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Effectiveness of video education on intention for cervical cancer screening

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ABSTRACT

Cervical cancer represents 7.5% of deaths caused by cancer in women. Prevention of cervical cancer can be done by cervical cancer screening. The purpose of the study was to determine the effect of video on knowledge level, attitude, and intention for cervical cancer screening in Yogyakarta. This study was a quantitative study with a quasi-experimental nonequivalent control group design. The study was carried out in April-October 2021. The population of the study was all women of childbearing age. The sample was 50 respondents for each group, experiment group and control group. The intervention was given through video education for the experiment group and pocketbooks for the control group. Data analysis used T-test, Wilcoxon test, and Mann-withney. There was a difference in the pre-test and post-test of knowledge level ($p=0.002$), attitude ($p=0.023$), intention ($p=0.005$) in the experiment group and knowledge level ($p=0.001$), attitude ($p=0.000$), intention ($p=0.004$) in the control group. There was a significant difference in women's intention ($p=0.001$) for cervical cancer screening with the video education method than pocketbooks. The method of providing educational videos and pocketbooks is effective for increasing the knowledge level, attitude, and intention for cervical cancer screening. Video has influence on intention to detection cervical cancer.

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1. INTRODUCTION

Cervical cancer is a matter of public health concern and the most common cancer in 42 low-income countries. Half a million women will die each year from cervical cancer in 2030 and 95% will occur in low-middle-income countries [1]. Indonesia is stated as lower middle income country, the incidence of cancer in Indonesia is 136.2/100,000. The highest cancer incidence rate in Indonesia for women is breast cancer which is 42.1/100,000 with an average death rate of 17/100,000 population followed by cervical cancer of 23.4/100,000 population with an average death of 13.9/100,000 population [2]. The prevalence of cancer in Indonesia showed an increase from 1.4/1000 population in 2013 to 1.79/1000 population in 2018. The highest prevalence of cancer is in the Special Region of Yogyakarta which is 4.86/1000 population, followed by West Sumatra 2.47/1000 population and Gorontalo 2.44/1000 population [3].

Cervical cancer is a very painful cancer cervical cancer is largely preventable through interventions such screening of adult women [4]. To reduce the burden of disease, the World Health Organization (WHO) has launched a global program to eliminate cervical cancer, with the following targets: all countries have to achieve 90% vaccination coverage, 70% of screening coverage, and 90% access to treatment for cervical pre-

cancer or cancer [5]. Visual inspection with acetic acid (VIA) is recommended by WHO for servical screening. VIA is non-invasive and can be executed in low-tech health facilities with instant results. To date, a VIA-based screening strategy has been adopted by 26 countries [6]. VIA identification of abnormalities by inspection of the cervix without the benefit of magnification. Acetic acid turns abnormal cervical cells white allowing an immediate assessment [4]. Studies on knowledge and awareness of cancer cervical screening carried out in Malawi and surrounding countries showed a consistent mix of screening barriers: little knowledge on symptoms or signs of the disease, lack of information of the screening programme and limited access to screening and treatment [7], [8].

Some studies have investigated the reasons that lead to low rates of women's participation in cancer screening programs including lack of knowledge and awareness of cervical cancer cited as the most common obstacle to cervical cancer screening programs [9], [10]. The results of a study in southern Sri Lanka conducted on women and their partners showed that family income, having at least secondary education, and having good knowledge about cervical cancer are factors that influence a woman to come to a health clinic and perform an early detection test for cervical cancer [11]. The results of a study conducted in Tanzania showed that the level of women's knowledge was significant in determining cervical cancer screening [12]. Research conducted in Kenya showed that 29% of the variation in cervical cancer screening was caused by the number of sources of information received [13]. Results of the study in 2016 also showed that access to information affects women's attitudes to carry out VIA screening examinations [14]. Previous research conducted by Setiyawati and Meilani on the prevention of cervical cancer in mothers in Yogyakarta was to show the results of 45.1% of mothers who carried out examinations of VIA, there is a relationship between maternal education, knowledge levels and attitudes towards cervical cancer prevention. Mothers who do early detection of cervical cancer are still low [15]. Based on precede-procede theory, behavior is influenced by predisposing, reinforcing and enabling factors. While these factors are influenced by health education. Health education can be provided by using the right learning media.

The several Meta analysis have shown that technology can enhance learning and multiple studies have shown that video, can be a highly effective educational tool. Video may provide a significant means to improve student learning. Video improves the understanding of difficult concepts compared to when the video was not used to give an education [16]. Based on the background description, researchers are interested in finding out whether video media and pocketbooks are influential in improving awareness, attitude, and intention to do cervical cancer screening. The results are expected to enrich empirical evidence related to the influence of videos and pocketbooks on the level of knowledge, attitudes, and intentions of cervical cancer screening. In addition, the study results can increase knowledge and become a source of information and references to the development of reproductive health obstetrics services and future research.

2. RESEARCH METHOD

This study was quantitative research using a quasi design experiment non equivalent control group design. There are two groups in this study, the first group was respondents who were informed through video and the second group was respondents who were informed through pocket book. The study was conducted in April-October 2021. The population of this study was all women in childbearing ager in Yogyakarta. Research samples are taken with purposive sampling techniques. The sample number of these studies was 50 respondents in each experiment group and control group.

The dependent variables in the study were the provision of educational video in the experiment group and pocketbooks in the control group. Independent variables in the study included knowledge level, attitude, and intention for cervical cancer screening. This study collected the type of primary data from respondents by distributing questionnaires. The same questionnaire was used during the pre-test and post-test. The questionnaire used has been tested for validity and reliability by researchers. Data analysis was done with statistical test software. Data analysis used T-tests, Wilcoxon, and Mann-withney tests. Hypotheses in this study whether video education was effective for improvin level of knowledge, attitudes and intention for cervical cancer screening. The Ethical Committee of Poltekkes Kemenkes Yogyakarta number e-KEPK/POLKESYO/0345/III/2021, March 29 2021 granted the ethical approval for this study.

3. RESULTS AND DISCUSSION

3.1. Knowledge level, attitude and intention for cervical cancer screening

Respondents in this study amounted to 100 women divided into two groups from two district in Yogyakarta. Based on Table 1, our findings show knowledge, attitude and intention respondents about detection of cervical cancer in experiment group. There is an increase in the number of respondents who have a good level of knowledge, positive attitudes and positive intention after the post-test.

Respondents of the experiment group before the intervention as much as 8% have a level of knowledge in the good category while after the intervention with education through video, the level of knowledge of respondents in the good category increased by 18%. Respondents before the intervention as much as 44% had a positive attitude for early detection of cervical cancer. After the intervention, respondents who had a positive attitude reached 52%. In the intention category, respondents' positive intentions for early detection of cervical cancer before intervention were 50%, while the number of respondents with positive intentions increased by 54% after intervention.

Table 2 shows about distribution of knowledge level, attitudes, and intention in control group. Similar to the experimental group, the control group also increased level of good knowledge, positive attitudes, and positive intention to cervical cancer detection. Control group respondents before the intervention as much as 10% had good knowledge level while after the intervention with education through pocketbooks, the knowledge level of respondents in the good category increased by 28%. Respondents before the intervention as much as 52% had a positive attitude toward cervical cancer screening. After the intervention, respondents who had a positive attitude showed an increase of 54%. In the intention category, respondents' positive intentions for cervical cancer screening before intervention were 52%, while the number of respondents with positive intentions reached 56% after intervention. To know the differenced in average knowledge levels, attitudes, and intention in each group are showed in Table 3. In the level of knowledge and attitudes, the control group experienced more average increases than the experimental group, but for intention in the experimental group more differences in average between pre-test and post-test.

In the experiment group based on Table 4, the average level of knowledge, attitude, and intention for early detection of cervical cancer in respondents during pre-test increased during post-test. Statistical test results obtained knowledge levels (p-value 0.002), attitude (p-value 0.023), and intention (p-value 0.005) indicate that there was a mean difference in the knowledge level, attitude, and intention for cervical cancer screening between before and after the intervention with the provision of educational video. In the control group, the average knowledge level, attitude, and intention for early detection of cervical cancer in respondents during pre-test increased during post-test. The results of statistical tests obtained the level of knowledge (p-value 0.001), attitude (p-value 0.000), and intention p-value 0.004) which shows that there was a mean difference in the value of knowledge level, attitude, and, intention for cervical cancer screening with the provision of education through pocketbooks.

Health education is a component of health and medical programs consisting of advanced efforts to change the behavior of individuals, groups, and communities which is a change in the way of thinking, behaving, and doing to help the experiment of changes behavior, prevention of disease and promotion of healthy living. Health education can be done by various methods and media such as movies, drama videos, storybooks, leaflets, posters, and lectures [17]. Health education methods with the utilization of media such as videos, books, and brochures are effective modifications to improve the scope of cervical cancer screening based on previous systematic review research [18]. Health education also affects the increase in interest in cervical cancer screening [19]. In this study, health education through the provision of video and pocketbooks are an influenced by increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. This is in line with the previous study mentioned that there is an increase of average score on knowledge and attitudes by providing audiovisual and visual media education about early detection of cervical cancer p-value 0.000 [20]. There was an influence of counseling with audiovisual media on the level of knowledge before and after counseling about cervical cancer [21].

Video is an audiovisual educational medium. Audiovisual method education is the provision of information with media that can display the elements of images and sounds simultaneous when communicating with messages or information to reveal an event and object with its actual circumstances. Health education audiovisual methods are considered more attractive and understandable. The study mentioned that the video delivery intervention group with a paired sample T-test showed a result of 0.000. It can be concluded that there was a difference in the value of early detection behavior of cervical cancer during pre-test and post-test. In the control group with the provision of media leaflets, there was no average increase before and after the intervention p-value of 0.476 [22]. Other studies also mentioned that there are different visits for cervical cancer screening in the group of education through videos and leaflets [23]. This shows that the provision of video as a medium of health education is considered effective to increase the knowledge levels, attitudes, and intentions that can affect the formation of behavior.

