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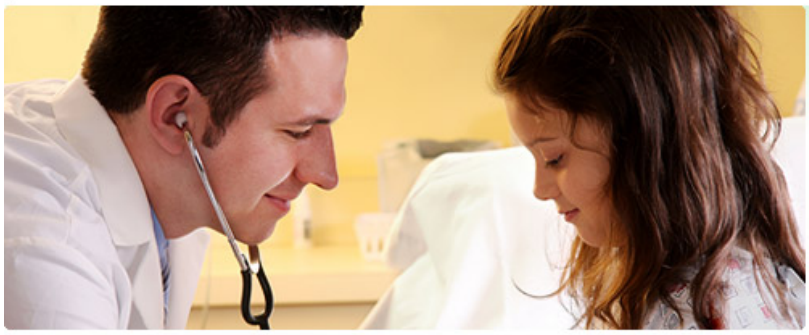

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The Effect of Model Intervention Towards the Intention of Early Detection of Cervical Cancer with Via Test

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Abstract

The purpose of this study was to evaluate the woman of childbearing age decision's model towards the intention of early detection of cervical cancer with the VIA (visual inspection with acetic acid) test. The design was quasi-experimental. The population of women of childbearing age and sample size was 70. Technique Paired samples statistics. Statistical analysis using the Wilcoxon test with a probability of 0.05. The difference in the value of the pre and post test were seen from the difference in the mean value between the pre and post test. In the treatment group, the difference test results were significant between the pre and post test, the value of p = 0,000. In Control group, the results of the difference test were not significant between the pre and post test, the value of p > 0.05. The Decision Model was a new finding of research where have the highest level of situation awareness on the situation, events and dynamics of its health condition. The decision model showed that with a high level of awareness, the women decided to make early detection of cervical cancer supported by high self efficacy and intention.

Keywords: *Model, Intervention, Early Detection of Cervical Cancer*

Introduction

Deaths from cervical cancer are projected to increase by almost 25% over the next 10 years. Based on the Globocan estimate, the 2012 International Agency for Research on Cancer (IARC), the incidence of cancer in Indonesia 134 per 100,000 people with the highest incidence in women was breast cancer by 40 per 100,000 followed by cervical cancer 17 per 100,000 and colorectal cancer 10 per 100. 000 women(1)

WHO mentioned four important components that became pillars in the treatment of cervical cancer, namely: prevention of HPV infection, early detection through increased alertness and organized early detection programs, diagnosis and treatment, and palliative care for advanced cases. Early detection of cervical cancer includes an organized screening program targeting women of childbearing age groups, the establishment of an effective referral system at each level of health services, and education for health workers and women of productive age. Pre-cancerous lesion screening and treatment requires a lower cost compared to treatment and management of cervical cancer.

The target of early detection of cervical cancer was 50% of women until 2019, early detection programs in Indonesia were prioritized for women aged 30-50 years. The fact was that the coverage of the results of activities from 2007 to 2014, namely the achievement of early detection of cervical cancer screening was 2.45%(1).

In 2030 there will be a surge in cancer patients in Indonesia up to seven times(2). The number of cancer patients who died also became increasingly alarming. The number of cervical cancer cases in Indonesia is getting worse because more than 80% of cases that come to the hospital are at an advanced stage.

By the complex problem, the idea arose to screen cervical cancer with a simple method, namely VIA.

In dr. Pirngadi Medan Hospital, In 2007 there were 345 cases, in 2008 there were 25 cases, in 2009 were 48 cases and in 2010 were 40 cases. The high rate of cervical cancer patients in Indonesia was caused by this disease did not cause symptoms and low awareness of women to check their health(1). If more women were accustomed to doing early detection, and the disease has

spread to someone, it can be dealt with more quickly[3].

Behavior factors which include predisposing factors, supporting factors and driving factors. Other factors that affect the efforts of early detection of cervical cancer are individual factors that influence the woman to detect early cervical cancer, namely SA (situation awareness). SA was a continuous process that involves assessing events in the environment so as to give meaning to information to help decision. Comprehension of cervical cancer hazards and the purpose of screening, assisted in making decision about screening, was an important factor in whether respondents made choices regarding information about screening[5]. Determinants influence intention on the behavior of early detection of cervical cancer was significant, one of which was perception of the national cancer screening program as well as perceptions about the risk of cervix cancer[6].

There was an effect of attitude on intention to do early detection of cervical cancer[7]. The implementation of the VIA program mentioned based on the recapitulation of VIA examinations in Pematangsiantar, which showed the percentage of woman participating in the 2015 - 2016 VIA test and was not seen achieving the VIA test target for each puskesmas. By the national percentage that has attended the VIA test was still far below the effective screening coverage of 50%, even far below the target coverage of Pematangsiantar Health Department's screening coverage of 20% per year.

