

Improving Knowledge, Interest, and Behavior Toward IVA Screening Through Audio-Visual Education Among Reproductive-Age Women in Ciamis

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Abstract

Background: Cervical cancer remains one of the leading causes of death among women worldwide, despite being largely preventable through early detection methods such as Visual Inspection with Acetic Acid (IVA). However, the participation rate of women of childbearing age in IVA screening remains low, particularly in rural areas. Health education using audio-visual media has the potential to enhance knowledge, stimulate interest, and promote preventive health behaviors. This study aimed to evaluate the effectiveness of audio-visual-based education on IVA screening in improving knowledge, interest, and behavior among women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency.

Methods: This quasi-experimental study employed a one-group pretest-posttest design. A purposive sampling technique was used to recruit 81 women of childbearing age. Data were collected through structured questionnaires measuring knowledge, interest, and behavior related to IVA screening before and after the educational intervention. Statistical analysis was conducted using univariate and bivariate non-parametric tests, specifically the Wilcoxon Signed Rank Test. **Results:** The majority of participants were aged 15–44 years (88.9%), had a low level of education (60.5% did not complete high school), and were predominantly housewives (97.5%). The Wilcoxon Signed Rank Test indicated a statistically significant increase in knowledge ($p = 0.000$), interest ($p = 0.000$), and behavior ($p = 0.034$) following the audio-visual educational intervention. **Conclusion:** The study demonstrates that audio-visual education significantly improves knowledge, interest, and preventive behavior regarding IVA screening among women of childbearing age. These findings support the integration of innovative media-based education in public health strategies to enhance cervical cancer prevention efforts in rural communities.

INTRODUCTION

Cervical cancer is a malignant disease that originates in the epithelial cells of the cervix and is primarily caused by persistent infection with Human Papilloma Virus (HPV). According to the American Cancer Society (ACS), cervical cancer usually develops slowly from precancerous lesions that can be detected early through screening methods such as the Pap Smear and Visual Inspection with Acetic Acid (IVA). The World Health Organization (WHO) also recognizes IVA as an effective and affordable screening tool, especially in low-resource settings.

Despite being preventable, cervical cancer remains one of the leading causes of cancer-related deaths among women in Indonesia. Globocan 2020 reported over 36,000 new cases annually, making it the second most common cancer among Indonesian women after breast cancer. In West Java Province, the incidence is also alarming, with approximately 5,000 new cases recorded in 2021. In

Ciamis Regency, cervical cancer remains a significant concern, with 120 new cases in 2022 and 14 cases detected in 2023, based on local health office data.

To address this issue, the government has implemented screening initiatives through Pap Smear and IVA tests. However, participation remains low. For example, in the Cieurih Health Center working area, only 255 of the targeted 3,939 women of childbearing age underwent IVA screening in 2023 (6.47%). By June 2024, coverage had further declined to just 3%, with Gereba Village recording the lowest uptake—only 2 women screened. This gap highlights the urgent need to improve awareness and participation in early detection programs.

Education is a key strategy in influencing health behaviors. Research shows that health education using audio-visual media can significantly enhance knowledge, shape attitudes, and motivate preventive actions, including cervical cancer screening. Audio-visual materials offer the advantage of engaging multiple senses, making complex information more accessible and relatable. Studies have shown that such media are more effective than conventional methods in increasing interest and knowledge about IVA screening.

Moreover, demographic factors such as age, educational level, and employment status also influence women's knowledge, interest, and behavior related to cervical cancer screening. Several studies have established that older women tend to demonstrate more mature decision-making in health behavior, while higher education levels are positively correlated with better understanding and acceptance of health information. Employment status may also affect access to information and motivation to participate in preventive services.

Considering the high incidence of cervical cancer, the low screening coverage, and the potential of audio-visual education, this study aims to examine the influence of education on Visual Inspection with Acetic Acid (IVA) through audio-visual media on the knowledge, interest, and behavior of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024

METHOD

This study employed a quasi-experimental design using the one-group pretest-posttest approach to examine the effect of audio-visual education on cervical cancer and the IVA test. The target population consisted of all women of childbearing age (WCA) in Gereba Village, under the working area of the Cieurih Community Health Center (UPTD Puskesmas Cieurih), Ciamis Regency, totaling 428 individuals.