Knowledge is a factor that facilitates the realization of a certain behavior so often referred to as the predisposition factor in the concept of behavior. Knowledge is a very important domain for the formation of behavior. Positive behavior can last a long time if based on sufficient knowledge. This is because behavior occurs due to coercion or rules that can be learned and required to do [24]. Previous American research has found that women with good knowledge are 6.5 times more likely to have early detection of cervical cancer

(OR 6.49; 95% CI 2.8-14.7) [25]. While a study in Indonesia stated that women with good knowledge are 5.8 times more likely to have cervical cancer screening [26].

Attitude is a factor in the occurrence of a behavior. Attitude is the readiness to react to objects. Attitude has three main components: cognition, affection, and conation. In the conation component, there is a tendency to act. The three components of the attitude form one whole attitude (total attitude). This is evidence that attitude is very closely related to the occurrence of a behavior. Attitude is covert behavior that can be manifested by real behavior (overt behavior) when a person has reached the stage of action [27]. The intention is a cognitive and conative representation of an individual's readiness to display behavior. The intention is the determinant and disposition of behavior until the individual has the right opportunity and time to display real behavior. Women with good attitudes have the potential to do early detection of cervical cancer by 5 times compared to women with negative attitudes. The ratio of the probability of women with positive intentions to detect cervical cancer is 8.83 [28].

Table 1. Distribution of knowledge levels, attitudes, and intentions before and after being given video to the experiment group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	4	8	9	18
Less	46	92	41	82
Attitude				
Positive	22	44	26	52
Negative	28	56	24	48
Intention				
Positive	25	50	27	54
Negative	25	50	23	46

Table 2. Distribution of knowledge levels, attitudes, and intentions before and after being given pocketbooks to the control group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	5	10	14	28
Less	45	90	36	72
Attitude				
Positive	26	52	27	54
Negative	24	48	23	46
Intention				
Positive	26	52	28	56
Negative	24	48	22	44

Table 3. Differences in average knowledge levels, attitudes, and intentions before and after intervention in the experiment group and control group

Group		Mean	Mean Difference	p-value
Knowledge				
Experiment	Pre-test	58.12	5.29	0.002
	Post-test	63.41		
Control	Pre-test	58.94	8.35	0.001
	Post-test	67.29		
Attitude				
Experiment	Pre-test	76.52	3.22	0.023
	Post-test	79.74		
Control	Pre-test	76.07	3.65	0.000
	Post-test	79.72		
Intention				
Experiment	Pre-test	76.39	4.56	0.005
	Post-test	80.95		
Control	Pre-test	78.53	4.05	0.004
	Post-test	82.58		

3.2. Differences in the average of knowledge levels, attitudes, and intentions for cervical cancer screening in the experiment group and control group

Analysis with simple linear regression showed that a meaningful difference between the intention for detection of cervical cancer in the experiment group and the control group. The differences can be seen in Table 4. The difference in the mean value of knowledge levels in the experiment group and the control group was 3.88. The results of the statistical test showed a p-value of 0.092 which means there was no significant difference between the knowledge levels of the experiment group compared to the control group. The mean attitude score for cervical cancer screening in the experiment group and control group showed a difference of 0.03. The results of the statistical test showed a p-value of 0.985, therefore it can be concluded

that there is no significant difference between the value of attitudes in the experiment group and the control group. However, the average value of the experiment group was higher than the control group. The results concluded that the provision of video media is effective for increasing knowledge and attitudes but does not have a meaningful influence on the increase in the level of knowledge and attitudes with a value of $p > 0.05$. The results of previous research also stated that the provision of video media had no significant effect on the increase in knowledge and attitude. The assumption of the researchers in the study, the provision of the video did not affect the increase in knowledge level and attitude due to the ability to absorb different information from each respondent and the lack of intention and willingness of respondents to look at the information from the video in full [29]. This leads to a lack of information provided by researchers. In line with the study, the researchers' assumption of this study is that the provision of interventions in the form of providing information through video conducted online is also a difficulty in this study. Researchers are limited to being able to control whether respondents pay attention to the video and fill out questionnaires and answer statements in earnest. This can affect the results of the study.

The difference in the average value of the intention of the experiment group and the control group was 1.63. Based on statistical tests showed a p-value of 0.001 so that there can be a significant difference between the intention for cervical cancer screening in the experiment group and the control group. Intervening with educational video significantly affected the increase in the value of intention for cervical cancer screening. This is in line with a previous study that states that the desire for early detection of cervical cancer increased from 35.8% to 94.2% after intervention with a video p-value of 0.001 [30].

Planned Behavior theory explains that a person's behavior begins with an intention to behave and an intention to behave is influenced by a person's attitude towards the behavior [31]. Therefore, the provision of good manners is necessary to produce good intentions. Research suggests that positive attitudes are associated with intentions for early detection of cervical cancer (95% CI: 4,048, 9,387) [32]. results of the study are supported by other studies that state that a positive attitude is the strongest determinant for the formation of good intentions OR 1.26 [33]. Meanwhile, qualitative research in 2019 states that a person's knowledge of an object contains two aspects, namely positive aspects and negative aspects. Both of these aspects will determine a person's attitude. If more and more positive aspects of the object are known, it will lead to more positive attitudes [34]. Good knowledge can lead to good attitudes. This is in line with a previous study that mentioned that there is a relationship of knowledge with attitudes towards early detection of cervical cancer with a p-value of 0.000 [35]. Based on the results of the study, the provision of educational video and pocketbooks is effective for increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. The provision of video media affects the intention of behaving in the early detection of cervical cancer. Knowledge, attitude, and, intention as a unit are factors that influence the formation of behavior.

Table 4. Differences in the average of knowledge levels, attitudes, and intentions in the experiment group and the control group

Group	n	Mean±SD	Mean Difference	p-value
Knowledge				
Experiment	50	63.41±10.312	3.88	0.092
Control	50	67.29±11.531		
Attitude				
Experiment	50	79.74±7.061	0.03	0.985
Control	50	79.71±9.168		
Intention				
Experiment	50	8.95±8.431	1.63	0.001
Control	50	82.58±11.902		

4. CONCLUSION

In the experiment group, there was a mean difference in knowledge levels, attitudes, and intentions before and after being given an intervention by providing educational video. In the control group, there was also a mean difference in knowledge levels, attitudes, and, intentions before and after the intervention with the provision of education through pocketbooks. There was a significant difference between the intention for early detection of cervical cancer in the experiment group and the control group. Educational methods of providing video and pocketbooks are effective for increasing the level of knowledge, attitudes, and intentions

for cervical cancer screening. Educational video significantly affected the increase in the value of intention for cervical cancer screening. Video can be used for health promotion media to increase women's participation in cervical cancer screening. For other researchers can develop other media to increase women's participation in cervical cancer of pandemic COVID-19.

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BUKTI KORESPONDENSI
ARTIKEL JURNAL ILMIAH NASIONAL

Judul artikel : Effectiveness of video education on intention for cervical cancer screening
Jurnal : Journal of Education and Learning (EduLearn)
Penulis : Nanik Setiyawati, Niken Meilani, Nur Khafidhoh

No	Perihal	Tanggal
1	Bukti Submission	12 November 2021
2	Bukti Hasil review pertama	18 Februari 2022
3	Bukti revisi hasil review pertama	4 Maret 2022
4	Bukti review kedua	9 Maret 2022
5	Bukti revisi hasil review kedua	26 Maret 2022

1. BUKTI SUBMISSION (12 November 2021)

The screenshot shows a web browser window with the URL `edulearn.intelektual.org/index.php/EduLearn/author/submissionReview/20420`. The page header includes the logo for 'Intelektual Pustaka Media Utama' and 'Journal of Education and Learning (EduLearn)'. A navigation bar contains links for HOME, ABOUT, USER HOME, SEARCH, CURRENT, ARCHIVES, and ANNOUNCEMENTS. The main content area is titled '#20420 Review' and includes tabs for SUMMARY, REVIEW, and EDITING. The 'Submission' section lists the author as 'nanik setiyawati', the title as 'Effectiveness of video education on knowledge level, attitude and intention for cervical cancer screening', and the editor as 'Lina Handayani (Review)'. The 'Peer Review' section shows 'Round 1' with a review version of '20420-53656-1-RV.DOCX' dated '2021-11-12'. The 'Editor Decision' section shows 'Decision' as '-', 'Notify Editor' as 'None', and 'Upload Author Version' as 'None' with a file selection button. A right-hand sidebar contains several utility boxes: 'USER' (logged in as nanik_setiyawati), 'CITATION ANALYSIS' (listing ERIC, Dimensions, Google Scholar, Garuda, Mandelley, Nello, Scopus), 'SPECIAL LINKS' (listing Author Guideline, Editorial Boards, Reviewers, Online Submissions, Abstracting and Indexing, Publication Ethics, Visitor Statistics, Contact Us, Similarity Report), 'AUTHOR' (listing Submissions: Active (1), Archive (2), New Submission), and 'JOURNAL CONTENT'.

