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The Effectiveness Of Training In Early Detection Of Cervical Cancer And Breast Cancer At Bapelkes Cikarang Increasing IVA Examination Coverage In Bekasi City

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ABSTRACT
The IVA examination coverage rate in Bekasi City is still low, indicating problems of increasing competence. This competency is enhanced through training in early detection of cervical and breast cancer. This study aims to determine the effectiveness of early detection training for cervical cancer and breast cancer for doctors and midwives in increasing the coverage of IVA examinations in Bekasi City. The quantitative approach was applied in this research through a quasi-experimental research design. The population used was all community health centers in Bekasi City, while the sampling technique used was a saturated sampling technique, namely taking all existing samples. Variables are measured using a quantitative questionnaire that has been standarized. This quantitative data analysis uses the SPSS version 18. Quantitative data analysis includes univariate and bivariate analysis. The results of the study showed that there were differences in knowledge, attitudes and behavior between the control group and the intervention group. Increased IVA coverage in the intervention group after being given early detection training. Early detection training is considered effective because there is an increase in knowledge, attitudes and behavior as well as coverage of IVA in Bekasi City. Future research can measure more comprehensively the effectiveness of training in terms of programs in the health service

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INTRODUCTION

Cancer is currently still a health problem because the number of cases continues to increase and the death rate is still high. Based on data from *the Global Cancer Observatory* from *the World Health Organization* (WHO) 2020, there were 18.1 million cases. The incidence of cancer in Indonesia (136.2/100,000 population) is in 8th place in Southeast Asia. In Indonesia, the highest cancer cases in the female population are breast cancer at 42.1 per 100,000 population with an average death of 17 per 100,000 followed by cervical cancer at 23.4 per 100,000 population with an average death of 13.9 per 100,000 population (Ministry of Health, 2019).

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Indonesia is the country with the highest cases of breast cancer and cervical cancer in Southeast Asia. It is estimated that in Indonesia the number of new cancer cases is 396,914 cases with an estimated death toll of 234,511 people. Of this number, the first highest number of cancers is breast cancer, namely around 16.6% (65,858) and the second highest number of cases is cervical cancer, namely around 9.2% (36,633) (Antari & Yuliastuti, 2022).

West Java Province is one of the regions experiencing an increase in the number of cancer sufferers. The city of Bekasi was chosen for this study because in the last 3 years the number of women experiencing cancer has increased, namely 21/100,000 population. Bekasi City is one of the cities in West Java which has a high number of cancer cases, namely 1913 people (*Profil_Kesehatan_Kota_Bekasi_2020*, n.d.). The death rate in 2022 due to cancer in Indonesia is around 30% to 50%. This death rate can be prevented by modifying or avoiding the main risk factors. Ways to implement this strategy to prevent mortality include early detection (Antari & Yuliastuti, 2022).

Current cancer prevention programs target both aspects, namely treatment and community education. The government wants to integrate these two aspects into a large scheme so that the implementation of cancer prevention runs simultaneously throughout Indonesia. More specifically, the government program through the Ministry of Health is dealing with cancer prevention. The Ministry of Health outlines several strategies for dealing with breast cancer and cervical cancer, including the following, namely: Health promotion to increase public knowledge and awareness. Special Protection: HPV immunization to prevent cervical cancer. Early detection includes IVA examination and pap smear to prevent cervical cancer, as well as SADANIS (Clinical Breast Examination) for early discovery (down staging) of breast cancer and follow-up. Treatment according to standards. The Indonesian government's program in efforts to overcome breast cancer and cervical cancer is by carrying out early examinations using the Acetic Acid Visual Inspection (IVA) and Clinical Breast Examination (SADANIS) methods (Khana et al., n.d.).