A purposive sampling technique was applied to recruit participants who met the inclusion criteria. Prior to the intervention, participants completed a pretest questionnaire assessing their knowledge, interest, and behavior regarding cervical cancer and IVA screening. Subsequently, they received structured health education through audio-visual media. A posttest was administered immediately after the intervention to measure any changes in outcomes.

All participants provided written informed consent before data collection. The study was reviewed and approved by the Health Research Ethics Committee, with reference number DP.04.03/F.XXVI.20/381/2024.

Data analysis included:

Univariate analysis to describe participant characteristics and response distributions.

Bivariate analysis using the Wilcoxon Signed Rank Test, a non-parametric statistical test, to assess differences in knowledge, interest, and behavior before and after the intervention. Statistical significance was determined at a p-value < 0.05.

RESULTS AND DISCUSSION

A.Characteristics of Women of Fertile Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024

Age Characteristics of Women of Fertile Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants were obtained through univariate analysis tests as follows. The results can be seen in table 1.

Table 1 Frequency Distribution of Age Characteristics of Women of Fertile Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Age Variable	Frequency (f)	Percentage (%)
WUS 15-44 years	72	88.9
Pre-Elderly WUS 45-49 years	7	8.6
Pre-Elderly 50-59 years	2	2.5
Total Respondents	81	100

Characteristics of Education of Women of Reproductive Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants were obtained through univariate analysis tests as follows. The results can be seen in table 2.

Table 2 Frequency Distribution of Characteristics of Education of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Education Variable	Frequency (f)	Percentage (%)
Low (<high school or equivalent)	49	60.5
Secondary (high school equivalent)	27	33.3
High (> high school or equivalent)	5	6.2
Total Respondents	81	100

Characteristics of the Work of Women of Childbearing Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants were obtained through univariate analysis tests as follows. The results can be seen in table 3.

Table 3 Frequency Distribution of Characteristics of Work of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Job Variables	Frequency (f)	Percentage (%)
Housewife	79	97.5
Work	2	2.5
Total Respondents	81	100

Overview of Knowledge, Interests, and Behavior of Women of Childbearing Age to Undergo IVA Examination Before and After Education on IVA Examination Through Audio Visual in Gereba Village, Cipaku District, Ciamis Regency in 2024

The description of the knowledge of women of childbearing age to perform IVA examination before and after education about IVA examination through audio visual in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants was obtained through univariate analysis tests as follows. The results can be seen in table 4.

Table 4. Description of knowledge of women of childbearing age to carry out IVA examination before and after education about IVA examination through audio visual in Gereba Village, Cipaku District, Ciamis Regency in 2024

Variables	Before Education		After Education	
	f	%	f	%
Knowledge				
Not enough	10	12.3	1	1.2
Enough	36	44.4	11	13.6
Good	35	43.2	69	85.2
Total Respondents	81	100	81	100

The description of the interest of women of childbearing age to undergo IVA examination before and after education about IVA examination through audio visual in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants was obtained through univariate analysis tests as follows. The results can be seen in table 5.

Table 5. Description of the interest of women of childbearing age to undergo IVA examination before and after education about IVA examination through audio visual in Gereba Village, Cipaku District, Ciamis Regency in 2024

Variables	Before Education		After Education	
	f	%	f	%
Interest				
Not interested	55	67.9	26	32.1
Interested	26	32.1	55	67.9
Total Respondents	81	100	81	100

The description of the behavior of women of childbearing age to carry out IVA examinations before and after education about IVA examinations through audio visuals in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants was obtained through univariate analysis tests as follows. The results can be seen in table 6.

Table 6. Description of the behavior of women of childbearing age to carry out IVA examinations before and after education about IVA examinations through audio visuals in Gereba Village, Cipaku District, Ciamis Regency in 2024

Variables	Before Education		After Education	
	f	%	f	%
Behavior				
Not Performing Inspection	81	100	26	32.1
Conducting an Inspection	0	0	55	67.9
Total Respondents	81	100	81	100

The Influence of Education on IVA Examination Through Audio Visual Media on the Knowledge, Interests, and Behavior of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Before conducting the influence test or Wilcoxon Signed Rank Test, the variable data were tested using the Kolmogorov Smirnov test first to determine whether the data on knowledge, interests, and behavior of women of childbearing age obtained were normally distributed or not. The results of the Kolmogorov Smirnov test are shown in the following table. The results can be seen in table 7.