Home > User > Author > Submissions > #20420 > Review

#20420 Review

SUMMARY REVIEW EDITING

Submission

Authors: nanik setiyawati

Title: Effectiveness of video education on knowledge level, attitude and intention for cervical cancer screening

Section: General issues in education and learning

Editor: Lina Handayani (Review)

Peer Review

Round 1

Review Version: [20420-53656-1-RV.DOCX](#) 2021-11-12

Initiated: 2021-11-22

Last modified: 2022-01-26

Uploaded file: None

Editor Decision

Decision: -

Notify Editor: Editor/Author Email Record No Comments

Editor Version: None

Author Version: None

Upload Author Version: Tidak ada file yang dipilih

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- Dimensions
- Google Scholar
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SPECIAL LINKS

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- Editorial Boards
- Reviewers
- Online Submissions
- Abstracting and Indexing
- Publication Ethics
- Visitor Statistics
- Contact Us
- Similarity Report

AUTHOR

Submissions

- Active (1)
- Archive (2)
- New Submission

JOURNAL CONTENT

2. BUKTI HASIL REVIEW PERTAMA (18 FEBRUARI 2022)

mail.google.com/mail/u/0/?ogbi#search/EduLearn%40journal.uad.ac.id/FMfcgzGmvBjtNDBzMWcBHmCMfQDqVgfb

Gmail EduLearn@journal.uad.ac.id

[EduLearn] Decision "Effectiveness of video education on knowledge level, attitude and intention for cervical cancer screening" 3 of 9

Dr. Lina Handayani linafkm@gmail.com sg3plvcprl372281.prod.sin3.secureserver.net Fri, Feb 18, 2022, 3:10 PM

to me

-- Number of minimum references is 30 primarily journal articles published in the last five years
 -- The references must be presented in numbering and CITATION ORDER (in the body paper) is SEQUENTIAL [1], [2], [3], [4], ----
 -- Guide of authors and Template: <http://iaescore.com/gfa/edulearn.docx>

Dear Prof./Dr./Mr./Mrs. - nanik setyawati,

It is my great pleasure to inform you that your paper entitled "Effectiveness of video education on knowledge level, attitude and intention for cervical cancer screening" has been ACCEPTED with minor revisions, and will be published in the Journal of Education and Learning (EduLearn). Your paper will be published for forthcoming issue. Congratulations!

Authors are encouraged to carefully consider the reviewers comments and suggestions for improvement of their manuscript and for preparing their paper strictly follow the guide of authors (NEW TEMPLATE: <http://iaescore.com/gfa/edulearn.docx>). Please follow these guidelines to ensure that your final file is complete and in the correct format.

- This journal ONLY publishes high quality papers. A high quality paper MUST has: 1) a clear statement of the problem the paper is addressing, 2) the proposed idea(s)/solution(s), and 3) results achieved. It describes clearly what has been done before on the problem, and what is NEW? The goal

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- Make sure that your discussion section is suitable. The "result and discussion" section reports the most important findings, including results analyse as appropriate.

- The title summarizes the main idea or ideas of your study (title is "summary" and "essence" of your paper). Title should be "encompassing" as well as "descriptive". A good title contains the fewest possible words needed to adequately describe the content and/or purpose of your research paper. Rarely use abbreviations or acronyms unless they are commonly known.

Submit final paper through our online system as author version (but if you reach any problems, you can submit your updated paper to email: EduLearn@uad.ac.id cc: EduLearn@journal.uad.ac.id) within 3 weeks.

Your cooperation is very appreciated

Best Regards,
 Dr. Lina Handayani

----- IMPORTANT -----

- For original research paper, there are four (4) types of novel technical results: 1) An algorithm, 2) A system construct, such as hardware design, software system, protocol, etc.; The main goal of your revised paper is to ensure that the next person who designs a system like yours doesn't make the same mistakes and takes advantage of some of your best solutions. So make sure that the hard problems (and their solutions) are discussed and the non-obvious mistakes (and how to avoid them) are discussed. 3) A performance evaluation: obtained through analyses, simulation or measurements. or 4) A

theory consisting of a collection of theorems. Your final camera ready paper should focus on: 1) Describing the results in sufficient details to establish their validity; 2) Identifying the novel aspects of the results, i.e., what new knowledge is reported and what makes it non-obvious; and 3) Identifying the significance of the results: what improvements and impact do they suggest. Number of minimum references for an original research paper is 25 references (included 20 recent journal articles).

- For review paper, the paper should present a critical, constructive analysis of the literature in a specific field through summary, classification, analysis and comparison. The function and goal of the review paper is: 1) to organize literature; 2) to evaluate literature; 3) to identify patterns and trends in the literature; 4) to synthesize literature; or 5) to identify research gaps and recommend new research areas. The structure includes:

- Title - in this case does not indicate that it is a review article.
- Abstract - includes a description of subjects covered.
- Introduction includes a description of context (paragraph 1-3), motivation for review (paragraph 4, sentence #1) and defines the focus (paragraph 4, sentences #2-3)
- Body - structured by headings and subheadings
- Conclusion - states the implications of the findings and identifies possible new research fields
- References ("Literature Review") - organised by number in the order they were cited in the text.

Number of minimum references for review paper is 50 references (and minimum 40 recently journal articles).

- Inbox** 462
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- Abstract: Prepare your abstract in a single paragraph and within 200 words. You need to summarize your contribution, idea, findings/results, and describe implications of the findings. Without abbreviations, footnotes, or references. Without mathematical equations, diagrams or tabular materials. It is suggested to present your abstract included the elements: 1) state the primary objective of the paper; 2) highlight the merits (or contribution); 3) give a conceptual idea on the method; 4) describe the research design and procedures/processes employed (is it simulation, experimental, survey etc.); 5) give the main outcomes or results, and the conclusions that might be drawn; and 6) include any implications for further research or application/practice, if any

- Camera ready paper: Your final camera ready paper should reflect a careful consideration of the following criteria

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Reviewer F:

Does the title of the paper accurately reflect the major focus contribution of this paper?

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If No, Please suggest change of the title as appropriate:

Is the abstract an appropriate and adequate digest of the work?

Yes

If No, Please suggest change of the abstract as appropriate:

Is the paper clear, concise, and well organized?

No

If No, Please suggest change of the organizing as appropriate:

- In the Introduction, it would be good to include a short theoretical part related to video education or video as a learning tool.
- Although the methodology is correctly described, the key research hypotheses are missing. Therefore, they should be added and explained in relation to the results of the analysis.
- The conclusion should include certain guidelines and recommendations. It may be necessary to highlight a potential new topic for further research. In addition, it is necessary to indicate the limitations of the conducted research.

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Rate of the contribution strength to the field is represented in this paper?
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Good

Do authors place the paper in proper context by citing relevant papers?
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Revisions are suggested

It is a valuable and interesting article. The text is written clearly and logically, without unnecessary repetitions. Literature and level of reference processing is appropriate. The language and style of writing are consistent and appropriate. Comments and suggestions are listed under numbers 3 and 9.

Are the references in EduLearn style? Mostly they are, but a few references lack the initials of the first name in front of the last name.

Journal of Education and Learning
<http://edulearn.intelektual.org>

Nanik Setiyawati <nanikyogya@gmail.com>
to Lina ▾

Dear Dr. Lina Handayani

Thankyou for reviewing my paper. I have sent our revision article in online system and email EduLearn@uad.ac.id cc: EduLearn@journal.uad.ac.id

Best Regards

Mar 4, 2022, 3:48 PM

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3. BUKTI REVISI HASIL REVIEW PERTAMA (4 MARET 2022)

The screenshot shows the 'Review' page for submission #20420 on the EduLearn platform. The page is divided into several sections: Submission, Peer Review, and Editor Decision. The Submission section lists authors (Nanik Setiyawati, Niken Mellani, Nur Khafidhoh) and the title 'Effectiveness of video education on intention for cervical cancer screening'. The Peer Review section shows 'Round 1' with a review version from 2021-11-22 to 2022-02-02. The Editor Decision section shows an 'Accept Submission' on 2022-03-09. The right sidebar contains user information, citation analysis (ERIC, Dimensions, Google Scholar, Garuda, Neliti, Scopus), special links (Author Guideline, Editorial Boards, etc.), and journal content search options.

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#20420 Review

SUMMARY REVIEW EDITING

Submission

Authors Nanik Setiyawati, Niken Mellani, Nur Khafidhoh

Title Effectiveness of video education on intention for cervical cancer screening

Section others

Editor Lina Handayani (Review)

Peer Review

Round 1

Review Version [20420-53556-1-RV.DOCX](#) 2021-11-12

Initiated 2021-11-22

Last modified 2022-02-02

Uploaded file None

Editor Decision

Decision Accept Submission 2022-03-09

Notify Editor [Editor/Author Email Record](#) 2022-03-09

Editor Version None

Author Version [20420-53556-1-ED.DOCX](#) 2022-03-04 [DELETE](#)

[20420-53556-2-ED.DOCX](#) 2022-03-08 [DELETE](#)

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Journal of Education and Learning (EduLearn)

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Effectiveness of video education on knowledge level, attitude and intention for cervical cancer screening

Nanik Setiyawati¹, Niken Meilani², Nur Khafidhoh³, Aghniya Misty Mufidah⁴

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Received month dd, yyyy

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Keywords:

Cervical cancer screening

Video

Knowledge level

Attitude

Intention

ABSTRACT

Cervical cancer represents 7.5% of deaths caused by cancer in women. Prevention of cervical cancer can be done by cervical cancer screening. The purpose of the study was to determine the effect of video on knowledge level, attitude, and intention for cervical cancer screening in Yogyakarta. This study was a quantitative study with a quasi-experimental nonequivalent control group design. The study was carried out in April-October 2021. The population of the study was all women of childbearing age. The sample was 50 respondents for each group, experiment group and control group. The intervention was given through video education for the experiment group and pocketbooks for the control group. Data analysis used T-test, Wilcoxon test, and Mann-withney. There was a difference in the pre-test and post-test of knowledge level ($p=0,002$), attitude ($p=0,023$), intention ($p=0,005$) in the experiment group and knowledge level ($p=0,001$), attitude ($p=0,000$), intention ($p=0,004$) in the control group. There was a significant difference in women's intention ($p=0,001$) for cervical cancer screening with the video education method than pocketbooks. The method of providing educational videos and pocketbooks is effective for increasing the knowledge level, attitude, and intention for cervical cancer screening. Video has influence on intention to detection cervical cancer.

