Increasing Mothers' Knowledge of Cervical Cancer Risk Through Peer Group Health Education with "Pinka" Method

by Sri Utami

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Abstract

Cervical cancer is a disease that is characterized by the growth and spread of abnormal network and will have metastases in cervical and even to other organs that can cause death. The purpose of this research is to find out the effect of peer group health education in attempt to increase mothers' knowledge of cervical cancer Risk. Quasy experimental design with non-equivalent control group was used as the design of this study. A total of 128 mothers at risk of developing cervical cancer from Surya Indah and Beringin Indah Pangkalan Kuras, Pelalawan were chosen as samples using stratified random sampling technique. The samples were divided into experimental group and control group (64 mothers on each group). The results of this study showed a score increase up to 40.70% with p value 0.0000 (p<0.05) in the experimental group after the group received health education with "PinKa" method. The conclusion is that a health education increases mothers' knowledge about cervical cancer. Therefore, health education about cervical cancer is recommended to improve the awareness of cervical cancer so that cervical cancer can be detected earlier and its risks can be minimized.

Keywords: cervical cancer, health education, mother, peer group

INTRODUCTION

Cervical cancer is a disease characterized by the growth and spread of an abnormal tissue that expands in the cervix and may infect other organs which may ultimately result in death (Azis, 2009)[1].

In the world, a woman dies from cervical cancer every two minutes, and a woman dies every four minutes in the Asia Pacific. The report in Indonesia is even more horrible as one woman dies from this disease every sixty minute. In this country, about 90-100 cases of cervical disease is found per 100,000 population, where 200,000 new cases are found each year (Azis, 2009). This means more than 15,000 cases of cervical cancer are detected every year, and about 8,000 cases of which end in death. The number equals to 40-45 women being infected daily, and 20 of them have to end their life. This fact makes Indonesia the country with the highest number of people with cervical cancer in the world. Riau Province in 2015 had the highest rate of cervical cancer (10%), precisely in the Pelalawan area (Riau Health Profile, 2015)[2]

In attempt to prevent cervical cancer, Indonesian government has launched a program in all regions of Indonesia telling every woman who is actively having sexual intercourse to visit hospital at least once a year for early detection of cervical cancer, either by Visual Acetate (IVA) and Pap Smear. The program is implemented on the ground that married women have higher possibility of contracting cervical disease since their reproductive organs are increasingly exposed to male genitals and

are thus at high risk of infection if they are not kept clean and healthy.

However, it seems that the application of Visual Acetate Acid (IVA) and Pap Smear Inspection method is not enough to prevent the spread of cervical cancer because of the high rate of this disease from year to year.

Thus, the researchers aspire to improve mothers' knowledge of the risk of cervical cancer with the "PinKa" method with the hope that they are more aware and exposed to critical information about cervical cancer: its definition, causes, signs and symptoms, prevention and management of mothers with cervical cancer. The researchers decided to give out the mothers a smart book on cervical cancer "PinKa Book" to improve their understanding of this issue. Afterwards, the extent to which the mothers have comprehended the given material is assessed. Researchers believe that the method allows them to learn more about cervical cancer: how to detect cervical cancer at the early stages and how to prevent it properly that the mortality rate is expected to decline.

The results of the research in Pelalawan village (2008) show that the mothers who exhibit positive cancerous dysplasia accounted for 30,3%, the suspects of cervical cancer 8,6%, the IVA negative 52,6%, and the inflammation 8,6%.[3]

Lastly, the results of the research in Padang Mutung village (2014) show that the mothers who exhibit positive cancerous dysplasia accounted for 26,3%, the suspects of cervical cancer 6,6%, the IVA negative 52,6%, and the inflammation 8,6%.[4]

From the survey conducted on February 5, 2018 in Mekar Sari village KM 2, Bandar Sei Kijang (Pelalawan District), it was found that only 12 mothers out of 47 interviewees from a *Wirid Yasin* club, a small local religious community, know of cervical cancer. Based on the empirical data and theoretical basis as well as the problems found in the field, the researchers are interested in conducting research on increasing mothers' awareness of cervical cancer risk through peer group health education with "PinKa" Method.

RESEARCH METHOD

This study employed *the Quasy Experiment* method (*the Non-Equivalent with Control Group*) involving the experimental group and the control group. The samples of the study were 128 mothers at risk of cervical cancer in Surya Indah and Beringin Indah Pangkalan Kuras Pelalawan, with 64 respondents in each place.

RESULTS
1. Univariate analysis
Table 1
Respondents' Characteristcis

Characte ristics	Experiment (n=64)		Control (n=64)		Total (n=128)		P
	N	%	N	%	N	%	
Age							
26-35 Early adult	9	14.1	2	3.1	11	8.6	0.081
36-45 Late adult	39	60.9	46	71.9	85	66.4	
46- 55 Early elderly	16	25.0	16	25.0	32	25.0	
Religion							
Islam	61	95.3	61	95.3	122	95.3	1.000
Christian	3	4.7	3	4.7	6	4.7	

Table 1 shows that 66,4% respondents are 36-45 years old (late adult phase), and 95,3% follow Islamic way of life, both from the experimental group and the control group. After doing the statistical test, it was found that the p value for age was 0.081 and for religion 1,000, which is greater than the alpha value (p> 0.05).

Table 2
The average pretest knowledge score of the mothers in the experimental group and the control group

Variable	N	Mean	SD	Min	Max	P

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Experiment	64	56.50	10.540	37	79	
Control	64	53.78	9.164	37	79	**0.205**

Table 2 shows that the average pre-test score of respondents' knowledge in the experimental group was 56.50 with the lowest score 37 (insufficient), the highest score 79 (good), and a standard deviation of 10,540. On the other hand, the average pre-test score in the control group was 53.78 with the lowest score 37 (insufficient), the highest score 79 (good), and a standard deviation of 9.164. The p value after statistical test was 0.205 (p> 0.05), showing that the average score of the mothers before given health education was generally homogeneous.