Table 7. Results of Normality Test (Kolmogorov Smirnov Test) Data on knowledge, interests, and behavior of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Normality/Variable Test Results	Knowledge	Interest	Behavior
n	81	81	81
Sig.	0,000	0,000	0,000

Proof of the existence or absence of the influence of education about IVA examination through audio-visual media on the knowledge, interests, and behavior of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024, can be seen from the results of the Wilcoxon Signed Rank Test as follows.

The effect of education about IVA examination through audio-visual media on the knowledge of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants was obtained through the following univariate analysis test. The results can be seen in table 8.

Table 8. The Influence of Education on IVA Examination Through Audio Visual Media on the Knowledge of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Variables	Before Education		After Education		<i>p-value</i>
	f	%	f	%	
Knowledge					0,000
Not enough	10	12.3	1	1.2	
Enough	36	44.4	11	13.6	
Good	35	43.2	69	85.2	
Total Respondents	81	100	81	100	

The effect of education about IVA examination through audio-visual media on the interest of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants was obtained through the following univariate analysis test. The results can be seen in table 9.

Table 9. The Influence of Education on IVA Examination Through Audio Visual Media on the Knowledge of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Variables	Before Education		After Education		<i>p-value</i>
	f	%	f	%	
Interest					0,000
Not interested	55	67.9	26	32.1	
Interested	26	32.1	55	67.9	
Total Respondents	81	100	81	100	

The effect of education about IVA examination through audio-visual media on the behavior of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024 as participants was obtained through the following univariate analysis test. The results can be seen in table 10.

Table 10. The Influence of Education on IVA Examination Through Audio Visual Media on the Knowledge of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Variables	Before Education		After Education		<i>p-value</i>
	f	%	f	%	
Behavior					
Not Performing Inspection	81	100	26	32.1	0,000
Conducting an Inspection	0	0	55	67.9	
Total Respondents	81	100	81	100	

DISCUSSION

Characteristics of Women of Fertile Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024

The explanation for each characteristic of women of childbearing age is detailed as follows:

1. Age Characteristics of Women of Fertile Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 1 shows that respondents aged between 15-44 years, namely 72 respondents (88.9%); respondents with low education (<high school or equivalent) were 49 respondents (60.5%); and respondents working as housewives were 79 respondents (97.5%).

Age characteristics affect the knowledge, interest, and behavior of women of childbearing age (WUS) towards IVA examination because it is related to the stage of cognitive development, health awareness, and access to information. The age group of 15-44 years (88.9%) is usually in the productive phase with a higher level of health awareness compared to other age groups, such as the pre-elderly WUS age of 45-49 years or the pre-elderly age of 50-59 years. Based on his research, Sab'ngatun showed that there was a significant relationship between age and early detection of cervical cancer using the IVA method with a significance level of 5% of 0.02 ($p < 0.05$).³⁵

In line with the results of Wahyuni et al.'s study in 2020, which showed that age characteristics affect the knowledge, interest, and behavior of WUS towards IVA examinations. Most respondents were aged 31-40 years (51.9%), a productive age that is often associated with a better level of health awareness. Health education in this group has been shown to be effective in increasing knowledge, interest, and behavior. The productive age group is more receptive to health-related information.¹³

According to research conducted by Sari AP in 2021, the majority of respondents aged <40 years were 25 respondents (80.6%). Most cervical cancers attack women over the age of 40, therefore the age of 40 is used as the limit for the number of cervical cancer cases. Precancerous lesions take about 10-20 years to turn into cervical cancer, so this early detection needs to be carried out 10 years earlier or carried out at the age of <40 years.¹⁴

Interest in health check-ups is also greater in the 31-40 age group. Sari's research states that this age group tends to have family responsibilities that encourage greater interest in getting checked.¹⁸ The productive age group is more active in practicing preventive behavior. The West Java BKKBN study noted that preventive behavior such as IVA examinations were more often carried out by WUS in the productive age.¹⁵

Characteristics of Education of Women of Childbearing Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024

Based on table 2 regarding the educational characteristics of WUS respondents in Gereba Village, Cipaku District, Ciamis Regency, totaling 81 people, it shows that respondents with low education (<high school or equivalent) are 49 respondents (60.5%); respondents

with secondary education (high school or equivalent) are 27 respondents (33.3%), and respondents with high education (>high school or equivalent) are 5 respondents (6.2%).