Self efficacy was an individual's belief about his ability to organize and complete a task, mastering the situation needed to achieve certain results. Some dimensions of self efficacy), namely magnitude, generality, and strength[8]. The addition of self-efficacy increases the predictability of the TPB. Self-efficacy was the strongest predictor of intention[9].

This study, wanted to expand the research by integrating the framework of TPB. Ajzen (1991) with Theory Situation Awareness (Endsley, 1988), and Social Cognitive Theory explains that the TPB model was very open to add another predictor variable to predict intention and behavior about the object under study[10-11]. This study will examine the decision model of women to perform early detection of cervical cancer with the VIA test.

Material and Method

The study design was quasi-experimental. The population of women of childbearing age and sample size was 70. Research variables were: perceptions, comprehension, attitude, subjective norms, projection, self efficacy, intention and decision making intention to perform VIA within such specific period.

The data of the study consists of primary and secondary data. The primary data had obtained from interviews with spreading questionnaires. The obtained data through interview consists the data of projection, self efficacy, intention, toward decision to perform VIA. Before, the instruments were used to measure each variable, then the necessary act would include performing an instrument test, which had performed validity test and questionnaire reliability.

Statistical analysis using the Wilcoxon test with a probability of 0.05. To analyze the difference in mean and standard deviation before and after treatment in each intervention and control group, a statistical analysis was performed using the Wilcoxon test with a probability of 0.05

Result

The intervention activities in the following research were compiled based on the model formed by providing Health Education through training to women of childbearing age to improve the women 'decision to do early detection of cervical cancer with the VIA test. The number of samples obtained 35 utsamples in the treatment group and 35 samples in the control group, so that 70 respondents were obtained.

To analyze the difference in mean and standard deviation before and after treatment in each intervention and control group, a statistical analysis was performed using the Wilcoxon test with a probability of 0.05. The results of the analysis could be seen in the following table.

Table 1. Paired samples statistics research on the decision of women to do early detection of cervical cancer with VIA test in the treatment group in Pematangsiantar.

Variable differences in woman's decision to make early detection of cervical cancer	N	Mean	Difference pre-post	Std. Deviation	Sig. (2-tailed)
Pre problem recognition	35	3,157	0,529	0,566	0,000
Pos problem recognition	35	3,686		0,455	
Pre information search	35	3,086	0,628	0,562	0,000
Pos information search	35	3,714		0,369	
Pre alternative evaluation	35	3,129	0,6	0,547	0,000
Pos alternative evaluation	35	3,729		0,408	
Pre early detection	35	3,029	0,757	0,652	0,000
Pos early detection	35	3,786		0,389	
Pre behavior after deciding	35	2,986	0,117	0,535	0,000
Pos behavior after deciding	35	3,757		0,390	
Pre total intervention	35	15,387	3,285	2,862	0,000
Pos total intervention	35	18,672		2,011	

In table 1. above Paired samples statistics The difference in the value of the pre and post test was seen from the difference in the mean value between the pre and post test and there was an increase in the value of the post test. The difference test results were significant between the pre and post test, the value of p = 0,000 (p <0.05)

Table 2. Paired samples statistics research on the decision of women of childbearing age to do early detection of cervical cancer with VIA test in the control group in Pematangsiantar.

The variable difference in the decision of woman for early detection of cervical cancer	N	Mean	Difference pre-post	Std. Deviation	Sig. (2-tailed)
Pre problem recognition	35	3,343	0,2	0,553	0,164
Pos problem recognition	35	3,543		0,475	
Pre information search	35	3,343	-0,273	0,627	0,207
Pos information search	35	3,157		0,455	
Pre alternative evaluation	35	3,000	-0,1	0,421	0,767
Pos alternative evaluation	35	2,900		0,930	
Pre early detection	35	3,171	-0.043	0,321	0,631
Pos early detection	35	3,214		0,474	
Pre behavior after deciding	35	3,200	0	0,584	0,972
Pos behavior after deciding	35	3,200		0,558	
Pre total control	35	16,057	-0,083	2,506	2,741
Pos total control	35	16,014		2,874	

In table 2. showed that the Wilcoxon test results in the control group, there are differences in the mean values in the pre and post test. But the difference in the mean value between the pre and post test, there is no increase in the value of the post test. The results of the difference test were not significant between the pre and post test, the value of p> 0.05.

Table 3. Independent samples statistics research on woman of childbearing age 's decision to do early detection of cervical cancer with VIA test on the results of the treatment and control group test posts in Pematangsiantar.