In an effort to carry out early detection of breast cancer and cervical cancer, officers at the Community Health Center have a very important role because the Community Health Center is at the forefront of health services in the community. Several studies regarding breast and cervical cancer prevention programs in Indonesia show that the implementation of breast and cervical cancer detection programs carried out by health workers at community health centers is not optimal. This is caused by many obstacles, including the insufficient number of trained personnel, so that inspections cannot be carried out optimally, which causes the target not to be achieved (Winarti & Munawaroh, 2019). Therefore, in order to maximize health workers at Community Health Centers in efforts to prevent or early detect breast and cervical cancer, it is necessary to increase competency continuously in the form of training .

Seeing the description of the importance of early detection of cervical and breast cancer training that has been held, further evaluation is needed to measure the effectiveness of the results of the training that has been carried out. To evaluate training, the Kirkpatrick model provides a framework for the levels of evaluation. Kirkpatrick's model is divided into 4 levels or *levels* , namely *reaction, learning, behavior* and *result* . Kirkpatrick's model appears to

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demonstrate four well-organized pillars for measuring effectiveness in training. Emotional reactions and learned knowledge are key concepts in evaluating training efficiency (Winanda , 2017)

VIA examination coverage in Bekasi City in 2023 is still low at an average of 0.5% of all Community Health Centers in Bekasi City. In response to this, the Bekasi City Government is collaborating with the Cikarang Health Training Center (Bapelkes), P2PTM Directorate of the Ministry of Health to organize training for health workers, especially doctors and midwives at Community Health Centers. The Bekasi City Government has included representatives of doctors/midwives from 4 8 Community Health Centers in Bekasi City to take part in early detection training. During 2019 to 2022 there has been no study regarding the effectiveness of early detection training and increasing IVA coverage in Bekasi City. The indicator of the success of early detection training according to the Training Curriculum for early detection of cervical cancer and breast cancer is the participant's final exam score of at least 80, and while in the field it is hoped that it can increase the IVA coverage rate and SADANIS examination rate.

METHOD

The research approach was carried out using a quantitative research approach with a quasi-experimental research design. This research design is used to determine the effect of the independent variable (treatment) on the dependent variable (outcome) under controlled conditions. *quasi* - experimental research design *used was a non-equivalent comparison group design* . The aim of quasi-experimental research is to obtain information that is an approximation of the information that can be obtained by actual experimentation in circumstances where it is not possible to control or manipulate all relevant variables (Anggun, Lestari, et al. 2017) . The reason this research design was used was because the hypothesis results were determined based on the observations of these two groups. Determining the experimental and control groups used saturated sampling techniques. These two groups will later be tested using the same instruments and analyzing which treatment is more optimal. The control group is a group of midwives/doctors who have attended other training and are not from the Bekasi City area , while the intervention group is a group of midwives/doctors who have attended early detection training from Bekasi City.

Pretest-Posttest Treatment Design and Control Group

Group	Pre Test	Treatment	Post test
Experiment	O1	X	O2
Controls	O3	-	O4

Pre Test Group Post Test Treatment
O1 X O2 Experiment
Control O3 - O4P
Information:
O1: First measurement (pre test)

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X : Intervention or experiment, is a training intervention
O2: Second measurement (post test), data taken after the intervention
O3: First measurement (pre test) for the control group
O4: Second measurement (post test), data taken without intervention in the control group

Before the research was carried out, validity and reliability tests were carried out on questions related to attitudes and behavior among groups of alumni training participants outside Bekasi City. In this research, the data collection process from both groups was carried out in two stages. The first stage of initial data collection (pre-test) is to determine the results of preliminary tests (O1 and O3) related to the competence of early cancer detection in the intervention group and control group. After that, the intervention group was given training while the control group did not receive training. After 1 month of intervention, both intervention and control groups were given a post-test (O2 and O4) with the same questionnaire. The way to reduce information bias from these two groups is to try to use the objectivity of research subjects and select reliable questionnaires. The control mechanism implemented in both groups ensures non-participation from both groups. The research results were analyzed to determine whether there was a difference in the increase in early detection competency between the two groups. Respondents in the intervention group and control group were selected from the same population but from different areas. All respondents were asked to be involved during the research process. All matters relating to respondents' rights will be included in the informed consent, and all confidentiality of data and information regarding respondents such as questionnaires, respondent consent is collected from selected informants. Apart from that, confidentiality regarding all stored documents can be given to third parties as long as they have permission from the researcher and specifically for the purposes of publication or further research (Syapitri, Henny, et al. 2021) . In accordance with Minister of Health Regulation No. 29 of 2017, each Community Health Center is obliged to carry out VIA examinations according to the number of women of childbearing age, aged 30 to 50 years and VIA coverage in 1 month of examination of at least 20 examinations.