Education level significantly influences a person's knowledge, interests, and behaviors. Individuals with higher levels of education tend to have broader knowledge about health topics and are more open to new information. They are also more likely to take proactive health-related actions, such as attending regular checkups. In addition, higher education is often associated with increased motivation to participate in health-promoting activities, such as health screenings or disease prevention programs.³¹

Based on the data obtained from the research results, most respondents had low education (<high school or equivalent), namely 49 respondents (60.5%) indicating that primary or secondary education was more common among participants, which may have influenced their awareness of the importance of IVA examination. In line with other studies showing that education has a major influence on health behavior related to cancer screening. For example, an educational intervention based on the PEN-3 model increased women's participation in cervical cancer screening by improving their knowledge and attitudes towards the examination.¹⁶

3. Characteristics of the Work of Women of Childbearing Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 3 shows the characteristics of the work of WUS respondents in Gereba Village, Cipaku District, Ciamis Regency, totaling 81 people, showing that 79 respondents (97.5%) work as housewives and 2 mothers work as teachers (2.5%).

According to Masruroh and Cahyaningrum, there is a relationship between work and WUS knowledge about early detection of cervical cancer through IVA in the Bergas health center area. Darmojo and Hadi in their research Masruroh and Cahyaningrum stated that a woman who has social activities outside the home will get more information from work friends or friends in social activities.²⁹

Based on the characteristics of WUS respondents in Gereba Village above, most of whom are housewives (97.5%), the researcher assumes that because of the many jobs done as housewives, it causes a lack of social activities outside the home which also results in limited information about the IVA test. This is in accordance with Mubarak's opinion in Masruroh's research which states that the work environment can make someone gain experience and knowledge both directly and indirectly. People whose type of work tends to be easy to get information, their level of knowledge will be higher compared to people who have jobs that are difficult to get information.²⁹

B. Description of Knowledge, Interests, and Behavior of Women of Childbearing Age to Conduct IVA Examination Before and After Education on IVA Examination Through Audio Visual in Gereba Village, Cipaku District, Ciamis Regency in 2024

The explanation for each description of knowledge, interests, and behavior of women of childbearing age is detailed as follows:

1. Description of Knowledge of Women of Childbearing Age to Conduct IVA Examination Before and After Education on IVA Examination Through Audio Visual in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 4 shows that respondents who had insufficient knowledge before education were 10 respondents (12.3%) and became 1 respondent (1.2%) after education. Meanwhile, respondents who had sufficient knowledge before education were 36 respondents (44.4%) and became 11 respondents (13.6%) after education. Then, respondents who had good knowledge before education were 35 people (43.2%) and became 69 people (85.2%) after education.

This data was obtained based on a questionnaire distributed to respondents in the form of a google form through a WhatsApp group formed based on the WhatsApp number obtained directly from the respondents and the results of coordination with the cadres of the Gereba Village area. The post-test was carried out directly during educational/counseling activities which were timed to coincide with the provision of IVA examination services.

This is in line with Finaninda et al.'s research written in a journal that there is an influence of health education about cervical cancer on knowledge and participation in IVA examinations in WUS. There is a difference in participation in IVA examinations between the intervention group and the control group after being given health education about cervical cancer in WUS.²⁶

The researcher's assumption is that the increase in the percentage of each category of respondent knowledge is due to the effectiveness of educational media about IVA examinations, thus stimulating the respondent's interest and understanding when education is given, which of course has an effect on increasing respondent knowledge. This finding is also in line with research by Sari et al. which found that the use of audiovisual media can increase understanding and knowledge of health, including knowledge about early detection of cervical cancer. Audiovisual media that is presented in an interesting, easy-to-understand, and informative manner can facilitate the delivery of complex health messages to the public, including women of childbearing age.¹⁸

Description of the Interest of Women of Childbearing Age to Undergo IVA Examination Before and After Education on IVA Examination Through Audio Visual in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 4.5 shows that respondents who were not interested in conducting IVA examination before education were 55 respondents (67.9%) and the number became 26 respondents (32.1%) after education. Meanwhile, respondents who were interested in conducting IVA examination before education were 26 respondents (32.1%) and the number became 55 respondents (67.9%) interested in conducting IVA examination after education.

