and post-test without a control group and was conducted in 16 meetings for 8-10 weeks with details of 1-2 meetings per week. In this research, the sample was taken with a probability sampling approach using the stratified random sampling method with a total sample of 275 adolescents aged 15-19 years in two high schools and vocational high schools in the Cisalak Pasar Urban Village, Depok City, Indonesia. The number of samples in each school was randomly selected based on the population size. At the high schools, 200 samples were taken, while at the vocational high schools, 75 samples were taken. Samples were selected based on established inclusion criteria: adolescents aged 15-19 years, being unmarried, high school and vocational high school students in Cisalak Pasar Urban Village in grade 10 and grade 11, being willing to be research respondents, being literate.

Data were collected using a questionnaire consisting of three sections, which are respondent's characteristics (age, sex, parents' educational background, parents' income), self-efficacy variable developed by researchers and has gone through a trial process with Cronbach's Alpha 0.885, with indicators that adolescents are able to avoid risky sexual behavior such as kissing, having sex. Risky sexual behaviour variable (sexual risk survey by Turchik and Garske) Cronbach's Alpha 0.807, with indicators low risk (not having risky sexual behavior, having experience of accessing pornographic content), medium risk (holding hands, hugging, kissing friends of the opposite sex on the lips), and high risk (groping or or being groped at erogenous parts of the body (breast or genitals), masturbation, and intercourse) [14]. The questionnaire has been done in English translation process to Indonesia without changing the content. This research used bivariate data analysis before and after the intervention. Bivariate analysis that was used was paired t-test. Previously, the data normality test had been carried out with the Kolmogorov Smirnov value of 0.002, besides the comparison between the value of skewness and standard error with a value of 1.62 or a value <2 .

2.1. Implementation of "PEKA BERAKSI" intervention

Session 1 of the intervention was health education, which was conducted in four meetings and discussed adolescent growth and development and risky sexual behavior. In this session, interactive videos about experiences of adolescents in dating, reproductive health, and the impact of smartphone and internet use on risky sexual behavior were played. Session 2 of the intervention was parental monitoring or parental control (by teachers), which was held four times. Activities in this session, for example, were to facilitate youth awareness of smartphone use as a cause of risky sexual behavior among adolescents by providing them with smartphone use management worksheets. In addition, activities in session 2 were training for nurse teachers at school health clinic and supervision in screening for risky sexual behavior in adolescents using the Google Forms. After the training, teachers were expected to be able to conduct early detection of sexual behavior and be able to develop school health clinic as a place for youth health services and a place for basic health referrals.

Session 3 was empowerment that was conducted in four meetings. In this session, nurses modified the media by using quartet cards that were played in a group so that peer involvement was able to influence adolescents. In addition, in this session, adolescents were trained to be able to solve problems via the case illustrations given according to the topic of risky sexual behavior. Peer involvement is considered very important for adolescents and therefore, nurses provided training for adolescent health cadres at schools and supervised peer teaching regarding risky sexual behavior. Session 4 was the last session of this intervention and was conducted in two meetings, which aimed to improve social skill of negotiation or assertive techniques of refusing peer invitations via role plays or short dramas with groups. The implementation of "PEKA BERAKSI" is described in the Figure 1.

