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Increasing Interest of Women of Childbearing Age in Early Detection of Cervical Cancer Through Health Education with Animated Video Method in Riau Province

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Abstract:

Introduction: Human papillomavirus (HPV) is the most important cause of cervical cancer. Prevention of cervical cancer through early detection with the VIA method is the simplest and easiest way. With health education, an easy way to increase interest in early detection of cervical cancer is with the VIA method among women of childbearing age. One of the most effective methods of health education is through the use of video animation. Video animation can stimulate curiosity and increase interest.

Objective: to increase the interest of women of childbearing age in the early detection of cervical cancer with health education through the Animated Video method.

Methods: Quantitative research, using a quasi-experimental design with a non-equivalent control group pretest-posttest design. Women of childbearing age from the age of 30 to 50 years who have children. The purposive sampling method was used in determining 34 respondents taken in the guidance area of the Harapan Raya Pekanbaru community health center. Univariate and bivariate data analysis, including Wilcoxon's test.

Results: The results indicate that there are results of increasing awareness with the VIA method in conducting early detection of cervical cancer among women of reproductive age, through improving health using animated videos, to reduce the risk of reproductive organs against cervical cancer. Increase interest in following up on early cervical cancer detection using the VIA method (p = 0.000).

Recommendation: Women of reproductive age should be able to participate in early cervical cancer detection through routine or regular VIA tests to help prevent cervical cancer.

Keywords: animated video, cervical cancer, early detection, interest, health education

Introduction

Cervical cancer in its history the main cause is the Human papillomavirus (HPV) is the most important causative factor, Ministry of Health RI in 2016. The Indonesian Ministry of Health in 2019, has also identified if the results in Indonesia have a total of 98,692 cases of women already suffering from cervical cancer. Where the data obtained in 2018, the number of new cases of cervical cancer was as many as 32,469 mothers (17.2%), with a mortality rate of 18,278 (8.8%), in Indonesia. By 2020, there was a notable increase of nearly 15% in the number of new cases, reaching 36,633 cases, resulting in 21,003 deaths. Research by Rahayu et al. in 2021 has identified, that the Riau Provincial Health Office has received a very high prevalence of cervical cancer in Riau province, with the results, being 315 cases (1.8%). Specifically, Pekanbaru City was highlighted as having the highest number of cervical cancer patients in Riau Province.

Arifin Achmad Hospital Pekanbaru identified accurate data, that 991 mothers with cervical cancer obtained in 2020. Meanwhile, the data jumped sharply in 2021, namely, cases have increased to 1052 patients, and also 67 cases of women were diagnosed with cervical cancer in 2021, in Pekanbaru Province. The Indonesian region has been facing a high mortality rate due to cervical cancer, primarily attributed to delays in early detection. Shockingly, 70% of cervical cancer patients are only detected at an advanced stage. Recognizing the significance of early detection, it is crucial to identify cervical cancer at its initial stages. By doing so, it becomes easier to treat the disease before it progresses to an advanced stage, as highlighted by Sabrida in 2015.

The Ministry of Health of the Republic of Indonesia in its strategic plan, for 2015-2019 has included initiatives aimed at overcoming cervical cancer, such as the strategic plan utilizing the Acetic Acid Visual Inspection (VIA) method for early detection. According to Sari (2017), the VIA methodis an examination performed by applying acetic acid (3-5%) to the mouth of the uterus, for 60 seconds the results can be observed. The cervix in abnormal conditions can change color to a very firm border with the result of whitening (acetowhite). In this case, it has been shown that the neck and cervix are in a state of having a precancerous lesion.

According to data from the Indonesian Health Profile, 8.3% of Indonesian women between the ages of 30 and 50 had used the VIA method to diagnose cervical cancer early; in 2021, that number was 2,827,177, or 6.83%. Only 10.6% of the province of Riau had early detection coverage in 2020, and 7.97% had it in 2021 (Indonesian Ministry of Health, 2022). According to data from the Pekanbaru City Health Office's Disease Prevention and Control, just 145 out of 186,165 women between the ages of 30 and 50 have undergone VIA screening for cervical cancer in 2021.