This is in line with the journal made by Vera Iriani Abdullah, et al., the research of Anes Patria Kumala, and the research of Dini Fitri Damayanti, et al. which stated that providing animated education on cervical cancer increased the interest of WUS in IVA examination ($p = 0.007$). The increase in interest score was 6.37. Cervical cancer education using animated videos can be used by midwives to increase the interest of WUS in IVA examination. Cervical cancer education with animated audiovisual is more efficiently accepted by the community than pocket books.^{24,27,30}

The researcher's assumption is that with the presence of interesting audio-visual media regarding the IVA examination, it will arouse the interest of respondents, who initially did not want to know but because the media display is interesting, it will eventually arouse interest. This is in line with the theory presented by Dini Fitri Damayanti that the characteristics of interest are driven by the presence of something pleasant that arises from an object.²⁴

Description of the Behavior of Women of Childbearing Age to Undergo IVA Examination Before and After Education on IVA Examination Through Audio Visual in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 6 shows that respondents who did not perform IVA examination before education were 81 respondents (100%) and the number became 26 respondents (32.1%) after education. Meanwhile, for respondents who performed IVA examination before education, there was none and the number became 55 respondents (67.9%) who performed IVA examination after education.

Research by Riana & Fitriani supports this, with the finding that audiovisual media can arouse a person's interest in taking preventive measures, such as health checks, because the visual and audiovisual approach is more interesting and easier to accept than traditional educational methods.¹⁹

Hastuti et al. in their research also found that providing education through videos or other audiovisual media can change individual behavior in terms of preventive health actions, because this media can provide clear explanations and inspiring visualizations.²⁰ The high correlation coefficient in this study (0.906 for knowledge and 0.607 for interest) indicates a very strong relationship between audiovisual education and increased knowledge and interest of respondents. This is also supported by Kartikasari et al., who found that the use of audiovisual media has a very strong influence in changing people's knowledge and behavior related to health.²¹

Education was conducted at two research locations, after being given education about IVA examination through audio-visual media in the form of meetings or face-to-face. After providing education, it was continued by filling out the Google form post-test and IVA examination activities.

According to the researcher's assumption, based on observations during the study, there really needs to be a new innovation in providing education to women of childbearing age that makes them interested so that from that interest it changes into an interest and behavior to want to do early detection of cervical cancer through the IVA test. This is in line with the theory stated by Benjamin Bloom that most human behavior is an operant response/instrumental response, namely a response that arises and develops followed by certain stimuli. Therefore, to form this type of response/behavior, it is necessary to create a certain condition, which is called operant conditioning.²⁸

The results of the study in the form of journals that show that there are research results that are in line, namely the research of Finaninda et al., Ni Putu Iasminiantari, et al., and the research of Warman Alamsyah et al. with the results of all studies almost the same, namely that there is an influence of audio-visual health education methods on women of childbearing age in increasing knowledge, attitudes and conscious behavior in women of childbearing age with statistical test results p-value <0.05.^{26,31,32}

The Influence of Education on IVA Examination Through Audio Visual Media on the Knowledge, Interests, and Behavior of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

The explanation for each influence of education about IVA examination through audiovisual media on the knowledge, interests, and behavior of women of childbearing age is detailed as follows:

The Influence of Education about IVA Examination Through Audio Visual Media on the Knowledge of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 8 shows the results of the Wilcoxon Signed Rank Test seen from Sig. (2-tailed) which is 0.000 <0.05, it can be concluded that there is a significant difference in the knowledge of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024 between before and after being given education about IVA Examination through audiovisual media, which means that there is a significant influence between education about IVA examination through audio-visual media on the knowledge of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024.

This is in line with the research journal of Ni Putu Iasminiantari et al., the research of Finaninda et al., and the research of Warman Alamsyah et al. which stated that there is an influence of education about IVA examination through audio-visual media on the knowledge,

interests, and behavior of women of childbearing age in carrying out early detection of cervical cancer.^{26,31,32}

According to the researcher's assumption, with the provision of counseling materials delivered in an interesting way, it will be able to attract the interest of the counseling target, which in this case is women of childbearing age. After the interest to listen arises, WUS will pay close attention to the counseling so that their knowledge increases. When knowledge increases, awareness of health is also renewed, which initially did not know and did not want to become aware and willing to check themselves for early detection of cervical cancer through the IVA test.

