

The Effectiveness of Peer Group WhatsApp on Adolescent Knowledge and Attitudes about Risky Sexual Behavior

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ABSTRACT

Background: Nowadays problems of teenagers are very complex and worrying, both those that arise from within themselves and from outside themselves. Various internal and external factors that affect adolescents will also have an impact on adolescents to have negative and unhealthy attitudes and behaviors (high risk behaviors). Efforts to increase knowledge and attitudes in adolescents can be used in preventing risky sexual behavior through WhatsApp peer groups. **Objective:** This study analyzes the effectiveness of the WhatsApp peer group on the knowledge and attitudes of adolescents about risky sexual behavior in Isen Mulang Senior High School, Palangka Raya City. **Methods:** This study is a quasi-experimental study with two groups, pretest-posttest with control group design which was carried out from July to September 2020. The population in this study were all adolescents who were in the age range of 15-21 years in Isen mulang Senior High School at SMA Isen Mulang, Palangka Raya city numbered 169 people with the sampling technique in this study using consecutive sampling with a sample of 31 respondents in the intervention group and 31 respondents in the control group. **Results:** There is a significant difference in the average value of knowledge (P -value = 0.000) and attitude score (P -value = 0.000) before and after the intervention in each group, there is a significant difference in increasing knowledge (P -value = 0.045) and attitude (P -value = 0.048) between the intervention group and the control group. The average increase in knowledge scores and attitude scores of the intervention group was higher than the control group. **Conclusion:** WhatsApp peer groups are considered effective in increasing adolescent knowledge and attitudes about risky sexual behavior. WhatsApp peer groups can be used as dynamic communication media and become one of the alternative choices in providing health education to adolescents other than face-to-face.

Keyword: Attitude, Knowledge, Peer group WhatsApp.

INTRODUCTION

Adolescence is described as an immature period which is a period of individuals undergoing major physical changes and psychological changes in addition to changes in social expectations and perceptions accompanied by physical growth and development and sexual maturation that leads to intimate relationships (WHO, 2018).

Data on the situation of adolescent reproductive health (KRR) showed that the largest proportion of dating at the age of 15-17 years was around 33.3% of female adolescents and 34.5% of male adolescents aged 15-17 years starting dating when they were not yet 15 years old. It is feared that at that age they do not have adequate life skills so they are at risk of having unhealthy dating behavior, one of which is having premarital sex which is at risk of teenage pregnancy and transmission of sexually

transmitted diseases (Kemenkes RI, 2015).

Dating can lead to premarital sexual behavior, violence, unwanted pregnancies and sexually transmitted infections. The results of the Indonesian Demographic Health Survey (IDHS) in 2017 stated that, in general, 80% of teenage girls had been in a relationship and 45% of them started dating for the first time at the age of 15-17 years. Then in teenage boys. 84% have been in a relationship and 44% of them started dating for the first time at the age of 15-17 years (Kemenkes RI, 2018).

In general, more boys stated that they had had premarital sex than girls. The results of the survey found that the reason for premarital sexual intercourse in male adolescents was mostly because of curiosity (y 57.5%) then in female adolescents it just happened (38%) and was forced by a partner (12.6%) so this reflects the lack of understanding of adolescents about reproductive health-

related healthy life skills, risk of sexual intercourse and the ability to resist unwanted relationships (Kemenkes RI, 2015).

Age at first sexual intercourse is closely related to reproductive health status, IDHS reports that adolescents aged 17 years are the highest age for both men and women to have sexual intercourse for the first time. In 2012, 59% of adolescents at the age of first having sex were 18-19 years, 59% and in the 2017 IDHS, 74% of the age at first having sex was 17-18 years. Unwanted pregnancy is closely related to teenage pregnancy. Unwanted pregnancies were twice as common in women age group 15-19 years (16%) as compared to age group 20-24 years (8%). Pregnancy in adolescents aged 10-19 years is at risk for complications of pregnancy and childbirth (Kemenkes RI, 2018).

The problems of teenagers that exist today are very complex and worrying. Sharing internal and external factors that affect adolescents has a negative impact on attitudes and behaviors that are not physically, mentally, and socially healthy (high risk behaviors). The number of adolescents who have sufficient knowledge and skills related to their sexual life is still limited, so there are still many teenagers who are at risk for problems of sexual exploitation, unwanted pregnancy, sexually transmitted infections (STIs) including HIV, as well as stigma and discrimination related to HIV and AIDS. This is because information related to sexual and reproductive health is still a taboo subject, whereas in fact at that age there are still many teenagers who really need correct and comprehensive information about reproductive and sexual health (BKKBN, 2013).