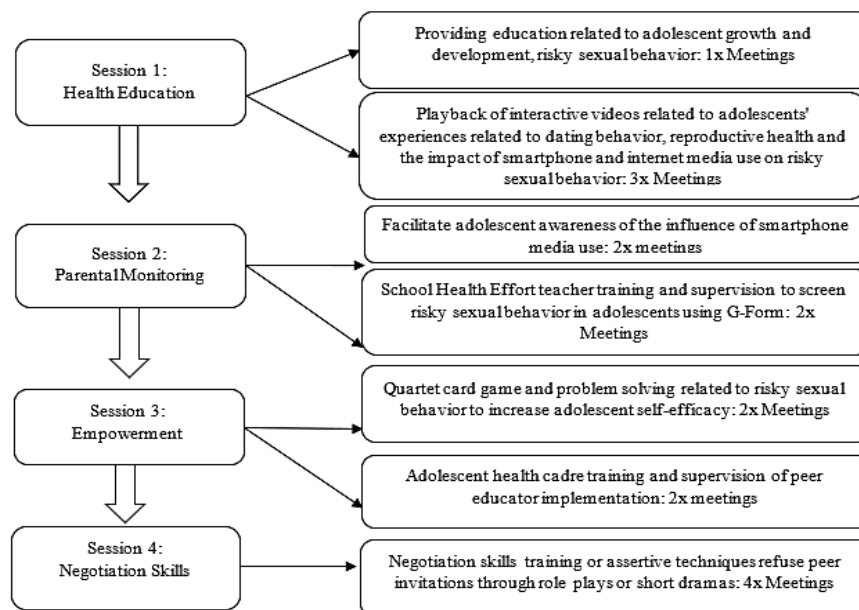


Figure 1. Flow chart of the implementation "PEKA BERAKSI" intervention

3. RESULTS AND DISCUSSION

Table 1 shows the average value before the self-efficacy intervention is 32.06 with SD 2.734. In the second measurement, it was found that the average score after the adolescent self-efficacy intervention was 38.55 with SD 1.449. The results of the statistical paired t-test found a value of 0.001 CI 95%, which means that the intervention carried out has a significant effect on adolescent self-efficacy to prevent risky sexual behavior in this case an increase before and after the intervention. Another thing is also shown through the results of this study related to risky sexual behavior showing the average score before intervention was 45.60 with SD 4.993. In the measurement after the intervention was found an average value of 43.36 with SD 4.797. The results of statistical tests found a p-value of 0.006 CI 95% which means that there is a significant effect between the “PEKA BERAKSI” intervention and risky sexual behavior in this case a decrease in risky sexual behavior in adolescents.

Table 1. Significant difference between the experimental group in the pre-test and post-test intervention measures

Variable	Pre-test (Mean±SD)	Min-max	Interpretation	Post-test (Mean±SD)	Min-max	Interpretation	p-value
Self-efficacy	(32.06±2.734)	18-28	Decreased	(38.55±1.449)	20-27	Increased	0.001
Risky sexual behaviour	(45.60±4.993)	33-55	Increased	(43.36±4.797)	32-52	Decreased	0.006

Note: p-value significant at .05 level of significance

Health problems in teenagers are very complex as they enter the adolescent phase. Stanhope and Lancaster described various health problems in adolescents, including smoking, consuming alcohol, sexual activity, and substance abuse [15]. One of the problems that continue to occur in adolescents along with the development of technology is risky sexual behavior. The results of the study conducted before the intervention found the incidence of risky sexual behavior in the low category of 27.3%, medium 25.5% and high 18.5%. This is certainly in line with the self-efficacy of adolescents with not sure conditions of 57.5%. The results of further studies found that the main cause of adolescent behavior was due to technology that was not controlled by both teachers and parents and the influence of peers because teenagers still felt like trying it. This is evidenced research, which examined the influence of the internet on the incidence of risky sexual behavior. In the research, it was found that adolescents often accessed various websites, including pornographic sites. In fact, further analysis explained that when adolescents continued to be exposed to pornography, they might start imitating what they have seen, such as having sex [16]. The long-term impact experienced by adolescents is that the dropout rate will increase during adolescence and pregnancy in adolescent girls will also be higher. Therefore, it is necessary to improve skills through health promotion for teenagers.

Health promotion for adolescents is also a process to improve the skill of adolescents/students to maintain and improve their health. In addition, to achieve a perfect health degree physically, mentally, and socially, public must be able to recognize and realize their aspirations and needs and be able to change or overcome their environment, either physical environment, social environment, or cultural environment. Further explained based on previous research, providing sexual health information for adolescents can increase motivation in the process of good behavior including avoiding sexual behavior, alcohol and smoking [17], [18]. Therefore, it can be concluded that health promotion is an effort to influence other people, individuals, groups/school communities, and public to have a healthy lifestyle, whereas operationally, health education is an activity to provide and or increase public knowledge, attitudes, and practice in maintaining good health or in improving their own health [19], [20].

Health care for students at schools is something that is continuously conducted by health workers and teachers or other school officials. This is because the quality of the school is determined by the students themselves, so that if students experience health problems, the teaching and learning process is hampered. Therefore, the implementation of health promotion at schools is important [21]. This is in line with the application of the comprehensive school health model (CSHM), which directly provides the basis for the implementation of a comprehensive school health clinic. The purpose and objective of comprehensiveness of schools that directly influence student health, encourage healthy lifestyle, improve student health and well-being, and incorporate health into student learning systems require family and public participation.