Another study that is in line is a study conducted by Ahmad which states that providing audiovisual-based education results in a significant increase in knowledge about IVA examinations and behavior to carry out the examination. This occurs because audiovisual education helps explain more clearly and interestingly about the procedures and health benefits of IVA examinations.²³

The Influence of Education about IVA Examination Through Audio Visual Media on the Interest of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 9 shows the results of the Wilcoxon Signed Rank Test seen from Sig. (2-tailed)¹² which is $0.000 < 0.05$, it can be concluded that there is a significant difference in the interest of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024 between before and after being given education about IVA examination through audio-visual media, which means that there is an influence of education about IVA examination through audio-visual media on the interest of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024.

This is in line with the research journal of Dini Fitri Damayanti et al., the research of Ni Putu Iasminiantari et al., the research of Anes Patria Kumala et al., and the research of Vera Iriani Abdullah et al. which stated that there is an influence of education about IVA examination through audio-visual media on the knowledge, interests, and behavior of women of childbearing age in carrying out early detection of cervical cancer.^{24,27,30,32}

The researcher's assumption is in line with the theory or research conducted by Sharma et al. which states that in the context of public health, good knowledge about reproductive health is related to increased interest in participating in health programs. Knowledge about how to prevent disease, maintain health, and the benefits of health programs reduces uncertainty and increases interest in participating in the program. This study found that individuals with better knowledge showed greater interest in participating in reproductive health campaigns.²²

These results imply that in order to increase interest in various programs, especially in the health sector, it is important to increase public knowledge first. Educational programs such as counseling through audio visuals as conducted by researchers that provide clear and easy-to-understand information about the benefits of a program can increase interest in participating.

Meanwhile, for respondents who remain uninterested, according to the researcher's assumption, this could be due to several factors that are not mentioned in this study, for example permission from the husband, health status, personality type or perception of health workers as stated in the theoretical study regarding factors that can influence interest in conducting IVA examinations for early detection of cervical cancer.

The Influence of Education about IVA Examination Through Audio Visual Media on the Behavior of Women of Childbearing Age in Gereba Village, Cipaku District, Ciamis Regency in 2024

Table 10 shows the results of the Wilcoxon Signed Rank Test seen from Sig. (2-tailed)¹² which is $0.000 < 0.05$, it can be concluded that there is a significant difference in the behavior of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024 between before and after being given education about IVA examination through audio-visual media, which means that there is an influence of education about IVA examination through audio-visual media on the behavior of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024.

This is in line with the research journal of Ni Putu Iasminiantari et al., the research of Finaninda et al., the research of Warman Alamsyah et al. which stated that there is an influence of education about IVA examination through audio-visual media on the knowledge, interests, and behavior of women of childbearing age in carrying out early detection of cervical cancer.^{26,31,32}

According to the researcher's assumption, the most striking change is seen in behavior. Behavioral change is the main indicator of the success of education. Before education, none of the respondents had undergone IVA examination, but after being given education, as many as 55 respondents or 67.9% of respondents began to undergo examination. This change is very significant and shows that audiovisual education can motivate individuals to take concrete steps in maintaining their health.

This is in line with Ahmad who said that audiovisual media-based education can significantly improve individual knowledge and behavior in following important medical procedures, such as IVA examinations. Audiovisual media has the power to convey information in an interesting, easy-to-understand way, and can clarify procedures that may feel foreign or scary to some people. In this context, education carried out in the right way can change people's behavior, encouraging them to take preventive measures such as IVA examinations which are very important in detecting cervical cancer early.²³

Effective education can reduce uncertainty and fear associated with medical examinations, while increasing participation in life-saving health programs. Providing education through audiovisual media has proven effective in increasing knowledge, interest, and behavior of women of childbearing age towards IVA (Visual Inspection of Acetic Acid) examination. Based on the data obtained in the study, there were significant changes in the knowledge, interest, and behavior of respondents who received the education.

This shows that audiovisual education can have a very strong impact on a person's attitude or behavior. Knowledge is a basic factor that influences a person's decision to undergo a health check.

Research Weaknesses

This study provides valuable insights into the influence of education through audiovisual media on increasing the knowledge, interests, and behavior of women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency. Several limitations need to be considered to understand the research results more deeply.

The research design was limited to Pretest-Posttest without a control group, which limits the ability to isolate the effects of audio-visual education on changes in knowledge, interest, and behavior. Without a control group, the changes that occurred in respondents may not have been entirely due to the education. It is possible that other external factors, such as the influence of other health campaigns or ongoing social events in Gereba Village, may have also contributed to the changes that occurred.