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1. INTRODUCTION

Cervical cancer is a malignancy that comes from the cervix. World Health Organization (WHO) calls cervical cancer the fourth type of cancer that most often affects women and is deadly. [1] Cervical cancer represents 7.5% of all cancer deaths in women.[2] The incidence of cancer in Indonesia is 136.2/100,000. The highest cancer incidence rate in Indonesia for women is breast cancer which is 42.1/100,000 with an average death rate of 17/100,000 population followed by cervical cancer of 23.4/100,000 population with an average death of 13.9/100,000 population.[3] Based on Riset Kesehatan Dasar (Riskesdas) in 2018, the prevalence of cancer in Indonesia showed an increase from 1.4 /1000 population in 2013 to 1.79/1000 population in 2018. The highest prevalence of cancer is in the Special Region of Yogyakarta which is 4.86/1000 population, followed by West Sumatra 2.47/1000 population and Gorontalo 2.44/1000 population.[4]

Prevention of cervical cancer can be done by doing an early cervical cancer screening because the symptoms of cervical cancer are not seen until the stage is more severe.[5] High-quality screening with cytology (Papanicolaou [Pap] test) has markedly reduced mortality from squamous cell cervical cancer, which comprises 80% to 90% of cervical cancer. Early detection of cervical cancer with IVA is a visual examination of the cervix using vinegar, which means looking at the cervix with the naked eye to detect abnormalities after using acetic acid or vinegar (3-5%).[6] Some studies have investigated the reasons that lead to low rates of women's participation in cancer screening programs including lack of knowledge and awareness of cervical cancer cited as the most common obstacle to cervical cancer screening programs.[7], [8]

The results of a study in southern Sri Lanka conducted on women and their partners showed that family income, having at least secondary education, and having good knowledge about cervical cancer are factors that influence a woman to come to a health clinic and perform an early detection test for cervical cancer.[9] The results of this study are in line with research conducted by Ayu Wulandari in 2016 that income and attitudes affect women's behavior to carry out detection of cervical cancer with IVA.[10] The results of a study conducted in Tanzania showed that the level of women's knowledge was significant in determining cervical cancer screening.[11] Research conducted in Kenya showed that 29% of the variation in cervical cancer screening was caused by the number of sources of information received.[12] Results of the study in 2016 also showed that access to information affects women's attitudes to carry out IVA screening examinations.[10] Previous research conducted by Nanik Setiyawati and Niken Meilani on the prevention of cervical cancer in mothers in Yogyakarta was to show the results of 45.1% of mothers who carried out examinations of Inspekulo Visual Acetate (IVA), there is a relationship between maternal education, knowledge levels and attitudes towards cervical cancer prevention. Mothers who do early detection of cervical cancer are still low.[13]. Based on Precede-Procede Theory, behavior is influenced by predisposing, reinforcing and enabling factors. While these factors are influenced by health education. Health education can be provided by using the right learning media. The several meta analysis have shown that technology can enhance learning and multiple studies have shown that video, can be a highly effective educational tool. Video may provide a significant means to improve student learning. Video improves the understanding of difficult concepts compared to when the video was not used to give an education.[14] Based on the background description, researchers are interested in finding out whether video media and pocketbooks are influential in improving awareness, attitude, and intention to do cervical cancer screening. The results are expected to enrich empirical evidence related to the influence of videos and pocketbooks on the level of knowledge, attitudes, and intentions of cervical cancer screening. In addition, the study results can increase knowledge and become a source of information and references to the development of reproductive health obstetrics services and future research.

2. METHOD

This study was quantitative research using a quasi design experiment nonequivalent control group design. There are two groups in this study, the first group was respondents who were informed through video and the second group was respondents who were informed through pocket book. The study was conducted in April-October 2021. The population of this study was all women in childbearing age in Yogyakarta. Research samples are taken with purposive sampling techniques. The sample number of these studies was 50 respondents in each experiment group and control group.

The dependent variables in the study were the provision of educational video in the experiment group and pocketbooks in the control group. Independent variables in the study included knowledge level, attitude, and intention for cervical cancer screening. This study collected the type of primary data from respondents by distributing questionnaires. The same questionnaire was used during the pre-test and post-test. The questionnaire used has been tested for validity and reliability by researchers. Data analysis was done with statistical test software. Data analysis used t-tests, Wilcoxon, and Mann-withney tests. Hypotheses in this study whether video education was effective for improvin level of knowledge, attitudes and intention for cervical cancer screening. The Ethical Committee of Poltekkes Kemenkes Yogyakarta number e-KEPK/POLKESYO/0345/III/2021, March ²⁹ 2021 granted the ethical approval for this study.

3. RESULTS AND DISCUSSION

3.1. Knowledge level, attitude and intention for cervical cancer screening

Table 1. Distribution of knowledge levels, attitudes, and intentions before and after being given video to the experiment group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	4	8	9	18
Less	46	92	41	82
Attitude				
Positive	22	44	26	52
Negative	28	56	24	48
Intention				
Positive	25	50	27	54
Negative	25	50	23	46

Based on table 1, it can be known that respondents of the experiment group before the intervention as much as 8% have a level of knowledge in the good category while after the intervention with education through video, the level of knowledge of respondents in the good category increased by 18%. Respondents before the intervention as much as 44% had a positive attitude for early detection of cervical cancer. After the intervention, respondents who had a positive attitude reached 52%. In the intention category, respondents' positive intentions for early detection of cervical cancer before intervention were 50%, while the number of respondents with positive intentions increased by 54% after intervention.

Table 2. Distribution of knowledge levels, attitudes, and intentions before and after being given pocketbooks to the control group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	5	10	14	28
Less	45	90	36	72
Attitude				
Positive	26	52	27	54
Negative	24	48	23	46
Intention				
Positive	26	52	28	56
Negative	24	48	22	44

Control group respondents before the intervention as much as 10% had good knowledge level while after the intervention with education through pocketbooks, the knowledge level of respondents in the good category increased by 28%. Respondents before the intervention as much as 52% had a positive attitude toward cervical cancer screening. After the intervention, respondents who had a positive attitude showed an increase of 54%. In the intention category, respondents' positive intentions for cervical cancer screening before intervention were 52%, while the number of respondents with positive intentions reached 56% after intervention.

Table 3. Differences in average knowledge levels, attitudes, and intentions before and after intervention in the experiment group and control group

Group	Mean	Mean Difference	p-value
Knowledge			
Experiment			
Pre-test	58,12		
Post-test	63,41	5,29	0,002
Control			
Pre-test	58,94		
Post-test	67,29	8,35	0,001

Attitude					
Experiment	Pre-test	76,52	3,22	0,023	
	Post-test	79,74			
Control	Pre-test	76,07	3,65	0,000	
	Post-test	79,72			
Intention					
Experiment	Pre-test	76,39	4,56	0,005	
	Post-test	80,95			
Control	Pre-test	78,53	4,05	0,004	
	Post-test	82,58			

In the experiment group based on table 4, the average level of knowledge, attitude, and intention for early detection of cervical cancer in respondents during pre-test increased during post-test. Statistical test results obtained knowledge levels (p-value 0.002), attitude (p-value 0.023) and intention (p-value 0.005) indicate that there was a mean difference in the knowledge level, attitude, and intention for cervical cancer screening between before and after the intervention with the provision of educational video. In the control group, the average knowledge level, attitude and, intention for early detection of cervical cancer in respondents during pre-test increased during post-test. The results of statistical tests obtained the level of knowledge (p-value 0.001), attitude (p-value 0.000), and intention p-value 0.004) which shows that there was a mean difference in the value of knowledge level, attitude and, intention for cervical cancer screening with the provision of education through pocketbooks.

Health education is a component of health and medical programs consisting of advanced efforts to change the behavior of individuals, groups, and communities which is a change in the way of thinking, behaving, and doing to help the experiment of changes behavior, prevention of disease and promotion of healthy living. Health education can be done by various methods and media such as movies, drama videos, storybooks, leaflets, posters, and lectures[15] Health education methods with the utilization of media such as videos, books, brochures, etc. are effective modifications to improve the scope of cervical cancer screening based on previous systematic review research.[16] The provision of health education improves knowledge and attitudes about early cervical cancer detection of IVA-type with a p-value of 0.000.[17] Health education also affects the increase in interest in cervical cancer screening.[18] In this study, health education through the provision of video and pocketbooks are an influenced by increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. This is in line with the previous study mentioned that there is an increase of average score on knowledge and attitudes by providing audiovisual and visual media education about early detection of cervical cancer p-value 0.000.[19] A recent study in 2021 also mentions that there was an influence of counseling with audiovisual media on the level of knowledge before and after counseling about cervical cancer.[20]

Video is an audiovisual educational medium. Audiovisual method education is the provision of information with media that can display the elements of images and sounds simultaneous when communicating with messages or information to reveal an event and object with its actual circumstances. Health education audiovisual methods are considered more attractive and understandable. The study mentioned that the video delivery intervention group with a paired sample t-test showed a result of 0.000. It can be concluded that there was a difference in the value of early detection behavior of cervical cancer during pre-test and post-test. In the control group with the provision of media leaflets, there was no average increase before and after the intervention p-value of 0.476.[21] Other studies also mentioned that there are different visits for cervical cancer screening in the group of education through videos and leaflets.[22] This shows that the provision of video as a medium of health education is considered effective to increase the knowledge levels, attitudes, and intentions that can affect the formation of behavior.

