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ORIGINAL RESEARCH

IMPACT OF AUDIO-VISUAL HEALTH EDUCATION USING THE FCMC APPROANCH ON WOMEN MOTIVATION TO UNDERGO VIA SCREENING FOR CERVICAL CANCER

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ABSTRACT

Women of childbearing age are at a higher risk of developing cervical cancer due to their sexual activity. In Indonesia, cervical cancer is the second leading cause of illness and death among women. One way to reduce the mortality rate is through preventive measures, such as early detection using the VIA method. This study aims to evaluate the effectiveness of delivering health education through audiovisual media in enhancing the motivation of women of childbearing age to undergo VIA screening. This study employs a quantitative approach with a pre-experimental design, specifically a One Group Pretest-Posttest design. The sample size, determined using the Slovin formula, consisted of 187 respondents selected through probability sampling with a cluster random sampling method. Data analysis was conducted using the Wilcoxon signed rank test. The findings revealed that prior to receiving audiovisual-based health education, only 4.3% of women of childbearing age demonstrated strong motivation to undergo VIA examinations. Following the health education intervention, this percentage increased significantly to 48.1%, indicating a notable improvement in motivation. The statistical test results indicate a significant difference between the pre-test and post-test scores ($Z = -11.681$, $p = 0.000 < \alpha\ 0.05$). In conclusion, audiovisual-based health education using the FCMC about respects the family as a unit, a mind body spirit family approach is effective in enhancing the motivation of women of childbearing age to undergo VIA screening. This study serves as a foundation for strengthening promotive efforts to encourage women to participate in VIA screening.

Keywords

Health education, Cervical Cancer, Motivation, VIA, Women of childbearing age

INTRODUCTION

Cervical cancer is a malignant tumor that develops in the cervix, where every year the incidence of cervical cancer increases followed by a high mortality rate (Santoso, 2021). The main cause of cervical cancer is the Human Papilloma Virus (HPV). HPV is a virus that can be transmitted. The way the HPV virus is transmitted is through sexual activity (Asiva Noor Rachmayani, 2015). The prevalence of cervical cancer in Indonesia ranks second highest in women, namely 36,633 or equivalent to 17.2% of the total cases in Indonesia (RI, 2023). According to the East Java Provincial Health Service, cases

of cervical cancer in East Java reached 13,078 cases (Victoria, 2020). Cervical cancer is a significant health issue in Jember City. According to data from the Jember Regency Health Office in 2022, of the 148,023 women of childbearing age (30–50 years) in Jember Regency, only 5,985 had undergone a VIA examination. The rate of cervical cancer screening or early detection in Jember Regency stands at 4.0%. Among those who underwent screening, 8 individuals (0.1%) tested positive for VIA (Dinkes Jember, 2022). All women are at risk of developing cervical cancer, with a greater risk in sexually active women (Naz et al., 2018). Cervical cancer is frequently diagnosed at an advanced stage, leading to a high mortality rate associated with this condition (Hasni et al., 2022). Precancerous lesions typically do not cause noticeable symptoms. However, when they progress to invasive cancer, common symptoms include bleeding, bleeding during sexual intercourse, and abnormal vaginal discharge. In more advanced stages, additional symptoms may include back pain, lower abdominal pain, and reduced urine output (Zhang et al., 2022). Recognizing the high incidence of cervical cancer, the Indonesian Ministry of Health has implemented an early detection program targeting women of childbearing age (30–50 years) through IVA examinations to help reduce the number of cervical cancer cases.

The Health Belief Model (HBM) is highly relevant in explaining women's motivation to undergo VIA screening. The HBM posits that health-related behaviors are influenced by several key constructs, including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Berhe et al., 2024). Cues to action, such as health education or provider recommendations, trigger screening behavior, and self-efficacy reflects confidence in completing the VIA process successfully. Studies among women, including healthcare professionals and childbearing-age groups, show these constructs significantly predict VIA uptake, with higher perceived threat and benefits linked to increased participation. In low-resource settings like Ethiopia and Indonesia, modified HBM scales have validated tools to measure these factors, explaining up to 65% of variance in screening intentions (Ananti et al., 2021)

In the context of cervical cancer screening, women are more likely to be motivated to undergo a VIA examination when they believe that they are susceptible to cervical cancer and understand the seriousness of the disease. Motivation also increases when women perceive clear benefits of early detection, such as preventing the progression of precancerous lesions, while simultaneously overcoming barriers such as fear, lack of knowledge, or limited family support. Family-centered health education delivered through audio–visual media can serve as an effective cue to action by enhancing understanding, reducing anxiety, and improving self-efficacy. Moreover, the involvement of family members as emphasized in the Family Centered Maternity Care (FCMC) approach further strengthens decision-making and reduces perceived barriers, thereby increasing the likelihood that women will participate in preventive measures such as VIA screening (Worku et al., 2024)

Family Centered Maternity Care (FCMC) respects the family as a unit, a mind body spirit family, and provides evidence based care that is aprpriate (Katz et al., 2015). Therefore, this study aims to impact of audio–visual media based health education using Family Centered Maternity Care approach toward motivasian of women to do VIA Test. The findings are expected to provide scientific evidence for integrating Audio visual into routine nursing care for cervical cancer detection, thereby reducing maternal mortality rates and health prevention.

