

A Comparative Study of Cervical Cancer Early Detection by Using Visual Inspection with Acetic Acid (VIA) Method in Bandar Lampung in 2019 Concerning Breast Cancer and Cervical Cancer Mitigations

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ABSTRACT

The visual inspection with acetic acid (VIA) test coverage in Bandar Lampung was 53.76% in 2019 and a pre-survey result showed that VIA implementation in Bandar Lampung was not yet optimal. The problem in this research was to do a comparative study on the cervical cancer earlier detection by using VIA method in Bandar Lampung according to the Regulation of Ministry of Health No. 29 in 2017 concerning breast cancer and cervical cancer mitigations. This was a comparative study by using r-test (Pearson Product Moment). The result showed a weak correlation between VIA equipment amounts to VIA test coverage in Bandar Lampung, a strong correlation between trained human resource amount to VIA test coverage in Bandar Lampung, a moderate correlation between numbers of examination and VIA coverage in Bandar Lampung, and moderate correlation between numbers of information technique activities and VIA coverage in Bandar Lampung. The most dominant factor was trained human resources.

Keywords: Earlier detection, visual inspection, acetic acid, cervical cancer

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INTRODUCTION

The visual inspection with acetic acid (VIA) test coverage in Bandar Lampung was 53.76% in 2019 and a pre-survey result showed that VIA implementation in Bandar Lampung was not yet optimal. The problem in this research was to do a comparative study on the cervical cancer earlier detection by using VIA method in Bandar Lampung according to the Regulation of Ministry of Health No. 29 in 2017 concerning breast cancer and cervical cancer mitigations.

MATERIALS AND METHODS

This was a comparative study that was conducted from March to April 2020. Population was all of 30 public health centers in Bandar Lampung and samples were of total population. Data were analyzed by using univariate and bivariate analysis by using r-test (Pearson Product moment).

RESULTS

Univariate Analysis

Table 1. Distribution of VIA coverage frequency, equipment amount, trained human resource, numbers of implementation days, and VIA activity information in Bandar Lampung in 2019

Variable	Mean	Minimum	Maximum
VIA coverage	47,97%	1%	269%
VIA equipment amount	1 equipment	1 equipment	3 equipment
Trained human resources	2 persons	1 persons	3 persons
Days of VIA examinations in a week in public health center	2 days	1 day	6 days
Activity information	3 methods	2 methods	4 methods

The average of VIA coverage percentage in Bandar Lampung was 47.97% with minimum VIA coverage of 1% and maximum VIA target coverage of 269%. Each public health center averagely had minimum VIA equipment of 1 unit and maximum a public health center could have 3 VIA equipment units. Averagely each public health center had 2 persons of IVA trained human resource. The least and maximum VIA trained human resources that a public health center could have were 1 person and 3 persons respectively. Each public center averagely provided 2 days a week for VIA examinations. The least and maximum days of IVA examinations that a public health center could have were 1 day in a week and 6 days in a week respectively. Each public health center averagely disseminated VIA examination activity by using 3 methods. The least and maximum methods that a public center could have were 1 method and 4 methods respectively.

Bivariate Analysis

Table 2. The analysis on the correlations of VIA equipment amount, examination days, activity information to VIA examination coverage in Bandar Lampung in 2019

Variable	R	P-Value	N
VIA equipment	0.196	0.298	30
Trained human resources	0.611	0.0005	30
Days of examinations	0.336	0.070	30
Activity information	0.316	0.089	30

Table 2 shows score of r-count (correlation) by 0.196. It indicates that there is a weak correlation of VIA equipment to VIA examination coverage in Bandar Lampung and it has a positive pattern meaning that the more IVA examination equipment will increase VIA examination coverage. The statistic test result showed that there was no significant correlation between VIA equipment amount and VIA examination coverage in Bandar Lampung.

Table 2 shows score of r-count (correlation) by 0.611. It indicates that there is a strong correlation of VIA-trained human resource amount to VIA examination coverage in Bandar Lampung and it has a positive pattern meaning that the more IVA-trained human resource amount will increase VIA examination coverage. The statistic test result showed that there was a significant correlation between VIA-trained human resource amount and VIA examination coverage in Bandar Lampung.

Table 2 shows score of r-count (correlation) by 0.336. It indicates that there is a moderate correlation of VIA examination day amount to VIA examination coverage in Bandar Lampung and it has a positive pattern meaning that the more VIA examination day amount will increase VIA examination coverage. The statistic test result showed that there was no significant correlation between VIA examination day amount and VIA examination coverage in Bandar Lampung.

Table 2 shows score of r-count (correlation) by 0.316. It indicates that there is a moderate correlation of VIA activity information to VIA examination coverage in Bandar Lampung and it has a positive pattern meaning that the more VIA activity information will increase VIA examination coverage. The statistic test result showed that there was no significant correlation between VIA activity information providing method amount and VIA examination coverage in Bandar Lampung.

DISCUSSION

VIA examination equipment

The VIA examination equipment include speculum and medical examination light, and all of them are available in each public health center. Structure and infrastructure are needed to obtain objective and target of VIA examination coverage. The research result showed that the correlation between VIA equipment and obtaining VIA target coverage was weak, but it had positive pattern. It means that the availability of VIA equipment still had a correlation even though it was weak correlation.

VIA-trained human resource

The bivariate analysis result showed a strong correlation between VIA-trained human resource and VIA examination coverage. It means that VIA-trained human resource influences the VIA examination target achievement. Acquiring qualified human resources require human resource training provided by the government.

Days of VIA examination

Univariate analysis result showed a moderate correlation between numbers of days for VIA examination and VIA coverage. In the implementation, all public health center provides VIA examination schedule.

VIA activity information

The research result showed that there was a moderate correlation between VIA activity information and VIA coverage. In the implementation, public health centers averagely provide VIA activity information through health education, cross-sectorial cooperation, cross-program cooperation, but there was lack of socialization through social media.

CONCLUSION

The researcher expects public health centers in Bandar Lampung to improve activity information VIA examination through mass media, electronic media, posters and others to improve target achievements of VIA examination coverage in Bandar Lampung. Public health center must maintain their human resources because trained human resources correlates strongly to VIA examination coverage target achievement.

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