Tabel 3
The average post-test knowledge score of the experimental group (after given the health education with "PinKa" method) and the control group (without health education)

Variable	N	Mean	SD	Min	Max
Experiment	64	97.20	3.747	90	100
Control	64	54.69	8.929	37	84

Table 3 shows that the average post-test score of the experimental group was 97.20 (good) with the lowest score 90, the highest score 100 (good), and a standard deviation of 3.747. On the other hand, the score in the control group was 54.69 with the lowest score 37 (insufficient), the highest score 84 (good), and a standard deviation of 8.929.

1. Bivariate analysis

Table 4
The comparison of scores of the experimental group before and after the health education with "PinKa" method

Variable	Mean	Mean Change	SD	P
Before	56.50	40.70	10.540	
After	97.20		3.747	0.000

Table 4 shows that the mean score before the application of health education was 56.50 with a standard deviation of 10,540, while that after the education was 97.20 with a standard deviation of 3.747. Thus, the mean change between the two was 40.70 (with p value =0.0000, *alpha* 0.05). This major score change signifies the power of the health education with "PinKa" method.

Table 5
The comparison of scores of the control group before and after the health education with "PinKa" method

Variable	Mean	Mean Change	SD	p
Sebelum	53.78	0.910	9.164	
Sesudah	54.69		8.929	0.420

Table 5 shows that the mean score before the application of health education was 53.78 with a standard deviation of 9.164, while the group score without the education was 54.69 with a standard deviation of 8.929. Thus, the mean change between the two was 0.910 with p value =0.420, *alpha* 0.05), resulting in Ho being rejected. This minor change indicated that the mothers did not have better understanding of cervical cancer when they were not given health education.

Table 6
Mann Whitney test in the experimental group (after given health education) and control group (without health education)

Variabel	N	Mean	SD	p
Eksperimen	64	97.20	3.747	
Kontrol	64	54.69	8.929	0.000

Table 6 shows the results of the Mann Whitney test. It was found that the pretest mean of score in the experimental group was 97.20 with a standard deviation of 3,747. In contrast, the score in the control

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group was 54.69 with a standard deviation of 8.929. After the statistical test, the p value equals 0.000 which was smaller than the *alpha* value (p <0.05).

The results of this study showed that the knowledge score of mothers before being given health education was 56.50 (sufficient) in the experimental group and 53.78 (insufficient) in the control group, The score after the implementation of health education in the experimental group was 97.20 (good), while that of control group who did not receive any education was 54.69 (insufficient). The conclusion to take from these findings is that health education has significant impact on improving mothers' awareness of cervical cancer in the experimental group.

DISCUSSION

Respondents' Characteristics

1. Age

The research conducted in Surya Indah and Beringin Indah Pangkalan Kuras Pelalawan found that most mothers were 36-45 years old (late adult phase) who remained sexually active. This is in line with a statement from WHO (2017) that health education to increase knowledge of the risk of cervical cancer by "PinKa" method is often prioritized for the right mothers aged 36-45 years or those in their late adulthood during which it is vital that the mothers constantly maintain the hygiene of, and regularly check, their genital health to identify symptoms, if any, of cervical cancer.

2. Religion

With regard to religion, the majority of respondents (95.3%) are Muslim.

Using Wilcoxon test on the experimental group, the researchers found that the average score of individuals in the experimental group before the realization of health education was 56.50, and it increased to 97.20 (with a p value of 0.000) after the completion of health education in the same group.

This considerable upward score change between pretest and post-test means clearly explains that the peer group health education with the "PinKa" method taught to the mothers could translate into substantial understanding of cervical cancer.

On the other hand, the results of Wilcoxon test to the control group not receiving any health education showed that the respondents scored an average of 53.78% (pretest) and 54.69% (post-test), while the p $value$ was 0,420 (p>0,05). These numbers suggest that there was slight progress in terms of knowledge regarding cervical cancer in the pretest and post-test when no health education was given. In the control group, there was also minor increase as no educational intervention was given (average score 0.91).

Meanwhile, the results using *Mann Whitney* test showed that the post-test score in the experimental group was 97.20 and the control group 54.69 with the p value 0,000 (p<0,05). %). This study concluded that the peer group health education with the "PinKa" method is able to enhance the knowledge of mothers about cervical cancer that they are expected to know what, how to prevent, and ways to deal with, the deadly infection of cervical cancer that threatens life.

This study using peer groups is an effective approach of education since the mothers feel free to tell stories, share feelings, and influence one another about cervical cancer, whey they meet, for example, on *arisan* (a regular social gathering where a kind of lottery is conducted and members take turns to win an amount of money previously deposited by all members). This routine gathering is a powerful tool because the mothers socialize more with peers, making it easier to ask, exchange ideas, and consult any health

problem they have. This can ignite positive discussion on reproductive health issues, especially cervical cancer (Andari, 2014).[5]

Conclusion

The results of Wilcoxon test on the experimental group showed that the p value was 0.000 (p<0.05), meaning that there was significant score difference between the pretest and post-test. This demonstrated the power of the peer group health education with the "PinKa" method to enhance the knowledge of reproductive health. Moreover, the results of *Mann Whitney* test in both the experimental group (receiving health education) and the control group (not receiving health education) also resulted in the *p value* 0.00 (*p<0,05*). This proves there is a significant difference between the mothers' knowledge before and after the realization of health education in the experimental group with the p value $<\alpha$.

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