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Effectiveness of Peer Group Education on Adolescents to Improve the Behavior of Prevention of Cervical Cancer

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ABSTRACT

Cervical cancer is a female reproductive disease, and is the most common cancer in the world. Knowledge about prevention of cervical cancer can be disseminated especially through the formation of adolescent peer groups. The purpose of this study was to determine the effectiveness of education using the peer group adolescent method to improve the prevention behavior of cervical cancer, in the "Taruna Pembangunan Surabaya" Intensive High School, with the design of the Non Equivalent Control Group. Respondents of the study were 90 students of the XI grade of "Taruna Pembangunan Surabaya" Intensive High School who were selected by simple random sampling technique. Data were collected through filling in questionnaires, then analyzed using T test and Manova. Based on the results of data analysis, it was concluded that prevention of cervical cancer using the peer group method in the Surabaya Midshipman Intensive High School was not yet effective. There were no differences in behavior between the treatment and control groups.

Keywords: Cervical cancer, HPV immunization, Peer group education

INTRODUCTION

Cervical cancer is a type of cancer that is most commonly found in women in Indonesia, causing many deaths because it is late found and treated. Cancer cells grow in the cervix, the lowest part of the uterus that attaches to the top of the vagina. Cervical cancer usually attacks women aged 35-55 years. Nearly 90% of cervical cancers originate from squamous cells lining the cervix. While the remaining 10% comes from mucus-producing gland cells in the cervical canal leading to the uterus (Prayitno, 2014). Causes of Cervical Cancer is a high-risk infection of Human Papiloma Virus (HPV) or oncogenic HPV, HPV which contains proteins that cause cancer (oncoprotein). But most (70%) of cervical cancer is caused by type 16 and 18. Early detection of HPV virus infection with IVA Test and Pap Smear is important because it can help detect the development of cervical cancer, Kartikawati (2013). Prevention of cervical cancer can be done primarily, namely by avoiding various risk factors and by providing infection prevention vaccines and HPV related diseases (Kartikawati, 2013). The results of research by experts, women who have sexual relations at the age of less than 17 years have a risk of getting cervix three times greater than the age of more than 20 years (Irianto, 2014).

Young women are the next generation to watch out for. This is triggered by changes in current lifestyles such as free sex, changing sexual partners, and smoking habits. The low level of the economy worsens, because hygiene and a less hygienic lifestyle can lead to cervical cancer. Adolescent girls will not see significant symptoms because the incubation period of cervical cancer can last for decades. To overcome this problem, by vaccinating HPV because this vaccine is very safe and almost without side effects and in other ways such as avoiding the causal factors, including avoiding cigarettes, washing the wrong vagina, having sexual intercourse with multiple partners and the environment dirty and not using towels that are used interchangeably (Wijaya, 2010). In addition, in adolescence this knowledge needs to be provided to be able to choose a healthy lifestyle and change the behavior of high-risk to low risk of an illness, one of which is knowledge about prevention of cervical cancer. This knowledge is preferred to primary prevention by eliminating risk factors and giving HPV vaccination. Besides that, it is also done early detection, especially for women who are actively carrying out sexual activities (Savitri, 2015). Knowledge of prevention of cervical cancer can be provided through peer education (Peer Group).

Knowledge about the prevention of cervical cancer can be by providing health promotion, one of which is through the health education model. Health education is the delivery of information to individuals or groups that can be practiced in schools, homes, workplaces to facilitate them to make smart choices in their own lifestyles, especially about disease prevention (Bowden, 2012). Promotive and preventive efforts to prevent cervical cancer have been carried out by the government, one of the solutions of the government to fulfill the reproductive rights of each individual, namely by the existence of PKRT (Integrated Reproductive Health Services), carried out in basic health care facilities. Health services that are appropriate for adolescents, namely PKRE (Essential Reproductive Health Services) that integrates Adolescent Reproductive Health. and

PKRK (Comprehensive Reproductive Health Services) that integrates prevention and treatment of cervical cancer (Ministry of Health of the Republic of Indonesia, 2015). Likewise with the role of midwives in the prevention of cervical cancer can detect early cervical cancer and can provide counseling to women, it has been explained according to the Minister of Health Regulation of the Republic of Indonesia (PERMENKES) No. 28 of 2017 concerning Professional Implementation in article 18 and article 21 A that midwives have the authority to give women's reproductive health services.

METHODS

This type of research is a quasi experiment with the design of a Non Equivalent Control Group. The population of the study was grade XI students of "Taruna Pembangunan Surabaya" Intensive High School, with a population size of 179. The sample size was 90 selected by simple random sampling technique. The research variable consisted of independent variables, namely the Peer Group Education Model and dependent variables, namely adolescent behavior in the prevention of cervical cancer. Data was collected through filling out questionnaires, then analyzed using paired t test and Manova.

