RESEARCH

OMPHE-VIA (Obedient Male Partner in Health-Education and Engagement for Visual Inspection with Acetic Acid Examination) Model Was Solution to Save Cervical Cancer

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Abstract

Background: VIA screening is very suitable for developing countries such as Indonesia, because the technique is easy, simple, low cost/cheap, high sensitivity, fast and accurate for early detection of cervical cancer. The coverage of early detection in Indonesia is <5% so that many cases of cervical cancer are found to be at an advanced stage and often cause death in women.
Methods: This study uses a mix-method study approach with a sequential exploratory approach. The research was carried out sequentially with qualitative methods first (interviews and FGDs), then continued with quantitative methods. In this study, the sampling technique used was multi-stage random sampling in 7 selected sub-districts.
Results: The variable perception of vulnerability with a good perception of vulnerability have a 2.64 times greater risk of carrying out an VIA examination. In multivariate modeling, knowledge is the most dominant variable because it has the largest POR of 6.3, which means the N-Gain value is in the medium category with a fairly effective interpretation of the effectiveness of the module, namely an increase in knowledge of 63.86% after being given education using the OMPHE-VIA module.
Conclusion: Based on the implementation of the OMPHE-VIA module, it was found that there was an increase in the average value of knowledge, before and after the education was given. It was also found that there was a significant difference in knowledge, and husband's support, construct between before and after the education was given using the OMPHE-VIA module

Keywords: early detection, cervical cancer, OMPHE model

INTRODUCTION

Cancer is the second leading cause of death in the world. Cervical cancer occupies the 9th position of the 35 types of cancer that causes the most death in the world. In Indonesia, cervical cancer is the second malignancy in women after breast cancer. In the last three decades.[1,2,3] The government through the Ministry of Health launched an early detection program for cervical cancer using the VIA method at public health center.[1,4] VIA screening has shown clinical sensitivity ranging from 41% – 92%.[4,5] The husband's role is important in the behavior of the VIA examination carried out by the wife.[6]

This research will produce the OMPHE-VIA Model which aims to provide education and health empowerment for husbands from women of childbearing age. Based on the OMPHE-VIA model, modules will be produced as learning media in husband education and empowerment. The model is implemented for husband and wife with modules as *tools* intervention. The OMPHE-VIA model will also be used as a basis for making policy recommendations related to the VIA-responsive husband program, which will be recommended to policy makers as one of the programs at the Public health center in Padang City.

METHODS

This study uses a *mix-method* with a *sequential exploratory*. This research was conducted in 7 selected sub-districts with low VIA examination coverage in Padang City from October to November 2019. The sample in this study amounted to 337 samples with the criteria of women of childbearing age who have not done an VIA/ *Pap-Smear* in the past year, with a partner who lives at home.

The development of the OMPHE-VIA questionnaire model is carried out after going through the evaluation stage by experts or experts first research is a *community experimental* which was carried out with a *one group pretest-posttest design* involving one intervention group who was given education using the designed module. Validity and reliability tests were carried out on the data obtained. The data were then reanalyzed by univariate and bivariate using SPSS.

RESULT

Table 1. Characteristics of Husband

Variable	n	%
Age of Husband		
Young (≤ 45 years)	274	81.3
Old (> 45 years)	63	18.7
Husband's Education Level		
Low (≤ SMA)	232	68.8
High (> SMA)	105	31.2

Work Husband		
Not Working (Retired)	3	0.9
Working	334	99.1
Married Age		
< 21 years	290	86.1
21 years	47	13.9
Knowledge		
Less Good	186	55.2
Good	151	44.8

Most of the respondent's husbands are 45 years old (81.3%), married age <21 years (86.1%), low education level (68.8%), have a job (99.1%), and knowledge of early cancer detection cervix in less category (55.2%). Most of the respondents were 45 years old (88.4%), married <21 years (86.6%), had a low level of education (73.6%), did not work (74.5%), had never undergone an IVA examination (72.7%) received good support from their husbands (58.2%), but this figure did not show how much support the husband gave to his wife.