METHOD

The research design used in this study is a pre-experimental design using a One Group Pretest-Posttest design (Sugiyono, 2020). The study took place in April 2024 in Padomasan Village, Jombang District, Jember Regency. Data collection involved

two assessments: the first (pretest) was conducted before the intervention, which consisted of audiovisual-based health education, and the second (posttest) was carried out after the intervention. The intervention consisted of health education delivered through an audiovisual video with an approximate duration of 10–15 minutes. The video presented structured educational content on cervical cancer, including its definition, risk factors, symptoms, prevention strategies, and the importance of early detection through the VIA test. It also emphasized the benefits of regular screening and encouraged women to participate in VIA examinations. Intervention was delivered directly by the researcher to ensure consistency and accuracy of the information provided. After the intervention, the post-test was administered to evaluate changes in participants' knowledge and motivation.

The researcher employed a *cluster sampling technique*, in which the study area was selected randomly. A total of 10% of the three hamlets in Padomasan Village were chosen as the research clusters. From this selection, Wringinsari Hamlet was randomly identified as the location for data collection. Furthermore, *purposive sampling* was used to determine the individual respondents included in the study. The sample size was determined using the *Slovin* formula, resulting in 187 respondents. Statistical analysis included both univariate and bivariate methods. Univariate analysis was employed to identify the characteristics of the respondents, while bivariate analysis was used to assess the impact of audiovisual-based health education on the motivation of women of childbearing age to undergo VIA examination, with the *Wilcoxon signed rank test* applied for the analysis. The data scale used in this study is an ordinal scale. The research instrument utilized in this study is a motivation questionnaire consists of 25 statements, parameters : awareness of reproductive health, motivation for Cervical Cancer prevention, habits of routine Health Check-Ups, health Information-Seeking behavior, personal responsibility for health, compliance with health care recommendations, commitment to a healthy lifestyle, family motivation and support (Sumarmi et al., 2021).

That has been validated and tested for reliability based on the Asyifa 2022 study. Ethical approval for this research was granted under the number: 2814/UN25.8/KEPK/DL/2024

RESULTS

The research results can be seen in the following table:

Table 1.Frequency Distribution of Respondent Characteristics

No.	Respondent Characteristics	Frequency (F)	Percentage (%)
1	**Age**		
	< 20 Year	1	1
	20-35 Year	117	62,6
	>36 Year	70	37,4
	Total	**187**	**100**
2	**Education**		
	Elementary School	81	43,3
	Junior High School	48	25,7
	Senior High School	57	30,5
	University	1	0,5
	Total	**187**	**100**
3	**Occupation**		
	Housewive	169	90,4
	Farmer	6	3,2
	Employee	11	5,9
	Teacher	1	0,5
	Total	**187**	**100**

Table 1 indicates that most respondents are aged between 20 and 35 years, with 117 (62.6%) in this age group. Nearly half of the respondents have an elementary education, totaling 81 43.3%), and almost all respondents are housewives, accounting for 169 (90.4%)

Table 2. Frequency Distribution of Motivation of Women of Reproductive Age before Receiving Health Education Using Audiovisual Methods

Motivation	Frequency (F)	Percentage (%)
Strong	8	4,3
Medium	57	30,5
Weak	122	65,2
Total	**187**	**100**

Based on table 2, it shows that the majority of respondents or 122 (65.2%) had weak motivation before being given audiovisual-based health education.

Table 3. Frequency Distribution of Motivation of Women of Reproductive Age after Receiving Health education Using Audiovisual Methods

Motivation	Frequency (F)	Percentage (%)
Strong	90	48,1
Medium	61	32,6
Weak	36	19,3
Total	**187**	**100**

Based on table 3, it shows that almost half of the respondents or 90 (48.1%) had strong motivation after being given audiovisual-based health education.

Table 4. Cross Tabulation Motivation of Women of Reproductive Age Before and After Receiving Health Education Using Audiovisual Methods

	Motivation Post - Test			
Motivation Pre-Test	**Strong**	**Medium**	**Weak**	**Total**
Kuat	8 (4,3%)	0 (0,0%)	0 (0,0%)	8 (4,3%)
Sedang	55 (29,4%)	2 (1,1%)	0 (0,0%)	57 (30,5%)
Lemah	27 (14,4%)	59 (31,6%)	36 (19,3%)	122 (65,2%)
Total	**90** (48,1%)	**61** (32,6%)	**36** (19,3%)	**187** (100%)

According to Table 4, it can be observed that nearly all respondents experienced an increase in motivation after receiving health education about the IVA test through audiovisual methods, with the number of respondents with weak motivation decreasing from 122 (65.2%) to those with strong motivation, which increased to 90 (48.1%).