The intervention developed by nurses as an innovation for health services at schools is “PEKA BERAKSI”. “PEKA BERAKSI” is a combination of several interventions, including health education, parental control, empowerment, and negotiation skills. This nursing action was implemented for 16 meetings over a period of 10 weeks and focused more on the prevention of risky sexual behavior in middle to late adolescents in high schools and vocational high schools. The results of the analysis of the implementation of

this intervention were self-efficacy in adolescents and a decrease in the incidence of risky sexual behavior. These expected results can directly shape social competence of adolescents in skills-based health education (PKHS), including self-awareness, empathy, decision making, problem solving, critical thinking, creative thinking, effective communication, interpersonal relationships, emotional control, and coping with stress.

The results of the implementation of “PEKA BERAKSI” intervention were related to self-efficacy in avoiding risky sexual behavior. Before the intervention, it was found that self-efficacy of adolescents was on average 32.06 and increased by 38.55 with a p-value of 0.001 after the intervention was implemented, meaning that the implementation of “PEKA BERAKSI” intervention had a significant influence on being able to increase adolescent self-efficacy in avoiding risky sexual behavior. This is in line with the theory of health promotion model (HPM) whose main focus is to understand how self-efficacy can influence the formation of affective responses to activities in adolescents. Research that is in line with this was conducted by Mahat *et al.* providing an explanation regarding self-efficacy and sexual risk behavior in adolescents. The results of these findings state that the concept of self-efficacy is the key in health promotion to change unhealthy behavior and thus, it is more suitable for adolescents so that they can make decisions to avoid risky sexual behavior [22]. In this research, an increase in adolescent self-efficacy had an impact on reducing risky sexual activity in adolescents in high schools and vocational high schools in Cisalak Pasar Urban Village by 10%.

Self-efficacy was not only increased by applying lecture methods, but also by playing videos. This is in line with research conducted by Widman *et al.* [23], which explained that preventing sexual behavior and reducing sexually transmitted infections are more effective by innovative methods, such as the use of video. The obstacle to implementing this intervention was that there was no designated time available to provide health education so that the time for nurses was less flexible. Apart from the lecture and video screening methods, there were also other activities, including role playing to decline risky sexual behavior and group support. The implementation of this intervention was adjusted to specialized skills based on the nursing intervention classification (NIC), namely, the improvement of life skills, which aims to independently develop individual skills to cope with the needs and challenges in daily life.

This intervention is more focused on knowledge, attitude, and psychomotor skills (skill building) by using interactive videos and activities or role-playing related to appropriate behavior according to scenarios that stimulate interpersonal interactions in real life [24]. This is in line with previous research conducted by Amin *et al.* [13], on 9,689 adolescent girls in Bangladesh for 18 months, from February 2014 to August 2015. The results of this research indicated that the interventions could significantly reduce child marriage (<18 years) by 10%. This is in line with the research conducted by Robin *et al.* [25] that observed the effectiveness of risk behavior management programs in adolescents. The results of this research focused on specific skills to reduce sexual behavior and on the duration of the intervention.

4. CONCLUSION

Based on this research, it can be concluded that “PEKA BERAKSI” intervention significantly influenced self-efficacy of adolescents in preventing and avoiding risky sexual behavior. The results of the research can have an impact on the role of community nurses in taking preventive measures to improve skills of adolescents for healthy living through health promotion programs to increase self-awareness of adolescents as individuals, families, and communities of the impacts and risks that they will be encountered when they start engaging with risky sexual behavior. The creativity of a community nurse is required to be able to provide attractive and understandable health promotions for adolescents, families, and general public so that the objectives of health promotion can be achieved according to the expected results.

Based on the results of this intervention, it is recommended for community nursing services to make the innovation program or intervention of “PEKA BERAKSI” as a program development that focuses on skills-based health education for adolescents and health promotion at schools through the involvement of all aspects across programs, sectors, and levels of government. For primary services, interventions that can be used as a reference for outdoor healthcare through home visits are recommended. Furthermore, it is recommended that education offices and schools make data on the results of this intervention as basic data in developing school health clinics and integrating subjects with health education for adolescents. In addition, nursing education is expected to be used as the basis for similar research conducted on adolescents in the community or society, which can be developed in further research with different model approaches and methods.





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