Knowledge is a factor that facilitates the realization of a certain behavior so often referred to as the predisposition factor in the concept of behavior Lawrence Green (1980). Knowledge is a very important domain for the formation of behavior. Positive behavior can last a long time if based on sufficient knowledge. This is because behavior occurs due to coercion or rules that can be learned and required to do.[23] Previous American research has found that women with good knowledge are 6.5 times more likely to have early detection of cervical cancer (OR 6.49; 95% CI 2.8-14.7).[24] While a study in Indonesia stated that women with good knowledge are 5.8 times more likely to have cervical cancer screening.[25]

Attitude is a factor in the occurrence of a behavior. Attitude is the readiness to react to objects. Attitude has three main components: cognition, affection, and conation. In the conation component, there is a tendency to act. The three components of the attitude form one whole attitude (total attitude). This is evidence that attitude is very closely related to the occurrence of a behavior. Attitude is covert behavior that can be manifested by real behavior (overt

behavior) when a person has reached the stage of action.[26] The intention is a cognitive and conative representation of an individual's readiness to display behavior. The intention is the determinant and disposition of behavior until the individual has the right opportunity and time to display real behavior. Attitudes and intentions are associated with early detection behaviors of cervical cancer with a p-value of 0.001 and 0.009, consecutively.[27] Women with good attitudes have the potential to do early detection of cervical cancer by 5 times compared to women with negative attitudes. The ratio of the probability of women with positive intentions to detect cervical cancer is 8.83.[28]

3.2. Differences in the average of knowledge levels, attitudes, and intentions for cervical cancer screening in the experiment group and control group

Table 4. Differences in the average of knowledge levels, attitudes, and intentions in the experiment group and the control group

Group	n	Mean±SD	Mean Difference	p-value
Knowledge				
Experiment	50	63,41±10,312	3,88	0,092
Control	50	67,29±11,531		
Attitude				
Experiment	50	79,74±7,061	0,03	0,985
Control	50	79,71±9,168		
Intention				
Experiment	50	80,95±8,431	1,63	0,001
Control	50	82,58±11,902		

The difference in the mean value of knowledge levels in the experiment group and the control group was 3.88. The results of the statistical test showed a p-value of 0.092 which means there was no significant difference between the knowledge levels of the experiment group compared to the control group. The mean attitude score for cervical cancer screening in the experiment group and control group showed a difference of 0.03. The results of the statistical test showed a p-value of 0.985, therefore it can be concluded that there is no significant difference between the value of attitudes in the experiment group and the control group. However, the average value of the experiment group was higher than the control group. The results concluded that the provision of video media is effective for increasing knowledge and attitudes but does not have a meaningful influence on the increase in the level of knowledge and attitudes with a value of $p > 0.05$. The results of previous research also stated that the provision of video media had no significant effect on the increase in knowledge and attitude. The assumption of the researchers in the study, the provision of the video did not affect the increase in knowledge level and attitude due to the ability to absorb different information from each respondent and the lack of intention and willingness of respondents to look at the information from the video in full.[29] This leads to a lack of information provided by researchers. In line with the study, the researchers' assumption of this study is that the provision of interventions in the form of providing information through video conducted online is also a difficulty in this study. Researchers are limited to being able to control whether respondents pay attention to the video and fill out questionnaires and answer statements in earnest. This can affect the results of the study.

The difference in the average value of the intention of the experiment group and the control group was 1.63. Based on statistical tests showed a p-value of 0.001 so that there can be a significant difference between the intention for cervical cancer screening in the experiment group and the control group. Intervening with educational video significantly affected the increase in the value of intention for cervical cancer screening. This is in line with a previous study that states that the desire for early detection of cervical cancer increased from 35.8% to 94.2% after intervention with a video p-value of 0.001.[30]

Planned Behavior theory explains that a person's behavior begins with an intention to behave and an intention to behave is influenced by a person's attitude towards the behavior.[31] Therefore, the provision of good manners is necessary to produce good intentions. Research suggests that positive attitudes are associated with intentions for early detection of cervical cancer (95% CI: 4,048, 9,387).[32] results of the study are supported by other studies that state that a positive attitude is the strongest determinant for the formation of good intentions OR 1.26.[33] Meanwhile, qualitative research in 2019 states that a person's knowledge of an object contains two aspects, namely positive aspects and negative aspects. Both of these aspects will determine a person's attitude. If more and more positive aspects of the object are known, it will lead to more positive attitudes.[34] Good knowledge can lead to good attitudes. This is in line with a previous study that mentioned that there is a relationship of knowledge with attitudes towards early

detection of cervical cancer with a p-value of 0.000.[35] Based on the results of the study above, the provision of educational video and pocketbooks is effective for increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. The provision of video media affects the intention of behaving in the early detection of cervical cancer. Knowledge, attitude and, intention as a unit are factors that influence the formation of behavior.

4. CONCLUSION

In the experiment group, there was a mean difference in knowledge levels, attitudes, and intentions before and after being given an intervention by providing educational video. In the control group, there was also a mean difference in knowledge levels, attitudes and, intentions before and after the intervention with the provision of education through pocketbooks. There was a significant difference between the intention for early detection of cervical cancer in the experiment group and the control group. Educational methods of providing video and pocketbooks are effective for increasing the level of knowledge, attitudes, and intentions for cervical cancer screening. Educational video significantly affected the increase in the value of intention for cervical cancer screening. Video can be used for health promotion media to increase women's participation in cervical cancer screening. For other researchers can develop other media to increase women's participation in cervical cancer of pandemic Covid-19

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BIOGRAPHIES OF AUTHORS

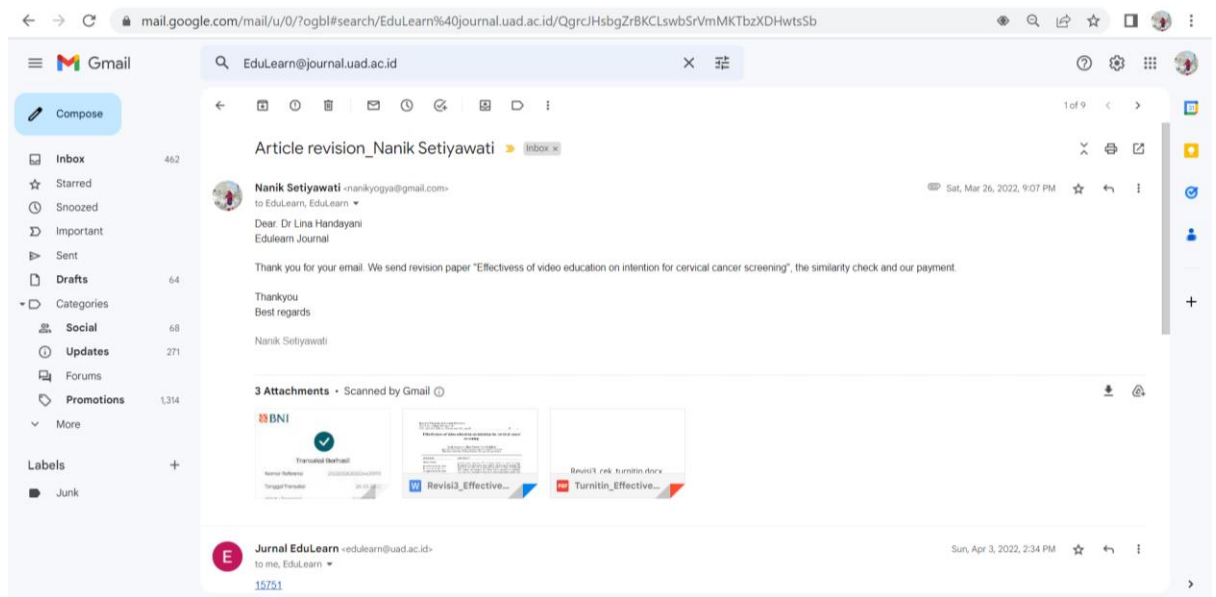
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4. BUKTI REVIEW KEDUA (9 MARET 2022)

The screenshot shows an email from Dr. Lina Handayani to a recipient. The subject is "[EduLearn] Decision Effectiveness of video education on knowledge level, attitude and intention for cervical cancer screening". The email content includes:

- Greeting: "Dear Prof./Dr./Mr./Mrs. nanik setyawan,"
- Announcement: "It is my great pleasure to inform you that your paper entitled 'Effectiveness of video education on knowledge level, attitude and intention for cervical cancer screening' has been ACCEPTED and will be published in the Journal of Education and Learning (EduLearn). This journal is ACCREDITED (recognised) SINTA 2 by the Ministry of Research and Technology/National Research and Innovation Agency, Republic of Indonesia (RISTEK-BRIN) (<https://sinta.ristekbrin.go.id/journals/detail?id=919>) and is INDEXED by ERIC Institute of Education Sciences (IES) of the U.S. Department of Education (<https://eric.ed.gov/?q=source%3A%22Journal+of+Education+and+Learning%22+ISSN-2089-9923>). Your paper will be published for forthcoming issue. Congratulations!"
- Instructions: "Your paper is in the final stage of publication, but revisions are required. Authors are encouraged to carefully consider the reviewers comments and suggestions for improvement of their manuscript. Pay attention also to the following instructions carefully!"
- Checklist: "1) PLEASE ADHERE STRICTLY THE GUIDE OF AUTHORS !! <http://iaescore.com/gfa/edulearn.docx> and pay attention to the checklist for" (The checklist items are: 2) All articles must follow the IMRAD plus C structure (1. INTRODUCTION - 2. The Advanced Theory/Proposed Method/Frameworks - specifically designed/proposed (optional) - 3. METHOD - 4. RESULTS AND DISCUSSION - 5. CONCLUSION (all included and clearly printed). See <http://iaescore.com/gfa/edulearn.docx>); 3) Add biographies of authors as our template (include links to all authors' profiles, do not delete any icons in the template). It is mandatory!! See <http://iaescore.com/gfa/edulearn.docx> --> Provide links for all authors to the 4 icons (Scholar, Scopus, Publons and ORCID); 4) Prepare all tables as our template (NOT as figure); 5) Use different PATTERNS for presenting different results in your figures-graphics (instead of different colors). It is mandatory!! Re-check all your figures. See <http://iaescore.com/gfa/edulearn.docx>; 6) Please ensure that all references have been cited in your text. Use a tool such as EndNote, Mendeley, or Zotero for reference management and formatting, and choose IEEE style. Each citation should be written in the order of appearance in the text in square brackets. For example, the first citation [1], the second citation [2], and the third and fourth citations [3], [4]. When citing multiple sources at once, the preferred method is to list each number separately, in its own brackets, using a comma or dash between numbers, as such [1], [3], [5]. It is not necessary to mention an author's name, pages used, or date of publication in the in-text citation. Instead, refer to the source with a number in a square bracket, e.g. [9], that will then correspond to the full citation in your reference list. Examples of in-text citations: "This theory was first put forward in 1970 [9]. Zadeh [10] has argued that ... Several recent studies [7], [9], [11]-[15] have suggested that ... end of the line for my research [10]."); 7) Please present all references as complete as possible and use IEEE style (include information of DOIs, volume, number, pages, etc.) if it is available, DOI information is mandatory!! See <http://iaescore.com/gfa/edulearn.docx>).
- Final instructions: "Please prepare your final paper by doing your best to avoid any delay for publication !!! Please do it seriously !!! Submit final paper along with your similarity report and your payment evidence to email: EduLearn@uad.ac.id cc: EduLearn@journal.uad.ac.id within 4 weeks. The similarity rate should be checked by using software such as iThenticate or Turnitin (that the result is below 20%). If the similarity index is more than 20%, your paper will be rescheduled for publication until the similarity is less than 20%."
- Appreciation: "We really appreciate your total commitment to supporting this journal. Your cooperation is very appreciated."
- Closing: "Best Regards, Dr. Lina Handayani"
- Footer: "To support the cost of wide open access dissemination of research results, to manage the various costs associated with handling and editing of the submitted manuscripts, and the Journal management and publication in general, the authors or the author's institution is requested to pay a"