Table 2. Relationship between Perceived Vulnerability, Perception of Seriousness, Perception of Benefits and Perceptions of Barriers to Wives with Husband's

Variables	Husband's Support				Total		p-value
	Poor		Good				
	n	*%*	*n*	*%*	*n*	*%*	
Perceived Vulnerability							
Poor	59	35.1	109	64.9	168	100.0	0.017
Good	82	48.5	87	51.5	169	100.0	
Serious Perception							
Poor	58	35.6	105	64.4	163	100.0	0.032
Good	83	47.7	91	52.3	174	100.0	
Benefits Perception							
Poor	94	48.0	102	52.0	196	100.0	0.010
Good	47	33.3	94	66.7	141	100.0	
Perception Barriers							
Poor	86	55.5	69	44.5	155	100.0	0.000

| Good | 55 | 30.2 | 127 | 69.8 | 182 | 100.0 |

There is a significant relationship between perceived vulnerability (p = 0.017), perceived seriousness (p = 0.032), perceived benefits (p = 0.010) and perceived obstacles (p = 0.000) with husband's support for early detection of cervical cancer with the VIA (table 2).

Table 3. Candidate Selection Results Determinant Factors Associated with Early Detection of Cervical Cancer

Variable	p-value	Information
Age	0.100	Not Candidate
for Education	0.454	Not Candidate
for Wife's Work	0.464	Not Candidate
for Husband's Work	0.999	Not Candidate
Marriage Age	0.918	Not Candidate
Husband's Support	**0.002**	**Candidate**
Wife Knowledge	**0.000**	**Candidate**
Perception of Vulnerability	0.649	Not Candidate
Perception of Seriousness	0.272	Not Candidate
Perception of Benefits	**0.000**	**Candidate**
Perception of Barriers	0.416	Not Candidate

Its shows that there are 3 variables with p value < 0.25, namely husband's support, wife knowledge, and perceived benefits (table 3).

Table 4. Initial Modeling of Multivariate Analysis

Variables	SE	p-value	OR (95% CI)	95% CI	
				Lower	Upper
Husband's Support	0.294	0.176	1.489	0.837	2.648
Wife Knowledge	0.321	0.000	6.541	Perceived	3.486 12,276
Benefits	0.279	0.000	2.873	1.662	4,967

There are 2 variables with p value > 0.05 so that *backward* elimination was carried out and the final multivariate modeling was obtained as follows : wife knowledge, and benefits (table 4).

Table 5. Final Modeling Multivariate Analysis

Variables	SE	P value	OR (95% CI)	95% CI	
				Lower	Upper
Husband's Support	0.319	0.000	7.037	3.768	13.142
Wife Knowledge	0.273	0.000	3.128	1.832	5.342

The final model in table 5 shows that the most dominant factor associated with early detection of cervical cancer is husband's support.

DISCUSSION

Analysis Factors Influencing To The VIA Examination

In this study, among 337 respondents there were 298 people aged 45 years. Of the 92 people who had an VIA examination (38.5%) were old (>45 years) and (25.8%) were young (≤45 years). The *continuity correction* showed that there was no significant relationship between age and the VIA examination in early detection of cervical cancer (p=0.141). These results are in line with Sri Wahyuni's research, where the results of respondent characteristics show that respondents aged 44-55 years (41%) are the highest age group.[7]

In addition, 248 of the 337 respondents had a history of low education. There was no significant relationship between the level of education and the VIA examination in early detection of cervical cancer (p=0.541). The results of this study are in accordance with research conducted by Mursita and Bambang that there is no relationship between education level and VIA examination visits (p = 0.709).[8] However, Pangesti stated that the higher the level of education, the easier it is for a person to receive information so that more knowledge is possessed.[9]

Among 337 respondents there were 251 people who did not work. Of the 92 people who have had an VIA examination, there are (34.9%) who work and (24.7%) no work. There was no significant relationship between the wife's occupation, husband's occupation and the VIA examination in early detection of cervical cancer (p=0.091, p=0,565). According to Cohen and Syme social support is something that is useful for individuals obtained from other people who can be trusted, so that a person knows that there are other people who pay attention, appreciate and love him.[10]

Among 337 respondents, there were 292 people whose marriages were <21 years old and 45 people who were married aged 21 years. Based on the results of the *continuity correction*, it was found that there was no significant relationship between the age of marriage and the VIA examination in early detection of cervical cancer (p=1,000). This is not in line with the results of Ayu Wulandari's research where respondents who are married have less behavior as many as 72.1% and all unmarried women of childbearing age have low VIA behavior (100%).[11] The relationship between marital status and VIA behavior is based on the sexual activity that women of childbearing age does, where married women of childbearing age is considered to have often had sexual intercourse so that the risk for cervical cancer tends to be greater.[12]