RESULTS

Table 1. Wilcoxon test results (Knowledge Difference Test)

Kelompok			Min	Max	Mean	SD	Delta	P-value	Note
Education	1	Pre test	3	9	6.30	1.208	0.03	0.962	Not Significant
		Post test	3	7	6.27	1.048			
	2	Pre test	3	8	6.27	1.143	0.17	0.540	Not Significant
		Post test	3	7	6.10	1.125			
	3	Pre test	3	8	6.27	1.461	0.16	0.566	Not Significant
		Post test	4	8	6.43	1.104			
Peer Group	1	Pre test	3	8	6.27	1.461	0.24	0.567	Not Significant
		Post test	3	8	6.03	1.564			
	2	Pre test	2	8	5.87	1.737	0.14	0.656	Not Significant
		Post test	2	8	5.73	1.639			
	3	Pre test	2	8	5.87	1.432	0.03	0.963	Not Significant
		Post test	2	8	5.90	1.583			
Control	1	Pre test	2	8	6.20	1.215	0.4	0.163	Not Significant
		Post test	5	9	6.60	1.192			
	2	Pre test	4	8	6.47	1.008	0.16	0.589	Not Significant
		Post test	5	9	6.63	1.189			
	3	Pre test	4	9	6.47	1.358	0.16	0.716	Not Significant
		Post test	5	9	6.63	1.066			

Based on table 1 it can be seen that statistically, there was no significant difference between the data before and after treatment in the two groups.

Table 2. Paired t test results (Attitude Difference Test)

Group			Min	Max	Mean	SD	Delta	p-value	Note
Education	1	Pre test	30	40	35.70	2.781	1	0.271	Not Significant
		Post test	31	45	36.70	3.650			
	3	Pre test	28	42	35.63	3.819	0.867	0.401	Not Significant
		Post test	31	45	36.50	3.712			
Peer group	3	Pre test	29	41	35.03	3.011	0.033	0.956	Not Significant
		Post test	30	41	35.00	2.586			
Control	1	Pre test	32	41	35.43	2.315	0.5	0.406	Not Significant
		Post test	30	41	35.93	2.703			

Based on table 2 it can be seen that statistically, there was no significant difference between before and after treatment, in all treatment groups totaling 4 groups.

Table 3. Wilcoxon test results (Differences in Attitudes for Educational Groups, Peer Groups and Controls, between Pretest and Posttest)

Kelompok		Min	Max	Mean	SD	Delta	p-value	Note	
Education	2	Pre test	31	44	36.70	3.426	0.93	0.322	Not Significant
		Post test	32	47	37.63	4.106			
Peer Group	1	Pre test	32	41	35.43	2.315	0.5	0.532	Not Significant
		Post test	30	41	35.93	2.703			
	2	Pre test	0	42	33.33	9.560	0.8	0.148	Not Significant
		Post test	0	40	32.53	9.224			
Control	2	Pre test	31	42	35.27	2.728	11.17	0.000	Significant
		Post test	21	29	24.10	2.107			
	3	Pre test	31	41	35.00	2.779	6.77	0.000	Significant
		Post test	26	32	28.23	1.995			

Based on the table above it can be seen that statistically, there was no significant difference between pretest and posttest data in the education group 2, group 1 and peergrupup 2. Whereas in the control group 2 and 3 there were differences between the pre and post data. The difference in question is a decrease because it can be seen from control 2, the pretest to post test has a decrease in attitude value of 11.17 and for the control group 2 has a decrease of 6.7

Table 4. Results of Difference Tests for The Education Group, Peer Group and Control Group on Observing Knowledge, Attitudes and Practices

	Effect	Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.985	5597.365 ^a	3.000	259.000	0.000
	Wilks' Lambda	0.015	5597.365 ^a	3.000	259.000	0.000
	Hotelling's Trace	64.834	5597.365 ^a	3.000	259.000	0.000
	Roy's Largest Root	64.834	5597.365 ^a	3.000	259.000	0.000
Kel	Pillai's Trace	0.578	7.786	24.000	783.000	0.000
	Wilks' Lambda	0.481	8.999	24.000	751.780	0.000
	Hotelling's Trace	0.962	10.323	24.000	773.000	0.000
	Roy's Largest Root	0.827	26.996 ^b	8.000	261.000	0.000

Table 5. General Linear Model

Dependent Variable	General Linear Model		
	F	Sig.	Note
Knowledge	2.018	0.045	Signifikan
Attitude	22.998	0.000	Signifikan
Practice	3.832	0.000	Signifikan

Based on the table 5 it can be seen that there are group differences in the three observed aspects, namely knowledge, attitudes, and practices.

DISCUSSION

The Effect of Adolescent Behavior in the Treatment and Control Group on Cervical Cancer Prevention Actions

The "Taruna Pembangunan Surabaya" Intensive High School students, with a total of 90 female students, had received information on prevention of cervical cancer through modules, which were given group counseling (30 female students), Peer Groups (30 female students) and independent (30 female students). The activity was conducted three times with a distance between one week's meetings. The time given for each meeting is around 2 hours. It is hoped that after being given an understanding, it can change the knowledge, attitudes and actions of the students in preventing cervical cancer.