The reluctance of women in their reproductive years to adopt the VIA method for cervical cancer screening is a serious health hazard. The majority of women of childbearing age, find it difficult to realize the existence of this condition, which can lead to low interest in understanding higher knowledge about their reproductive organs, which is very helpful for mothers in detecting cervical cancer early. Permata and Abdiana's (2019) research identifies several factors that contribute to the low coverage of VIA exams, such as women of childbearing age's disinterest in having VIA exams, the absence of VIA cadres and investigators, the lack of socialization studies related to VIA exams, the dearth of VIA pamphlets, brochures, and posters, and the absence of family support.

Attempts to encourage more women who are fertile to take part in VIA screening by offering them health counseling. By teaching women of childbearing age how to take care of themselves with reproductive health knowledge, such as the early detection and prevention of cervical cancer, health counseling aims to increase community capacity (Nurmala et al. 2018,). The delivery of health counseling requires facilities and infrastructure as the communication process requires a medium.Animated video media is very appropriate because moving video media attracts more attention. Animated video is media in the form of sentences accompanied bymoving images made to attract attention and facilitate understanding of messages to women of childbearing age (Apriansyah et al., 2020). Based on research conducted by Fizran & Evi (2022) in Padang City, where the results of health counseling research using PowerPoint and video playback, succeeded in methods to increase maternal motivation in conducting early detection efforts of cervical cancer can use the VIA method as appropriate tool in the prevention of cervical cancer. The phenomenon and description make it abundantly evident how it is very important to advise women of fertile age in early detection of cervical cancer using animated video media, for examination with the VIA method. As a result, the researcher carried out a study titled "Using the Animated Video Method in Increasing the Interest of Women of childbearing age in Efforts to detect early cervical cancer suffered by using health counseling".

Research Method

Purposive sampling was used as the sampling method in this study. consisting of the following inclusion criteria married, childbearing women between the ages of 30 and 50 who have never used the VIA method to screen for cervical cancer. Ethical Approval Number: 47/UN19.5.1.8/KEPK.FKp/2023

Results and Discussions

A. Results

1. Univariate Analysis

Table 1. Respondent Characteristics

Characteristic	Experiment		Control		Total	
	N	%	N	%	N	%
Age:						
30-40 years old	8	47,1	9	52,9	17	50
41-50 year old	9	52,9	8	47,1	17	50
Education						
No School	0	0	0	0	0	0
Primary School	3	17,6	1	5,9	4	11,8
Junior High School	3	17,6	4	23,5	7	20,6
Senior High School	8	47,1	10	58,8	18	52,9
College	3	17,6	2	11,8	5	14,7
Occupation						
Work	6	35,3	5	29,4	11	32,4
No Working	11	64,7	12	70,6	23	67,6
Childbirth Category						
Not Yet	3	17,6	2	11,8	5	14,7
Primiparous	5	29,4	3	17,6	8	23,5
Multiparous	9	52,9	12	70,6	21	61,8
Total	17	100	17	100	34	100

Table 1 identified the age of respondents between 30 to 40 and 41 to 50 years as indicated evenly, in 17 respondents in the experimental group and 17 in the control group. Dominant respondents (18 respondents, or 52.9 percent), with a high school diploma, and obtained according to characteristics in education. Both low (17.6%) and extremely low (17.6%) interest rates are available. 23 respondents, or 67.6% of the sample, did not have a job, according to the characteristics of their employment status. 21 respondents, or 61.8% of the sample, had a history of multi-parity based on parity characteristics.

Table 2: An overview of the increase in the number of women Early detection is an interest of childbearing age.

Health education can prevent cervical cancer through health education.

The method involves animated videos.