Peer groups are teenagers whose age or level of maturity is more or less the same. While the peer group is a group of people with the same status and are usually in the same age group. Adolescents want to be liked and accepted by a larger peer group which can produce pleasurable feelings when accepted or stressed and experience extreme anxiety when ostracized and belittled by peers. For many teenagers, acceptance in their peer group is the most important aspect of their lives.

Therefore, peers are very important during adolescence (Selvam, 2018).

Adolescents are susceptible to peer group influences, but these influences vary and adolescents find more identity within the peer group than in the family environment. Peer groups provide influence and control to follow the norms and interests of the group and the amount of influence depends on the nature of the group and the nature of the teenager (Dumas, 2011).

Learning media can be an alternative to increase adolescent knowledge and attitudes about risky sexual behavior, one of which is the WhatsApp peer group. WhatsApp peer group is one of the learning media in the form of providing health education about risky sexual behavior in peer groups which is given through WhatsApp group. This method is expected to increase the knowledge and attitudes of adolescents to avoid risky sexual behavior. WhatsApp is a cross-platform messaging application exchanging messages at no cost because WhatsApp is an internet data package that uses a GPRS/EDGE/3G or Wi-Fi connection for communication (Prajana, 2017).

WhatsApp groups have pedagogical, social, and technological benefits and this application provides support in the implementation of online learning (Susilawati and Supriyatno, 2020). The learning process which integrates learning activities through WhatsApp is more effective than the learning process in the classroom, so that learning activities through WhatsApp are an effective tool (Barhoumi, 2020).

Implementation of WhatsApp as a useful alternative to help teenagers in learning (Kheryadi, 2017). The results of the study concluded that learning by WhatsApp is a feasible and effective method. WhatsApp learning feedback shows a positive attitude in the form of better participation compared to conventional methods (Maske et al., 2018).

WhatsApp allows teens to be actively involved in online discussions and creates confidence and helps teens interact in their peer groups to discuss interesting topics and peer group discussions through WhatsApp helps teens build self-confidence and motivation to learn (Kheryadi, 2017). Based on this

background, the purpose of this study was to analyze the effectiveness of the WhatsApp peer group on the knowledge and attitudes of adolescents about risky sexual behavior at Isen Mulang High School, Palangka Raya City.

METHODS

This research is a quantitative research with a quasi-experimental research design with a pretest-posttest design with control group design. The population in this study were all adolescents who were in the age range of 15-21 years at Isen Mulang High School, Palangka Raya City, amounting to 169 people. The sample in this study were teenagers who were in the age range of 15-21 years at SMA Isen Mulang, Palangka Raya City who met the inclusion criteria consisting of 31 respondents in the intervention group and 31 respondents in the control group based on the results of the statistical calculation of the study sample size.

The inclusion criteria in this study were teenagers who had an android smartphone that had a WhatsApp application in the intervention group and an android smartphone that could access the Zoom meeting application in the control group, were willing to be respondents and participated in the whole process of research activities. The sampling technique in this study used non-probability sampling with consecutive sampling technique.

In the intervention group, respondents were given health education about risky sexual behavior through the WhatsApp peer group which was held for six meetings then the control group was given health education about risky sexual behavior face-to-face online through the Zoom meeting application in one face-to-face online meeting.

The instrument used in this study was a questionnaire to measure the knowledge and attitudes of adolescents about risky sexual behavior which was filled out online by respondents, which could be accessed via Google Form according to the predetermined time before and after the intervention.

The questionnaire used to measure the knowledge and attitude variables refers to the previous research questionnaire by Muflih and Syafitri (2018)

which has been modified. The questionnaire used to measure knowledge consists of 20 questions using a Guttman scale with a Cronbach's alpha value of 0.889. Then the attitude questionnaire consists of 15 statements using a Likert scale with a Cronbach's alpha value of 0.829.

Data analysis was done by univariate analysis and bivariate analysis. In the paired group test, the knowledge variable was analyzed using the paired t-test, while in the control group it was using the Wilcoxon test. In the attitude variable in the paired test group, the intervention group used the paired t-test and the control group used the Wilcoxon test. Then in the unpaired group, test on the knowledge variable used the Mann Whitney test and the attitude variable used the independent t-test test which had previously been tested for the homogeneity of the respondents.

This research has obtained a research ethics permit from the Research Ethics Commission of the Health Poltekkes Ministry of Health Palangka Raya number 010/III/KE.PE/2020.

RESULTS AND DISCUSSION

The results of descriptive statistics on knowledge and attitudes of respondents about risky sexual behavior in the intervention group and control group can be seen in Table 1 below:

Table 1. Descriptive Statistics of Respondents' Knowledge and Attitudes about Risky Sexual Behavior in the Intervention Group and Control Group.