Table 5. Wilcoxon Signed Rank Test Result

	Post - Pre
Z	-11.681[b]
Asymp. Sig. (2-tailed)	.000

In Table 5, The Wilcoxon Signed-Rank test results indicate a significant difference between the pre-test and post-test scores ($Z = -11.681$, $p = 0.000 < \alpha\ 0.05$), demonstrating that the intervention had a strong effect on increasing the motivation of women of reproductive age to undergo the IVA examination.

DISCUSSION

1. Motivation of women of childbearing age to undergo the VIA test before receiving Audiovisual-Based Health Education with the Family Centered Maternity Care (FCMC) approach

Based on table 2 shows that, before receiving audiovisual-based health education, out of 187 respondents, 8 (4.3%) had strong motivation, 57 (30.5%) had moderate motivation, and 122 (65.2%) had weak motivation to undergo the IVA examination.

According to Ningrum and Fajarsari, in the research of Iasminiantari et al., several factors influence the motivation of women of childbearing age to undergo early cervical

cancer detection using the VIA method. These factors include knowledge, education level, and economic status (Iasminiantari et al., 2018). This study identifies three characteristics that influence motivation: age, highest level of education, and employment. The results show that nearly half of the respondents, 81 (43.3%), have an elementary school education. This suggests that a higher level of education is associated with better access to information, while a lower level of education may hinder personal development and attitudes (Hutagalung et al., 2023). This is consistent with previous research, which indicates that a person's level of education significantly affects their motivation to take action. Respondents with a lower level of education are more likely to struggle in recognizing health issues, which in turn impacts their motivation (Nasution, 2021).

2. Motivation of women of childbearing age to undergo the VIA test after receiving Audiovisual-Based Health Education with the Family Centered Maternity Care (FCMC) approach

According characteristics of respondents based on age, with the majority, 117 (62.2%), falling within the 20-35 age range. Age is a key factor that influences the level of knowledge, including the ability to comprehend the material presented. Respondents are generally more receptive to information during their productive years, with receptiveness tending to decrease as age increases. In this study, the respondents fall within the productive age group, Table 1 presents the characteristics of respondents based on age, with the majority, 117 (62.2%), falling within the 20-35 age range. Age is a key factor that influences the level of knowledge, including the ability to comprehend the material presented. Respondents are generally more receptive to information during their productive years, with receptiveness tending to decrease as age increases. In this study, the respondents fall within the productive age group, strategies to enhance respondent motivation include providing information, such as through health education, which in this study was delivered using audiovisual media. The use of media in health education is intended to improve the effectiveness of the outcomes achieved (Iasminiantari et al., 2018)

3. Analysis of the impact of audiovisual-based health education using the FCMC approach on the motivation of women of childbearing age to undergo VIA test

The Family Centered Maternity Care (FCMC) approach emphasizes the significance of family involvement in motivating and encouraging mothers or women of childbearing age (WUS) to maintain their reproductive health. This is crucial in preventing serious diseases, particularly cervical cancer. The support and motivation provided by the family to pregnant women plays a key role in safeguarding reproductive health (Nurul abidah & Anggraini, 2021). This aligns with the analysis in Table 4, which shows that nearly all respondents experienced an increase in motivation after receiving health education about the IVA test through audiovisual methods, with motivation shifting from weak in 122 respondents (65.2%) to strong in 90 respondents (48.1%).

Enhancing the family's understanding and knowledge of the importance of providing motivational support to women of childbearing age, ensuring that families are equipped to monitor maternal health. This is in line with the study of Febriana (2020) which shows that health education using audiovisual media is an effective approach to enhance the knowledge of women of childbearing age about cervical cancer. As a result, their understanding of the importance of VIA examinations improves, leading to increased motivation to undergo these screenings as a preventive measure for cervical cancer (Sugiyanto & Febriana, 2020). With FCMC given responsive maternity care process that respects each womans choise, values, and needs.Thais reflects the quality of healthcare services (Worku et al., 2024).

CONCLUSION

Based on the results of a study of 187 respondents with women of childbearing age, it can be concluded that The Family Centered Maternity Care (FCMC) approach emphasizes the significance of family involvement in motivating and encouraging mothers or women of childbearing age to maintain their reproductive health. This is crucial in preventing serious diseases, particularly cervical cancer.The results of the Wilcoxon signed rank test showed a significant difference between motivation before and after the intervention with a p value of 0.000 ($p < 0.05$).

Education using the Family-Centered Maternity Care (FCMC) approach with audiovisual media has been proven effective in increasing women's motivation to undergo the IVA Test. This strategy can be adopted as an effective public health intervention to increase the coverage of early detection of cervical cancer through the IVA Test.

This approach aligns with the principles of Family-Centered Maternity Care (FCMC), which empowers individuals and families in making healthcare decisions. Therefore, it can be concluded that the educational intervention using audiovisual media with an FCMC approach is an effective strategy that has a significant impact on increasing motivation for IVA Test screening.

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