Characteristic	Group Experiment (N=17)		Group Control (N=17)		Total	
	N	%	N	%	N	%
Pre Test:						
High	1	5,9	0	0	1	2,9
Medium	1	5,9	8	47,1	9	26,5
Low	11	64,7	5	29,4	16	47,1
Very Low	4	23,5	4	23,5	8	23,5

Total	17	100	17	100	34	100
Post Test:						
High	14	82,4	1	5,9	15	44,1
Medium	3	17,6	10	58,8	13	38,2
Low	0	0	3	17,6	3	8,8
Very Low	0	0	3	17,6	3	8,8
Total	17	100	17	100	34	100

Table 2 presents the distribution of interest categories in the early detection pre-test in light of the intervention. The majority of respondents in the experimental group demonstrated low interest, accounting for 64 percent of the total, and very low interest, 23 percent of the total, whereas the control group showed little interest, accounting for 29 points. percent) and incredibly low (23.5 percent). Following the intervention, the distribution of the category of interest in the screening posttest showed that respondents in the experimental group had a high interest (82.4 percent), while those in the control group had a moderate interest (58.8 percent). utilizing animated videos to teach health consciousness and raise awareness of cervical cancer screening among fertile women.

Bivariate Analysis

Table 3. There was a difference in increased interest in women of childbearing age in the experimental and control groups after health counseling in early detection of cervical cancer.

Experiment Group	N	Mean	SD	P value
Pre-test	17	10.47	2.004	0.000
Post-test	17	16.71	1.105	

From statistical tests in the experimental group, it was obtained with a p-value (0.000) < α (0.05)

Table 4. Control Group

Control Group	N	Mean	SD	P value
Pre-test	17	11.82	2.811	0.066
Post-test	17	12.76	2.705	

Table 4. Increased interest in women of childbearing age with early detection of cervical cancer using health education in animated video methods

Table 5. Comparison of Experiment and Control Group

Experiment and Control Group				
Variable	N	Mean	SD	P value
Post-test Group Experiment	17	16.71	1.105	0.000
Post-test Group Control	17	12.76	2.705	

The results show that women of childbearing age are increasingly interested in efforts to detect early cervical cancer with health education methods using animated videos.

B. Discussion

Univariate Analysis

1. Characteristics

Age.

Table 1 indicates that the ages of respondents 30 to 40 and 41 to 50 were evenly distributed, through 17 experimental group respondents (or 50%) and 17 control group respondents (or 50%). There were also respondents' ages ranging from 30 to 40 years and 41 to 50 years, with maximum results of 17 for the experimental group (or 50%) and 17 for the control group (or 50%). Because these hormones are active at these

ages, there is an increase in cervical cancer between the ages of 30 and 40 and between the ages of 41 and 50. Ten to twenty years pass between HPV infection and invasive cancer (Faqihatus, 2013).
This is by Sulistiyani's research (2010) results of her research that women aged 30-40 years and 41-50 years In high risk of cervical cancer for women aged 30 to 50 years and are still sexually active (prevalence of 5-10%). Although there is a decrease in the risk of HPV infection with age, the risk of persistent infection may increase. This is because the active hormones in the body support a higher risk of cervical cancer. In addition, the older a person has cervical cancer, and if undetected, the greater exposure to cancer be greater, making the severity without treatment making the woman's body increasingly declining condition and immunity.

Education

Education shows the results of most respondents having a high school education level 18 respondents (52.9%). Research Surbakti (2008) indicates, that the results where education has a significant relationship with the incidence of cervical cancer. Mothers with cervical cancer with low education are a cause of high-risk factors and determine the presence of cervical cancer. According to the theory women with low education, very little attention to health, especially health in the reproductive organs, namely the presence of personal hygiene, especially in the cleanliness of the genitals, even though the reproductive organs are a very high point associated with the risk of cervical cancer.
Research by Arimurti et al. (2020), indicates that there is a significant relationship between education and the behavior of early detection of cervical cancer because women with secondary education also have a 5.3 times chance of conducting cervical cancer early detection examinations. So the conclusion of the level of education is very influential for the formation of a woman's interest in conducting early detection efforts of cervical cancer. The high education of women, greatly affects the search for various information, making women's interest in conducting early detection efforts of cervical cancer.