5. BUKTI REVISI HASIL REVIEW KEDUA (26 MARET 2022)



The screenshot shows a Gmail interface with the following details:

- Search Bar:** EduLearn@journal.uad.ac.id
- Left Sidebar:** Compose, Inbox (462), Starred, Snoozed, Important, Sent, Drafts (64), Categories, Social (68), Updates (271), Forums, Promotions (1,314), More, Labels (Junk).
- Email Header:** Article revision_Nanik Setiyawati (Inbox)
- Sender:** Nanik Setiyawati <nankiyogya@gmail.com> to EduLearn, EduLearn
- Recipient:** Dr Lina Handayani, EduLearn Journal
- Date:** Sat, Mar 26, 2022, 9:07 PM
- Body Text:**

Thank you for your email. We send revision paper "Effectiveness of video education on intention for cervical cancer screening", the similarity check and our payment.

Thankyou
Best regards

Nanik Setiyawati
- Attachments:** 3 Attachments • Scanned by Gmail
 - BNI logo
 - Revisi3_Effective... (Word document)
 - Turnitin_Effective... (Word document)
- Next Email Header:** Jurnal EduLearn <edulearn@uad.ac.id> to me, EduLearn (15751), Sun, Apr 3, 2022, 2:34 PM

Effectiveness of video education on intention for cervical cancer screening

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ABSTRACT

Cervical cancer represents 7.5% of deaths caused by cancer in women. Prevention of cervical cancer can be done by cervical cancer screening. The purpose of the study was to determine the effect of video on knowledge level, attitude, and intention for cervical cancer screening in Yogyakarta. This study was a quantitative study with a quasi-experimental nonequivalent control group design. The study was carried out in April-October 2021. The population of the study was all women of childbearing age. The sample was 50 respondents for each group, experiment group and control group. The intervention was given through video education for the experiment group and pocketbooks for the control group. Data analysis used T-test, Wilcoxon test, and Mann-withney. There was a difference in the pre-test and post-test of knowledge level ($p=0,002$), attitude ($p=0,023$), intention ($p=0,005$) in the experiment group and knowledge level ($p=0,001$), attitude ($p=0,000$), intention ($p=0,004$) in the control group. There was a significant difference in women's intention ($p=0,001$) for cervical cancer screening with the video education method than pocketbooks. The method of providing educational videos and pocketbooks is effective for increasing the knowledge level, attitude, and intention for cervical cancer screening. Video has influence on intention to detection cervical cancer.

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1. INTRODUCTION

Cervical cancer is a malignancy that comes from the cervix. World Health Organization (WHO) calls cervical cancer the fourth type of cancer that most often affects women and is deadly. [1] Cervical cancer represents 7.5% of all cancer deaths in women.[2] The incidence of cancer in Indonesia is 136.2/100,000. The highest cancer incidence rate in Indonesia for women is breast cancer which is 42.1/100,000 with an average death rate of 17/100,000 population followed by cervical cancer of 23.4/100,000 population with an average death of 13.9/100,000 population.[3] Based on Riset Kesehatan Dasar (Riskesdas) in 2018, the prevalence of cancer in Indonesia showed an increase from 1.4 /1000 population in 2013 to 1.79/1000 population in 2018. The highest prevalence of cancer is in the Special Region of Yogyakarta which is 4.86/1000 population, followed by West Sumatra 2.47/1000 population and Gorontalo 2.44/1000 population.[4]

Prevention of cervical cancer can be done by doing an early cervical cancer screening because the symptoms of cervical cancer are not seen until the stage is more severe.[5] High-quality screening with cytology (Papanicolau

[Pap] test) has markedly reduced mortality from squamous cell cervical cancer, which comprises 80% to 90% of cervical cancer. Early detection of cervical cancer with IVA is a visual examination of the cervix using vinegar, which means looking at the cervix with the naked eye to detect abnormalities after using acetic acid or vinegar (3-5%).[6] Some studies have investigated the reasons that lead to low rates of women's participation in cancer screening programs including lack of knowledge and awareness of cervical cancer cited as the most common obstacle to cervical cancer screening programs.[7], [8]

The results of a study in southern Sri Lanka conducted on women and their partners showed that family income, having at least secondary education, and having good knowledge about cervical cancer are factors that influence a woman to come to a health clinic and perform an early detection test for cervical cancer.[9] The results of this study are in line with research conducted by Ayu Wulandari in 2016 that income and attitudes affect women's behavior to carry out detection of cervical cancer with IVA.[10] The results of a study conducted in Tanzania showed that the level of women's knowledge was significant in determining cervical cancer screening.[11] Research conducted in Kenya showed that 29% of the variation in cervical cancer screening was caused by the number of sources of information received.[12] Results of the study in 2016 also showed that access to information affects women's attitudes to carry out IVA screening examinations.[10] Previous research conducted by Nanik Setiyawati and Niken Meilani on the prevention of cervical cancer in mothers in Yogyakarta was to show the results of 45.1% of mothers who carried out examinations of Inspekulo Visual Acetate (IVA), there is a relationship between maternal education, knowledge levels and attitudes towards cervical cancer prevention. Mothers who do early detection of cervical cancer are still low.[13]. Based on Precede-Procede Theory, behavior is influenced by predisposing, reinforcing and enabling factors. While these factors are influenced by health education. Health education can be provided by using the right learning media. The several meta analysis have shown that technology can enhance learning and multiple studies have shown that video, can be a highly effective educational tool. Video may provide a significant means to improve student learning. Video improves the understanding of difficult concepts compared to when the video was not used to give an education.[14] Based on the background description, researchers are interested in finding out whether video media and pocketbooks are influential in improving awareness, attitude, and intention to do cervical cancer screening. The results are expected to enrich empirical evidence related to the influence of videos and pocketbooks on the level of knowledge, attitudes, and intentions of cervical cancer screening. In addition, the study results can increase knowledge and become a source of information and references to the development of reproductive health obstetrics services and future research.

2. METHOD

This study was quantitative research using a quasi design experiment nonequivalent control group design. There are two groups in this study, the first group was respondents who were informed through video and the second group was respondents who were informed through pocket book. The study was conducted in April-October 2021. The population of this study was all women in childbearing age in Yogyakarta. Research samples are taken with purposive sampling techniques. The sample number of these studies was 50 respondents in each experiment group and control group.

The dependent variables in the study were the provision of educational video in the experiment group and pocketbooks in the control group. Independent variables in the study included knowledge level, attitude, and intention for cervical cancer screening. This study collected the type of primary data from respondents by distributing questionnaires. The same questionnaire was used during the pre-test and post-test. The questionnaire used has been tested for validity and reliability by researchers. Data analysis was done with statistical test software. Data analysis used t-tests, Wilcoxon, and Mann-withney tests. Hypotheses in this study whether video education was effective for improvin level of knowledge, attitudes and intention for cervical cancer screening. The Ethical Committee of Poltekkes Kemenkes Yogyakarta number e-KEPK/POLKESYO/0345/III/2021, March ²⁹ 2021 granted the ethical approval for this study.

3. RESULTS AND DISCUSSION

3.1. Knowledge level, attitude and intention for cervical cancer screening

Respondents in this study amounted to 100 women divided into two groups from two district in Yogyakarta. Based on table 1, our findings show knowledge, attitude and intention respondents about detection of cervical cancer in experiment group. There is an increase in the number of respondents who have a good level of knowledge, positive attitudes and positive intention after the post-test.

Table 1. Distribution of knowledge levels, attitudes, and intentions before and after being given video to the experiment group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	4	8	9	18
Less	46	92	41	82
Attitude				
Positive	22	44	26	52
Negative	28	56	24	48
Intention				
Positive	25	50	27	54
Negative	25	50	23	46

Respondents of the experiment group before the intervention as much as 8% have a level of knowledge in the good category while after the intervention with education through video, the level of knowledge of respondents in the good category increased by 18%. Respondents before the intervention as much as 44% had a positive attitude for early detection of cervical cancer. After the intervention, respondents who had a positive attitude reached 52%. In the intention category, respondents' positive intentions for early detection of cervical cancer before intervention were 50%, while the number of respondents with positive intentions increased by 54% after intervention.

Table 2 show about distribution of knowledge level, attitudes and intention in control group. Similar to the experimental group, the control group also increased level of good knowledge, positive attitudes and positive intention to cervical cancer detection.