Variable differences in woman's decision to make early detection of cervical cancer	N	Mean rank	Difference	Sig. (2-tailed)
Problem recognition (pos control)	**35**	**30,46**	**10,08**	**0,016**
Problem recognition (pos treatment)	35	40,54		
information search (pos control)	35	27,36	16,28	0,000
information search (pos treatment)	35	43,64		
Alternative evaluation (pos control)	35	25,09	20,82	0,000
Alternative evaluation (pos treatment)	35	45,91		
Do early detection (pos control)	35	25,14	20,72	0,000
Do early detection (pos treatment)	35	45,86		
Behavior after deciding (pos control)	35	25,87	19,26	0,000
Behavior after deciding (pos treatment)	35	45,13		

In table. 3. showed that the Mann Whitney test results in the post control group and post treatment group, there were differences in mean rank values in the post control and post treatment. The difference in the value of the post control and treatment was seen from the difference in mean rank values, there was an increase in the mean value of the treatment post rank. The difference in problem recognition indicators in the control group with the treatment group obtained p = 0.016 (p <0.05), the difference in information search indicators in the control group with the treatment group obtained a value of p = 0,000 (p <0.05), different alternative evaluation indicators in the control group with the treatment group obtained p = 0,000 (p <0.05), the difference in indicators of early detection in the control group with the treatment group obtained p = 0,000 (p <0.05), differences in behavioral indicators after deciding in the control group with the treatment group obtained p = 0,000 (p <0.05).

Based on the results of the analysis in the table above, it can be concluded that the intervention model found can improve the decision of women to do early detection of cervical cancer with the VIA test.

The results of this study also found that from 35 woman in the intervention group, after observing that in the second week after intervention, there were 20 woman who decided to have early detection of cervical cancer with an VIA test and at the third week there were 10 people who decided to do early detection cervical cancer with VIA test. In the control group, after observation there were 5 woman who decided to detect cervical cancer early with the VIA test.

Discussion

Based on the analysis of differences in decision of the women to do early detection of cervical cancer with VIA test between groups given intervention and groups not in the decision model intervention using non-

parametric test, and for Post test using the Wilcoxon test and for the Control vs test. The Mann Whitney Test treatment with the SPSS 22 program showed that the mean increase in the group given the intervention was greater than the control group. In the hypothesis test there were differences in the decisions of women between the groups given the intervention and the control group obtained significant values. Thus there was a change in the decision of women to do early detection of cervical cancer with an VIA test between the intervention group and the control group in Pematangsiantar.

The population in this study was less aware of cervical cancer. The increasing incidence of cancer and death, which was very alarming, caused by a lack of awareness of early detection of cervical cancer[12]. The increase in cancer cases was more prevalent in developing countries than in developed countries[13] because cancer was detected most in the late stages in most developing countries, this poses several challenges in care, recovery and survival[14]. Screening for early detection of cervical cancer in pematangsiantar was not optimal. This evidence-based information was an advocacy tool for policy making and the development of appropriate interventions. Health workers, especially in Puskesmas, need to improve their outreach services and provide health education to the community and increase timely information dissemination to the public regarding routine early detection of cervical cancer.

The study also showed a significant increase in the intervention group for cervical cancer. Woman of school understood more about each risk for cervical cancer. All participants agreed that women with complaints of public area should immediately check without delay. The preventive approach coupled with timely treatment was the only solution to overcome the burdensome cancer challenges. There was an urgent need to accelerate efforts to communicate accurate information, among different layers of society, about preventable cancers, especially cervical cancer, which was a leading cause of death in women[15].

To stimulate regular early detection among women, there must be aggressive health promotion interventions, designed to raise awareness and to improve the impression of cervical cancer in the community[16]. Effective education and mass examinations are needed for successful cervical cancer screening programs in India because the creation of awareness and increased access to screening services was very important to reduce the burden of preventable cancer[17]. This was consistent with research which found that women had poor knowledge about cervical cancer screening and lack of awareness of symptoms, risk factors and cervical cancer prevention screening. Importantly, the results of early detection would guide the management of conditions throughout life, including the decision-making process, where the individual would become an important part[15]. Interventions to promote culturally sensitive public health programs designed to provide information and services across various age groups, levels of education, culture and social strata must be developed and implemented[18-20].

In conclution, intervention with the decision model of women of childbearing age was able to change the decision to conduct an examination of early detection of cervical cancer to health services.

Conflicts of Interest: No potential conflict of interest relevant to this article was reported.

Ethics: The Ethical clearance of this study taken from the Commission on Health Research Ethics, Faculty of Public Health, Airlangga University.

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