Variable	Group	n	Mean	Median	Min-Max	SD	
Knowledge	Intervention						
		<i>Pretest</i>	31	65.00	70	25-95	18.841
		<i>Posttest</i>	31	81.77	80	50-100	12.619
	Control						
		<i>Pretest</i>	31	75.32	80	30-95	16.276
		<i>Posttest</i>	31	81.77	80	65-95	9.354
Attitude	Intervention						
		<i>Pretest</i>	31	44.94	45	36-57	5.428
		<i>Posttest</i>	31	48.33	48	40-56	4.571
	Control						
		<i>Pretest</i>	31	49.26	51	34-56	4.878
		<i>Posttest</i>	31	50.71	50	39-57	4.444

In Table 1 it can be concluded that there is an increase in the average value of knowledge and attitude scores before and after the intervention in the intervention group and control group.

Factors that contribute to the increase in knowledge are the frequency of application of the knowledge learned, understanding of each person's knowledge, challenges in solving difficult problems, the presence of handouts although they cannot help cognitively develop the lessons that have been learned and cooperation between team members so as to encourage adolescents to communicate with each other during the problem solving process (Noordin et al., 2019).

Increased cognitive abilities are also obtained through previous experiences which play an important role in thinking, including decisions about sex, dating, sexual relationships and sexual reactions (Suwarni and Bustan, 2018).

Attitude is an assessment that can be in the form of a person's opinion on a stimulus or object and then assessing or acting on that stimulus or object. Therefore, indicators for health attitudes are also in line with knowledge about health (Mrl et al., 2019).

Behavior is formed from the interaction between knowledge and attitudes. The interaction between knowledge and attitudes can shape behavior. Then the attitude can motivate a person to gain more knowledge so that it can direct the individual to choose coping strategies as a type of behavior in dealing with health problems (Farid, Barandouzi and Valipour, 2019).

Table 2. Differences in Knowledge Scores and Attitude Scores on Risky Sexual Behavior Before and After Intervention in the Intervention Group and Control Group

Variable	n	Group	
		Intervention	Control
Knowledge			
Pretest Mean±SD	31	65.00±18.841	75.32±16.276
Posttest Mean±SD	31	81.77±12.619	81.77±9.358
P-value		0.000*	0.036**
Attitude			
Pretest Mean±SD	31	44.49±5.428	49.26±4.878
Posttest Mean±SD	31	48.33±4.571	50.71±4.444
P-value		0.000*	0.041**

In Table 2 it can be concluded that there is a difference in the average value of knowledge and attitude scores about risky sexual behavior in each group.

The influence and contribution of peers is very strong during the adolescent period. The interaction of peers with relatively the same age has a unique role and the most important function as a source of information about things outside the family. Peer groups play an important role in adolescent change and largely influence adolescent attitudes and learning (Selvam, 2018).

WhatsApp is an online media that is considered the easiest, popular, and effective among other online media (Kheryadi, 2017). WhatsApp as a medium for communicating information delivered is more effective because it uses information technology where messages are received by the target more quickly (Trisnani, 2017).

WhatsApp group peer group has pedagogical, social and technological benefits. The WhatsApp application provides support in the implementation of online learning. WhatsApp is able to change attitudes so that it can increase student participation, accelerate the occurrence of study groups, build and develop knowledge in groups (Jumiatmoko, 2016).

The results showed that WhatsApp can be used as an effective educational media. In particular, the intervention of sending picture messages has a higher significance than the intervention through sending text messages, so it can be concluded that health promotion and education programs through WhatsApp are effective in increasing knowledge (Ekadinata and Widyandana, 2017).

In this study, the control group was given health education about risky sexual behavior through face-to-face meetings

conducted online using the Zoom meeting application. One of the lessons that can be implemented in adolescents is video conferencing.

Learning with video conferencing replaces learning that is carried out face-to-face directly into face-to-face activities virtually through applications that are connected to the internet network. The use of video conferencing can help so that face-to-face interactions can still be carried out. Learning that ideally has interaction even though it is not close together, with video conferencing will help the learning process because educators will be directly involved with students (Sandiwarno, 2016).

The results of the study concluded that online learning using the Zoom meeting application was effective. There was a very good response to online learning because it is more flexible when using it, is more independent, and encourages teenagers to be more active in learning. Then the features in the Zoom make learning more interesting (Monica and Fitriawati, 2020).

The results of the study concluded that most of the respondents expressed positive opinions on the use of WhatsApp in collaboration with other online applications. The use of WhatsApp groups and Zoom meetings can improve the teaching and learning process and the rules for using the application must be set to minimize the weaknesses of the application (Fadda et al., 2020).