Among 337 respondents there were 196 people who received good husband support and 141 people who received poor husband support. Based on the results, it was found that there was a significant relationship between husband's support and the VIA examination in early detection of cervical cancer (p = 0.003). The results means that wives who have good husband support tend to be 2.2 times more likely to have an VIA examination compared to wives who have poor husband support (OR=2.2). This research is also in line with the research conducted by Umami, which stated that there is a relationship between husband's support and the behavior of VIA examination by women of childbearing age (p = 0.016).[13]

Among 337 respondents there were 183 people with good knowledge and 154 people with poor knowledge. A total of 92 people who have had an VIA examination (42.1%) have good knowledge and (9.7%) have poor knowledge. Based on the results, it was found that there was a significant relationship between the wife's knowledge and the VIA examination in early detection of cervical cancer (p = 0.000). The results of this study are in accordance with Lawrence Green's theory, that someone who has high knowledge tends to have good behavior. According to Junainah, increasing knowledge will not always lead to behavioral changes, but will show a positive relationship so that if knowledge is high, the behavior tends to be good.[14]

In this study, 337 respondents there were 169 people who had a good perception of susceptibility for early detection of cervical cancer and 168 people had a poor perception of vulnerability.It was found that there was no significant relationship between the perception of vulnerability and the VIA examination in early detection of cervical cancer (p = 0.739). This is inversely proportional to the results of Inten Ayu's research, which found that respondents who had not participated in the VIA examination were found in the group of respondents with a low perception of vulnerability (97.1%) compared to the group with a high perception of vulnerability (86.5%).[15]

Among 337 respondents there were 182 people who perceived barriers to early detection of cervical cancer were good and 155 people perceived barriers to be less good. It was found that there was no significant relationship between perceived barriers and the VIA examination (p=0.490). According to Liyasda and Tanjung, the reason women of childbearing age has not conducted an VIA examination is because of the obstacles, among others: first, the lack of knowledge of the benefits of the test, the lack of information obtained causes a lack of understanding about the benefits of the VIA examination.[16]

Analysis Relationship between Husband's Support and Perception of Vulnerability, Seriousness, Benefits and Barriers to Wives

Based on the results of the study, it can be seen that there is a significant relationship between perceptions of vulnerability and husband's support regarding early detection of cervical cancer at the Public health center (p=0.017). Where as many as 196 people get the husband's support well, there are (64.9%) who have a poor perception of vulnerability and (51.5%) who have a good perception of vulnerability. The results means that wives who have a poor perception of susceptibility to early detection of cervical cancer tend to be 0.57 times more likely to have good husband support than wives who have a good perception of vulnerability (OR=0.57). The HBM theory developed by Rosenstock states that a person's assumption of being easily infected with a disease will make him/her take some protection. Perceived susceptibility is a person's subjective perception of the risk of contracting a disease.[17]

From the research, it is also known that there is a significant relationship between perceived seriousness and husband's support regarding early detection of cervical cancer at the Public health center (p = 0.032). The results of this analysis means that wives who have a perception of seriousness about early detection of cervical cancer that are not good tend to be 0.6 times more likely to have good husband support compared to wives who have a low perception of seriousness good (OR=0.6). The research by Yuliwati showed that the activeness of seeking information through friends, health workers, counseling, print and electronic media affects the behavior of carrying out the VIA examination. Individual perceptions of seriousness are expected to be able to encourage the adoption of health behaviors if the individual already has other key beliefs supporting the action. Individuals with high motivation to maintain health should be more likely to adopt health-relevant behaviors.[18]

The perception of barriers felt by women who want to do VIA examinations in this study stated that there were obstacles to lack of information regarding early detection of cervical cancer using the VIA method, limited access to costs, distance/transportation, information and technology worsening the condition of women to carry out VIA examinations, women's fears.[19]

Building the OMPHE-VIA Model as an Approach to Husbands Who Will Change HBM *Constructs* for Wives

The implementation of early detection of cervical cancer using the VIA method in each Public health center has a different schedule. Based on the results of the research that 3 health centers carry out inspections once a week, but 1 health center carries out only once a month. The officer reasoned that the scheduling was so that the implementation was more coordinated and adjusted to the existing officers. According to Minister of Helath Regulation (Permenkes) No. 34 of 2015 that the detection is carried out at least 2-3 times a week.

The next stage of implementation is that patients who come are given counseling. Counseling is a process of providing assistance which is carried out through counseling interviews by an expert to individuals who have problems which are later expected to help the problems experienced by the individual.[20] Based on the results of the study, the detection carried out by the officers was good. Patients who experience infection are given treatment by a doctor or midwife and patients who experience positive VIA are given a referral to be treated at the hospital because there is no cryotherapy at the Public health center.

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