Jobs

Based on the characteristics of employment status, most of the respondents did not work.23 respondents (67.6%). A person's work greatly influences women's interest in efforts to carry out early detection of cervical cancer. If a woman's job is better, it will affect her economic status, so that it can influence women of childbearing age in increasing knowledge and interest in themselves. Harlock's (2008) economic status theory explains that less advanced businesses tend to reduce and limit a person's interests

Parity

Based on the characteristics of parity, most of the respondents had a history of multiparous parity 21 respondents (61.8%). Cervical cancer can occur as a result of women having parity exceeding four. As a result of trauma and injury to the cervix that often occurs during childbirth can make it easier for HPV to enter as a causative agent for cervical cancer. Research Herlana et al. (2017) detected trauma to the cervix and too frequent injuries to the reproductive organs during labor. Research Services (2016), identified a significant relationship between parity with cervical cancer. Multiparous women have a higher risk of cervical cancer when compared to primiparous women.
The frequency of a woman giving birth has an impact on the frequent openings in her reproductive organs there are wounds, and makes it easier for the virus that causes cervical cancer to easily interact with the wound. So it can be concluded that women with many children are predicted to experience frequent infections of the cervix, so the occurrence of infections that are too frequent can cause a high chance of developing cervical cancer.

3. Increased interest of women of childbearing age in cervical cancer early detection screening through health education through animated videos have been presented.

According to Table 2, the results obtained indicated that most respondents in the experimental group (64 points or 7% of the sample) had low interest in conducting an early detection pre-test in light of the intervention, whereas the control group (29 points or 4% of the sample) had low interest. Following the intervention, interest in administering a post-test for cervical cancer screening was found to be high (82 points 4 percent) in the experimental group and moderate (58 points 8 percent) in the control group

As a result of watching animated videos on health education, the posttest results indicated that women of childbearing age had a "high interest" in screening for cervical cancer. The researcher opted for the health education approach because it stimulates curiosity and makes people more approachable and engaged when information is presented engagingly.

According to Latipah (2017), personal interest is related to knowledge, and as knowledge increases, a person's interest increases to take action.

Bivariate Analysis

Increased interest in women of childbearing age, for experimental and control groups before and after health education in cervical cancer early detection screening.

Increased interest of women of childbearing age in cervical cancer early detection examination with health education through animated videos. The findings demonstrated that using animated videos in health education raises women's interest in early cervical cancer screening in their reproductive years. Interest levels significantly increased. Because the animated video approach combines visual and aural elements to create polished and captivating entertainment, it has the potential to raise awareness of cervical cancer early detection among fertile women.

Research by Khasanah et al. (2020) identified that the existence of health counseling through video greatly increases the awareness of a woman of reproductive age in the examination of early detection of cervical cancer. According to Notoatmodjo (2005), media and methods used in the dissemination of information can have a significant impact on the acquisition of knowledge. The findings of this study also support a study conducted in 2015 by Sari, who found that health counseling had an impact on people's attitudes toward preventing cervical cancer and that health counseling positively impacted those attitudes. The study's findings indicate that receiving health education increases interest since it will pique curiosity before women of childbearing age act in certain ways. This study also supports that conducted by Khasanah et al. (2020), who found that health counseling through video media increases understanding of the VIA method for early detection of cervical cancer in women.

Conclusion

This research highlights the importance of health literacy in the digital era in healthcare efforts, especially early detection of cervical cancer. Bibliometric analysis provides valuable insights for researchers, health practitioners, and policymakers to plan and implement effective strategies to improve public health literacy regarding the prevention of these diseases.

The results indicate that there is an increasing interest in women of childbearing age, in conducting early detection of cervical cancer through health education, using animated videos in Riau Province.

Declaration of conflict of interest

There is no potential conflict of interest in research, authorship, or publishing articles.

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