The results of other studies show that the effectiveness of using the Zoom meeting application is considered to be less effective due to the obstacles faced in the learning process, spending a lot of credit or internet data quota, family economic conditions and network speed in each area. One of the efforts to overcome the weakness of using the Zoom

application is to have a plan B by utilizing the WhatsApp group (Setiani, 2020).

Table 3. Differences in Knowledge Values and Attitude Scores in the Intervention Group and the Control Group

Variable	n	Mean±SD	P-value
Knowledge			
Difference in Knowledge Value of the Intervention Group	31	36.06±21.439	0.045**
Difference in Knowledge Value of Control Group	31	26.94±14.445	
Attitude			
Intervention Group Attitude Score	31	3.39±3.818	0.048*
Difference in Attitude Score of Control Group	31	1.45±3.713	

In Table 3 it can be concluded that there is a significant difference in the increase in the value of knowledge and attitude scores between the intervention group and the control group. Then the increase in the value of knowledge and increase in the score of attitudes in the intervention group was higher than the control group.

Based on the results of this study, it can be concluded that health education about risky sexual behavior through WhatsApp peer groups is effective in increasing adolescent knowledge and attitudes. The formation of one's actions requires knowledge as an impetus in growing attitudes and behavior. Knowledge is the basis for determining attitudes so that if knowledge is low, it will affect attitudes and behavior, and vice versa (Notoatmodjo, 2013).

The WhatsApp group feature is one of the high breakthroughs in supporting the learning process in accessing online information sources directly. The combination of videos, images, text, sound along with the availability of facilitators and learning anytime and anywhere makes WhatsApp a new and convenient tool for teaching and learning activities although there is no significant difference between increasing knowledge gained from WhatsApp or face-to-face lectures, but the

advantages of WhatsApp overcome the drawbacks (Gon and Rawekar, 2017).

WhatsApp can be used as communication in closed groups specifically for members involved in WhatsApp groups and facilitate interactive multimedia communication through the exchange of messages via text, images, audio and video using smartphones (Rosenberg and Asterhan, 2018).

WhatsApp is effective in increasing the success of the teaching and learning process because WhatsApp groups are a forum for asking questions, link sharing platforms, discussions and collaborative workspaces (Fadda et al., 2020). Collaborative learning activities through WhatsApp groups are effective in the context of education, cognitive benefits, motivation, and attitudes. Aspects of collaborative learning include several aspects. These aspects are the productive involvement of adolescents in peer interaction, the presence of group dialogue features that lead to high-quality learning and the relationship between online group work, and the social and emotional aspects of peer interaction. These aspects make WhatsApp a good tool for online learning and more desirable than face-to-face learning (Barhoumi, 2020).

Learning using WhatsApp groups can produce positive benefits, especially developing students' writing skills, besides using WhatsApp groups can build interaction between students because they can share knowledge and information (Handayani and Aminatun, 2020).

WhatsApp can be used as a discussion forum that can increase learning, motivation, reduce anxiety and a sense of belonging so that WhatsApp can be used as a tool that can optimize learning and increase learning motivation (Awada, 2016).

Learning using WhatsApp learning groups is a feasible, effective, and friendly method. WhatsApp learning feedback shows a positive attitude in the form of enjoying the learning process using WhatsApp with better participation compared to conventional learning methods (Maske et al., 2018).

The results of a study concluded that WhatsApp is an effective medium to increase knowledge and practice of breast self-examination BSE. The use of WhatsApp groups can be a viable alternative for health education purposes on breast cancer control strategies (Saraswati, 2019).

The results of other studies concluded that the health education media that was considered effective in improving breastfeeding behavior in the first week of birth was the WhatsApp group (Sukriani and Arisani, 2020). The use of WhatsApp Messenger is effective as a mobile learning group method to be applied in the learning process in improving learning outcomes compared to the usual face-to-face learning method (Pratama and Kartikawati, 2017).

Various advantages make WhatsApp the most potential chat medium in various academic information and communication and it is possible to form a community based on this WhatsApp application (Zakirman and Rahayu, 2018).

The use of WhatsApp groups in women as the goal of health education can be a very feasible alternative in breast cancer control strategies. This is because the WhatsApp group provides a space to discuss and exchange experiences (Pereira et al., 2020).

CONCLUSION

There is a significant difference in the increase in knowledge and attitudes between the intervention group and the control group. The average increase in knowledge and attitudes in the intervention group was higher than the control group, so it can be concluded that the WhatsApp peer group is considered effective in increasing adolescent knowledge and attitudes about risky sexual behavior.

WhatsApp peer groups can be used as a dynamic communication medium and become an alternative choice in providing health education other than face-to-face. WhatsApp peer groups can be applied by health workers in providing health education in youth groups both in schools, colleges, communities and in the community of youth associations who are the target of adolescent health education.

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