Human behavior is very complex and has a very broad scope. In behavioral domain theory, that humans consist of cognitive domains, affective domains and psychomotor domains. Subsequent developments in the interest of measuring educational outcomes (counseling), these three domains are measured from: knowledge, attitude and practice or actions taken by students in relation to psychomotor counseling material (Notoatmodjo, 2003). The domain has been proven in

Fridayanti (2016) research results, in Semarang with the result that there are significant differences between health promotion with leaflets and health promotion with community leaders' motivation for behavior.

The counseling given to "Taruna Pembangunan Surabaya" Intensive High School students in this research activity does not seem to make their needs at this time. Moreover, it was said that prevention of cervical cancer is the most effective by giving HPV immunization that requires a lot of funds, so the students lack interest in the material about prevention of cervical cancer in adolescents.

The Effect of Peer Group Education on The Behavior of Prevention of Cervical Cancer in Adolescents

Peer Group is formed because the students are experiencing socialization processes, learning to gain social stability in preparing themselves to become adults, looking for groups that are suitable and can be invited to interact so that they feel accepted in the group. Peer Group education in the prevention of cervical cancer in adolescents of the same age in high school is expected to improve adolescent health behavior so that they can avoid risk factors for cervical cancer.

Prevention of cervical cancer can be done primary and secondary. Primary prevention is an effort to reduce or eliminate individual contact with carcinogens to prevent carcinogenesis. This prevention can be done by avoiding risk factors and providing HPV vaccination. This vaccine is given to young women as early as possible, because the level of body immunity and cell growth and reproduction in the cervical area are still very good. With vaccination, it is likely that the number of cervical cancer cases that threaten women can be suppressed (Kartikawati, 2013). Secondary prevention of cervical cancer can be done by applying healthy behaviors such as maintaining a healthy diet, not smoking or avoiding passive smoking, avoid sex at an early age before marriage or at a very young age, avoid having sex with multiple partners.

In this study, the Peer Group group which was divided into 6 groups, was given a module to be read and studied, then each student was given the opportunity to give an explanation to the group in the hope that students better understand this cervical cancer prevention material, if that exposes their peers. The knowledge of the students shows that the most effective prevention of cervical cancer is by giving HPV vaccination. The vaccination requires a lot of funds, moreover not yet a program from the government so that the students become less interested. But in the second and third Peer Group education, they can determine the attitude and plan of action to be taken in implementing prevention of cervical cancer, namely by implementing healthy living behaviors.

The Differences in Adolescent Behavior in the Prevention of Cervical Cancer between the Treatment and Control Groups after Peer Group Education was Given

The Peer Group is formed in the hope that it can give influence individually or in groups of students, both the influence on knowledge, attitudes and actions to be taken in the prevention of cervical cancer. In this case small groups are formed in the same class. The formation of this group is expected to have a positive influence, so that they are ready to face the life to come, can develop a sense of solidarity between friends, and finally be able to change the culture that they think is good, practice acquiring knowledge, attitudes and actions, practice independently and can express feelings and opinion for the development of the group.

Lawrence Green (1980) in Notoatmodjo (2003), said that behavior is influenced by 3 main factors, namely predisposing factor, enabling factor, and reinforcing factor. Predisposing factors are factors that facilitate the realization of one's behavior. Enabling factors are factors including the availability of facilities. while reinforcing factors are factors that reinforce the occurrence of behavior. This was evidenced in Ervyna's research (2015), in Makassar 10 Public Middle School that there was the influence of the Peer Education Group on genitalia's personal hygiene behavior in the prevention of cervical cancer in young women in the Makasar 10 Public Middle School

The Peer Group method applied in this study did not affect changes in the behavior of prevention of cervical cancer in "Taruna Pembangunan Surabaya" Intensive High School students. The researchers gave female students education about the most effective ways to prevent cervical cancer by HPV immunization, but the costs were quite expensive. This is an obstacle so that there is a possibility that students are no longer interested in early prevention of cervical cancer by participating in the HPV immunization program. To prevent cervical cancer that can be done by high school students by implementing healthy behaviors, such as maintaining a healthy diet, not having free sex at an early age, not marrying at an early age, and not smoking or not becoming passive smokers. Health education specifically on how to prevent cervical cancer in adolescents provided by researchers as health workers is also a reinforcing factor that there are still other events in the prevention of cervical cancer, namely by applying healthy lifestyle behaviors.

CONCLUSION

Prevention of cervical cancer in adolescents applied through the formation of the Peer Group group at the "Taruna Pembangunan Surabaya" Intensive High School was less effective, as evidenced by the absence of differences in behavior between the treatment and control groups after the Peer Group approach was educated.

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