RESULTS

This section analyzes questionnaire data before and after being given training and determines whether each of these variables has experienced a significant increase from before and after being given treatment: average value, Z score, and p value. The results are presented based on variables. The answer to this research question focuses on all research variables in the experimental group before and after being given training in early detection of cervical and breast cancer. Quantitative data is used to determine whether there is an increase in knowledge, attitudes and behavior as well as IVA coverage. In this section, each of these variables will be explained.

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The independent sample t-test or independent sample t test is used to determine the difference in the average of two independent populations/groups of data. Guidelines for decision making are

a. T count > t table and sig < 0.05: significantly different (Ho rejected)
b. T count < t table and sig > 0.05: not significantly different (Ho is accepted)
(Nuryadi et al, 2017: 108-109)

In this study, the independent sample t test was used to analyze whether there were differences in knowledge, attitudes and behavior between the group that was given the early detection training intervention for cervical cancer and breast cancer and the group that was not given the intervention. The t table value with df 94 is 1.985. The results of the independent sample t test are in the following table :

Table 1.8 Independent Sample T Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Knowledge	Equal variances assumed	1,252	,266	6,013	94	,000	10.03125	1.66835	6.71870	13.34380
	Equal variances not assumed			6,013	85,502	,000	10.03125	1.66835	6.71440	13.34810
Attitude	Equal variances assumed	41,623	,000	6,166	94	,000	1.52083	.24663	1.03113	2.01053
	Equal variances not assumed			6,166	54,327	,000	1.52083	.24663	1.02643	2.01524
Behavior	Equal variances assumed	,730	,395	13,725	94	,000	1.33333	.09715	1.14044	1.52622
	Equal variances not assumed			13,725	93,908	,000	1.33333	.09715	1.14044	1.52623

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Based on the results of the independent sample t test, differences in knowledge, attitudes and behavior between the control and intervention groups can be seen which are explained as follows:

a. The calculated t value of the difference in knowledge of the control and intervention groups is 6.013, where this value is greater than the t table of 1.985 with a sig value of 0.000, where this value is smaller than the p value of 0.05. This shows that there is a significant difference in knowledge between the control group and the intervention group who were given training regarding early detection of cervical cancer and breast cancer.
b. The calculated t value for the difference in attitudes of the control and intervention groups is 6.166, where this value is greater than the t table of 1.985 with a sig value of 0.000, where this value is smaller than the p value of 0.05. This shows that there is a significant difference in attitudes between the control group and the intervention group who were given training regarding early detection of cervical cancer and breast cancer.
c. The calculated t value for the difference between the control and intervention groups is 13.725, where this value is greater than the t table of 1.985 with a sig value of 0.000, where this value is smaller than the p value of 0.05. This shows that there is a significant difference in behavior between the control group and the intervention group who were given training regarding early detection of cervical cancer and breast cancer.

CONCLUSION

In this study, it was found that there was a difference in the number of IVA examination coverage before and after the intervention. Training on early detection of cervical and breast cancer in Bekasi City in this study was considered effective in increasing the competency (knowledge, attitudes and behavior) of health workers in Bekasi City . In this study there were significant differences in knowledge, attitudes and behavior between the control group and the intervention group who were given training regarding early detection of cervical cancer and breast cancer

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