The sample in this study consisted of women of childbearing age in Gereba Village, this study only covers the population of one village in Cipaku District. Because the sample was not taken randomly, the results of this study may not be generalizable to a wider population, such as women of childbearing age in other areas with different social, cultural, or economic characteristics. This is important considering the very diverse local characteristics, and factors such as education, income, and accessibility of health facilities can affect the results.

This study only observed changes in respondents' knowledge, interests, and behavior in a relatively short period, namely before and after the provision of audio-visual education. Although there were significant changes in respondents' knowledge, interests, and behavior, there was no long-term monitoring of the continuation of IVA examination behavior. Therefore, it is difficult to assess whether the changes that occur are permanent or only temporary, given that behavioral changes in health often take longer to achieve stability.

In addition, this study did not control for several variables that may influence interest and behavior in VIA screening, such as socioeconomic status, education level, and support from family or community. These factors can greatly influence an individual's decision to undergo a health check, including VIA screening. Without controlling for these factors, the results of the study may be influenced by unmeasured variables.

In addition to the above, limitations of this study include not including an in-depth evaluation of respondents' experiences or perceptions of the audio-visual media used. Respondents' experiences of education, such as their level of understanding, comfort, or involvement during the education process, can affect the results of the study. Without a deeper understanding of individual experiences, it is difficult to assess whether the media used is truly effective in increasing their understanding and motivation to undergo IVA examinations.

CONCLUSION AND RECOMMENDATION

Conclusion

1. Characteristics of Women of Childbearing Age (WUS) in Gereba Village, Cipaku District, Ciamis Regency in 2024 are respondents aged between 15-44 years, namely 72 respondents (88.9%), respondents aged WUS Pre-Elderly, namely 45-49 years 7 respondents (8.6%), and respondents aged Pre-Elderly, namely 50-59 years 2 respondents (2.5%); The characteristics of the respondents' education are low education (<high school or equivalent) namely 49 respondents (60.5%), respondents with secondary education (high school or equivalent) namely 27 respondents (33.3%), and respondents with high education (> high school or equivalent) as many as 5 respondents (6.2%); and the characteristics of the respondents' jobs consist of housewives as many as 79 respondents (97.5%) and mothers working as teachers, namely 2 people (2.5%).
2. The description of respondents' knowledge who had insufficient knowledge before education was conducted was 10 respondents (12.3%) and became 1 respondent (1.2%) after education. While for respondents who had sufficient knowledge before education was conducted, there were 36 respondents (44.4%) and became 11 respondents (13.6%) after education. Then for respondents who had good knowledge before education, there were 35 people (43.2%) and became 69 people (85.2%) after education; Respondents who were not interested in conducting IVA examination before education were 55 respondents (67.9%) and the number became 26 respondents (32.1%) after education. While for respondents who were interested in conducting IVA examination before education were 26 respondents (32.1%) and the number became 55 respondents (67.9%) interested in conducting IVA examination after education; Respondents who did not perform IVA examination before education were 81

respondents (100%) and the number became 26 respondents (32.1%) after education. Meanwhile, for respondents who performed IVA examination before education, there was none and the number became 55 respondents (67.9%) who performed IVA examination after education.

3. There is an influence of education about IVA examination through audio-visual media on knowledge with a p-value of $0.000 < 0.05$, on interest with a p-value of $0.000 < 0.05$, and on behavior with a p-value of $0.000 < 0.05$ in women of childbearing age in Gereba Village, Cipaku District, Ciamis Regency in 2024.

Recommendation

For other researchers, it can improve the shortcomings and limitations in this study, namely using a control group so that it can see whether there are other factors that influence the changes that occur in respondents, the sample used reaches a wider population, and includes a way to evaluate respondents regarding the success of this audiovisual media education whether it is permanent or not. For educational institutions, make the results of this study as material for the academic community in developing learning, for example including complementary courses in academic designs to increase students' abilities in making audiovisual media for counseling purposes. For respondents/community, become aware of carrying out IVA examinations and screening and prevention of cervical cancer routinely according to the recommended time. For health centers, a policy for the PTM (Non-Communicable Disease) program can be made in increasing the scope of IVA screening examinations, carrying out follow-up for respondents who have positive IVA examination results, and also to maintain the sustainability of health promotion, especially the PTM program, which continues to take place periodically so that the community continues to be reminded through audiovisual health promotions.

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