Table 2. Distribution of knowledge levels, attitudes, and intentions before and after being given pocketbooks to the control group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	5	10	14	28
Less	45	90	36	72
Attitude				
Positive	26	52	27	54
Negative	24	48	23	46
Intention				
Positive	26	52	28	56
Negative	24	48	22	44

Control group respondents before the intervention as much as 10% had good knowledge level while after the intervention with education through pocketbooks, the knowledge level of respondents in the good category increased by 28%. Respondents before the intervention as much as 52% had a positive attitude toward cervical cancer screening. After the intervention, respondents who had a positive attitude showed an increase of 54%. In the intention category, respondents' positive intentions for cervical cancer screening before intervention were 52%, while the number of respondents with positive intentions reached 56% after intervention.

To know the differenced in average knowledge levels, attitudes and intention in each group are showed in table 3. In the level of knowledge and attitudes, the control group experienced more average increases than the experimental group, but for intention in the experimental group more differences in average between pre-test and post-test.

Table 3. Differences in average knowledge levels, attitudes, and intentions before and after intervention in the experiment group and control group

Group		Mean	Mean Difference	p-value
Knowledge				
Experiment	Pre-test	58,12	5,29	0,002
	Post-test	63,41		
Control	Pre-test	58,94	8,35	0,001
	Post-test	67,29		
Attitude				
Experiment	Pre-test	76,52	3,22	0,023
	Post-test	79,74		
Control	Pre-test	76,07	3,65	0,000
	Post-test	79,72		
Intention				
Experiment	Pre-test	76,39	4,56	0,005
	Post-test	80,95		
Control	Pre-test	78,53	4,05	0,004
	Post-test	82,58		

In the experiment group based on table 4, the average level of knowledge, attitude, and intention for early detection of cervical cancer in respondents during pre-test increased during post-test. Statistical test results obtained knowledge levels (p-value 0.002), attitude (p-value 0.023) and intention (p-value 0.005) indicate that there was a mean difference in the knowledge level, attitude, and intention for cervical cancer screening between before and after the intervention with the provision of educational video. In the control group, the average knowledge level, attitude and, intention for early detection of cervical cancer in respondents during pre-test increased during post-test. The results of statistical tests obtained the level of knowledge (p-value 0.001), attitude (p-value 0.000), and intention p-value 0.004) which shows that there was a mean difference in the value of knowledge level, attitude and, intention for cervical cancer screening with the provision of education through pocketbooks.

Health education is a component of health and medical programs consisting of advanced efforts to change the behavior of individuals, groups, and communities which is a change in the way of thinking, behaving, and doing to help the experiment of changes behavior, prevention of disease and promotion of healthy living. Health education can be done by various methods and media such as movies, drama videos, storybooks, leaflets, posters, and lectures[15] Health education methods with the utilization of media such as videos, books, brochures, etc. are effective modifications to improve the scope of cervical cancer screening based on previous systematic review research.[16] The provision of health education improves knowledge and attitudes about early cervical cancer detection of IVA-type with a p-value of 0.000.[17] Health education also affects the increase in interest in cervical cancer screening.[18] In this study, health education through the provision of video and pocketbooks are an influenced by increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. This is in line with the previous study mentioned that there is an increase of average score on knowledge and attitudes by providing audiovisual and visual media education about early detection of cervical cancer p-value 0.000.[19] A recent study in 2021 also mentions that there was an influence of counseling with audiovisual media on the level of knowledge before and after counseling about cervical cancer.[20]

Video is an audiovisual educational medium. Audiovisual method education is the provision of information with media that can display the elements of images and sounds simultaneous when communicating with messages or information to reveal an event and object with its actual circumstances. Health education audiovisual methods are considered more attractive and understandable. The study mentioned that the video delivery intervention group with a paired sample t-test showed a result of 0.000. It can be concluded that there was a difference in the value of early detection behavior of cervical cancer during pre-test and post-test. In the control group with the provision of media leaflets, there was no average increase before and after the intervention p-value of 0.476.[21] Other studies also mentioned that there are different visits for cervical cancer screening in the group of education through videos and leaflets.[22] This shows that the provision of video as a medium of health education is considered effective to increase the knowledge levels, attitudes, and intentions that can affect the formation of behavior.

Knowledge is a factor that facilitates the realization of a certain behavior so often referred to as the predisposition factor in the concept of behavior Lawrence Green (1980). Knowledge is a very important domain for the formation of behavior. Positive behavior can last a long time if based on sufficient knowledge. This is because behavior occurs due to coercion or rules that can be learned and required to do.[23] Previous American research has found that women with good knowledge are 6.5 times more likely to have early detection of cervical cancer (OR 6.49; 95% CI 2.8-14.7).[24] While a study in Indonesia stated that women with good knowledge are 5.8 times more likely to have cervical cancer screening.[25]

Attitude is a factor in the occurrence of a behavior. Attitude is the readiness to react to objects. Attitude has three main components: cognition, affection, and conation. In the conation component, there is a tendency to act. The three components of the attitude form one whole attitude (total attitude). This is evidence that attitude is very closely related to the occurrence of a behavior. Attitude is covert behavior that can be manifested by real behavior (overt behavior) when a person has reached the stage of action.[26] The intention is a cognitive and conative representation of an individual's readiness to display behavior. The intention is the determinant and disposition of behavior until the individual has the right opportunity and time to display real behavior. Attitudes and intentions are associated with early detection behaviors of cervical cancer with a p-value of 0.001 and 0.009, consecutively.[27] Women with good attitudes have the potential to do early detection of cervical cancer by 5 times compared to women with negative attitudes. The ratio of the probability of women with positive intentions to detect cervical cancer is 8.83.[28]

3.2. Differences in the average of knowledge levels, attitudes, and intentions for cervical cancer screening in the experiment group and control group

Analysis with simple linear regression showed that a meaningful difference between the intention for detection of cervical cancer in the experiment group and the control group. The differences can be see in in table 4:

Table 4. Differences in the average of knowledge levels, attitudes, and intentions in the experiment group and the control group

Group	n	Mean±SD	Mean Difference	p-value
Knowledge				
Experiment	50	63,41±10,312	3,88	0,092
Control	50	67,29±11,531		
Attitude				
Experiment	50	79,74±7,061	0,03	0,985
Control	50	79,71±9,168		
Intention				
Experiment	50	80,95±8,431	1,63	0,001
Control	50	82,58±11,902		

The difference in the mean value of knowledge levels in the experiment group and the control group was 3.88. The results of the statistical test showed a p-value of 0.092 which means there was no significant difference between the knowledge levels of the experiment group compared to the control group. The mean attitude score for cervical cancer screening in the experiment group and control group showed a difference of 0.03. The results of the statistical test showed a p-value of 0.985, therefore it can be concluded that there is no significant difference between the value of attitudes in the experiment group and the control group. However, the average value of the experiment group was higher than the control group. The results concluded that the provision of video media is effective for increasing knowledge and attitudes but does not have a meaningful influence on the increase in the level of knowledge and attitudes with a value of $p > 0.05$. The results of previous research also stated that the provision of video media had no significant effect on the increase in knowledge and attitude. The assumption of the researchers in the study, the provision of the video did not affect the increase in knowledge level and attitude due to the ability to absorb different information from each respondent and the lack of intention and willingness of respondents to look at the information from the video in full.[29] This leads to a lack of information provided by researchers. In line with the study, the researchers' assumption of this study is that the provision of interventions in the form of providing information through video conducted online is also a difficulty in this study. Researchers are limited to being able to control whether respondents pay attention to the video and fill out questionnaires and answer statements in earnest. This can affect the results of the study.

The difference in the average value of the intention of the experiment group and the control group was 1.63. Based on statistical tests showed a p-value of 0.001 so that there can be a significant difference between the intention for cervical cancer screening in the experiment group and the control group. Intervening with educational video significantly affected the increase in the value of intention for cervical cancer screening. This is in line with a previous study that states that the desire for early detection of cervical cancer increased from 35.8% to 94.2% after intervention with a video p-value of 0.001.[30]

Planned Behavior theory explains that a person's behavior begins with an intention to behave and an intention to behave is influenced by a person's attitude towards the behavior.[31] Therefore, the provision of good manners is necessary to produce good intentions. Research suggests that positive attitudes are associated with intentions for early detection of cervical cancer (95% CI: 4,048, 9,387).[32] results of the study are supported by other studies that state that a positive attitude is the strongest determinant for the formation of good intentions OR 1.26.[33] Meanwhile, qualitative research in 2019 states that a person's knowledge of an object contains two aspects, namely positive aspects and negative aspects. Both of these aspects will determine a person's attitude. If more and more positive aspects of the object are known, it will lead to more positive attitudes.[34] Good knowledge can lead to good attitudes. This is in line with a previous study that mentioned that there is a relationship of knowledge with attitudes towards early detection of cervical cancer with a p-value of 0.000.[35] Based on the results of the study above, the provision of educational video and pocketbooks is effective for increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. The provision of video media affects the intention of behaving in the early detection of cervical cancer. Knowledge, attitude and, intention as a unit are factors that influence the formation of behavior.

4. CONCLUSION

In the experiment group, there was a mean difference in knowledge levels, attitudes, and intentions before and after being given an intervention by providing educational video. In the control group, there was also a mean difference in knowledge levels, attitudes and, intentions before and after the intervention with the provision of education through pocketbooks. There was a significant difference between the intention for early detection of cervical cancer in the experiment group and the control group. Educational methods of providing video and pocketbooks are effective for increasing the level of knowledge, attitudes, and intentions for cervical cancer screening. Educational video significantly affected the increase in the value of intention for cervical cancer screening. Video can be used for health promotion media to increase women's participation in cervical cancer screening. For other researchers can develop other media to increase women's participation in cervical cancer of pandemic Covid-19

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KOMITE ETIK PENELITIAN KESEHATAN POLITEKNIK KESEHATAN KEMENKES YOGYAKARTA

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KETERANGAN LAYAK ETIK *DESCRIPTION OF ETHICAL APPROVAL*

No. e-KEPK/POLKESYO/0345/III/2021

Protokol penelitian yang diusulkan oleh:
The research protocol proposed by

Peneliti Utama : Nanik Setiyawati, SST.,S.Pd.,M.Kes.
Principal in Investigator

Nama Institusi : Poltekkes Kemenkes Yogyakarta
Name of the Institution

Dengan judul:
Title

"Pengaruh Video Terhadap Tingkat Pengetahuan, Sikap dan Niat untuk Deteksi Dini Kanker Leher Rahim Pada Wanita Usia Subur di Yogyakarta"

Dinyatakan layak etik sesuai 7 (tujuh) Standar WHO 2011, yaitu 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, 4) Risiko, 5) Bujukan/Eksploitasi, 6) Kerahasiaan dan Privacy, dan 7) Persetujuan Setelah Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator setiap standar.

Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011 Standards, 1) Social Values, 2) Scientific Values, 3) Equitable Assessment and Benefits, 4) Risks, 5) Persuasion/Exploitation, 6) Confidentiality and Privacy, and 7) Informed Consent, referring to the 2016 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard.

Pernyataan Laik Etik ini berlaku selama kurun waktu tanggal 29 Maret 2021 sampai dengan tanggal 29 Maret 2022.

This declaration of ethics applies during the period March 29, 2021 until March 29, 2022.

March 29, 2021

Professor and Chairperson,

Ketua KEPK,



Drh. Idi Setyobroto, M.Kes.

Lampiran: e-KEPK/POLKESYO/0345/III/2021

LE dengan catatan, tetap laksanakan dengan protokol kesehatan ketat.

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Effectiveness of video education on intention for cervical cancer screening

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ABSTRACT

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Cervical cancer represents 7.5% of deaths caused by cancer in women. Prevention of cervical cancer can be done by cervical cancer screening. The purpose of the study was to determine the effect of video on knowledge level, attitude, and intention for cervical cancer screening in Yogyakarta. This study was a quantitative study with a quasi-experimental nonequivalent control group design. The study was carried out in April-October 2021. The population of the study was all women of childbearing age. The sample was 50 respondents for each group, experiment group and control group. The intervention was given through video education for the experiment group and pocketbooks for the control group. Data analysis used T-test, Wilcoxon test, and Mann-withney. There was a difference in the pre-test and post-test of knowledge level ($p=0,002$), attitude ($p=0,0254$), intention ($p=0,005$) in the experiment group and knowledge level ($p=0,001$), attitude ($p=0,000$), intention ($p=0,004$) in the control group. There was a significant difference in women's intention ($p=0,001$) for cervical cancer screening with the video education method than pocketbooks. The method of providing educational videos and pocketbooks is effective for increasing the knowledge level, attitude, and intention for cervical cancer screening. Video has influence on intention to detection cervical cancer.

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1. INTRODUCTION

Cervical cancer is a malignancy that comes from the cervix. World Health Organization (WHO) calls cervical cancer the fourth type of cancer that most often affects women and is deadly. [1] Cervical cancer represents 7.5% of all cancer deaths in women. [2] The incidence of cancer in Indonesia is 136.2/100,000. The highest cancer incidence rate in Indonesia for women is breast cancer with 42.1/100,000 with an average death rate of 17/100,000 population followed by cervical cancer of 2.10/100,000 population with an average death of 13.9/100,000 population. [3] Based on Riset Kesehatan Dasar (Riskesdas) in 2018, the prevalence of cancer in Indonesia showed an increase from 1.4 /1000 population in 2013 to 1.79/1000 population in 2018. The highest prevalence of cancer is in the Special Region of Yogyakarta which is 4.86/1000 population, followed by West Sumatra 2.47/1000 population and Gorontalo 2.44/1000 population. [4]

Prevention of cervical cancer can be done by doing an early cervical cancer screening because the symptoms of cervical cancer are not seen until the stage is more severe. [5] High-quality screening with cytology (Papanicolaou

16 [Pap] test) has 41 kedly reduced mortality from squamous cell cervical cancer, which comprises 80% to 90% of cervical cancer. Early detection of cervical cancer with IVA is a visual examination of the cervix using vinegar, which means looking at the cervix with the naked eye to detect abnormalities after using acetic acid or vinegar (3-5%).[6] Some studies have investigated the reasons that lead to low rates of women's participation in cancer screening programs including lack of knowledge and awareness of cervical cancer cited as the most common obstacle to cervical cancer screening programs.[7], [8]

The results of a study in southern Sri Lanka conducted on women and their partners showed that family income, having at least secondary education, and having good knowledge about cervical cancer are factors that influence a woman to come to a health clinic and perform an early detection test for cervical cancer.[9] The results of this study are in line with research conducted by Ayu Wulandari in 2016 that income and attitudes affect women's behavior to carry out detection of cervical cancer with IVA.[10] The results of a study conducted in Tanzania showed that the level of women's knowledge was significant in determining cervical cancer screening.[11] Research conducted in Kenya showed that 29% of the variation in cervical cancer screening was caused by the number of sources of information received.[12] Results of the study in 2016 also showed that access to information affects women's attitudes to carry out IVA screening examinations.[10] Previous research conducted by Nanik Setiyawati and Niken Meilani on the prevention of cervical cancer in mothers in Yogyakarta was to show the results of 45.1% of mothers who carried out examinations of Inspekulo Visual Acetate (IVA), there is a relationship between maternal education, knowledge levels and attitudes towards cervical cancer prevention. Mothers who do early detection of cervical cancer are still low.[13]. Based on Precede-Procede Theory, behavior is influenced by predisposing, reinforcing and enabling factors. While these 8 factors are influenced by health education. Health education can be provided by using the right learning media. The several meta analysis have shown that technology can enhance learning and multiple studies have shown that video, can be a highly effective educational tool. Video may provide a significant means to improve student learning. Video improves the understanding of difficult concepts compared to when the video was not used to give an education.[14] Based on the background description, researchers are interested in finding out whether video media and pocketbooks are influential in improving awareness, attitude, and intention to do cervical cancer screening. The results are expected to enrich empirical evidence related to the influence of videos and pocketbooks on the level of knowledge, attitudes, and intentions of cervical cancer screening. In addition, the study results can increase knowledge and become a source of information and references to the development of reproductive health obstetrics services and future research.

2. METHOD

This study was quantitative research using a quasi design experiment nonequivalent control group design. There are two groups in this study, the first group was respondents who were informed through video and the second group was respondents who were informed through pocket book. The study was conducted in April-October 2021. The population of this study was all women in childbearing age in Yogyakarta. Research samples are taken with purposive sampling techniques. The sample number of these studies was 50 respondents in each experiment group and control group.

48 The dependent variables in the study were the provision of educational video in the experiment group and pocketbooks in the control group. Independent variables in the study included knowledge level, attitude, and intention for cervical cancer screening. This study collected the type of primary data from respondents by distributing questionnaires. The same questionnaire was used during the pre-test and post-test. The questionnaire used has been tested for validity and reliability by researchers. Data analysis was done with statistical test software. Data analysis used t-tests, Wilcoxon, and Mann-withney tests. Hypotheses in this study whether video education was effective for improvin level of knowledge, attitudes and intention for cervical cancer screening. The Ethical Committee of Poltekkes Kemenkes Yogyakarta number e-KEPK/POLKESYO/0345/III/2021, March 29 2021 granted the ethical approval for this study.

3. RESULTS AND DISCUSSION

3.1. Knowledge level, attitude and intention for cervical cancer screening

Respondents in this study amounted to 100 women divided into two groups from two district in Yogyakarta. Based on table 1, our findings show knowledge, attitude and intention respondents about detection of cervical cancer in experiment group. There is an increase in the number of respondents who have a good level of knowledge, positive attitudes and positive intention after the post-test.

Table 1. Distribution of knowledge levels, attitudes, and intentions before and after being given video to the experiment group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	4	8	9	18
Less	46	92	41	82
Attitude				
Positive	22	44	26	52
Negative	28	56	24	48
Intention				
Positive	25	50	27	54
Negative	25	50	23	46

Respondents of the experiment group before the intervention as much as 8% have a level of knowledge in the good category while after the intervention with education through video, the level of knowledge of respondents in the good category increased by 18%. Respondents before the intervention as much as 44% had a positive attitude for early detection of cervical cancer. After the intervention, respondents who had a positive attitude reached 52%. In the intention category, respondents' positive intentions for early detection of cervical cancer before intervention were 50%, while the number of respondents with positive intentions increased by 54% after intervention.

Table 2 show about distribution of knowledge level, attitudes and intention in control group. Similar to the experimental group, the control group also increased level of good knowledge, positive attitudes and positive intention to cervical cancer detection.

Table 2. Distribution of knowledge levels, attitudes, and intentions before and after being given pocketbooks to the control group

Category	Pre-test		Post-test	
	n=50	%	n=50	%
Knowledge				
Good	5	10	14	28
Less	45	90	36	72
Attitude				
Positive	26	52	27	54
Negative	24	48	23	46
Intention				
Positive	26	52	28	56
Negative	24	48	22	44

Control group respondents before the intervention as much as 10% had good knowledge level while after the intervention with education through pocketbooks, the knowledge level of respondents in the good category increased by 28%. Respondents before the intervention as much as 52% had a positive attitude toward cervical cancer screening. After the intervention, respondents who had a positive attitude showed an increase of 54%. In the intention category, respondents' positive intentions for cervical cancer screening before intervention were 52%, while the number of respondents with positive intentions reached 56% after intervention.

To know the differenced in average knowledge levels, attitudes and intention in each group are showed in table 3. In the level of knowledge and attitudes, the control group experienced more average increases than the experimental group, but for intention in the experimental group more differences in average between pre-test and post-test.

Table 3. Differences in average knowledge levels, attitudes, and intentions before and after intervention in the experiment group and control group

Group		Mean	Mean Difference	p-value
Knowledge				
Experiment	Pre-test	58,12	5,29	0,002
	Post-test	63,41		
Control	Pre-test	58,94	8,35	0,001
	Post-test	67,29		
Attitude				
Experiment	Pre-test	76,52	3,22	0,023
	Post-test	79,74		
Control	Pre-test	76,07	3,65	0,000
	Post-test	79,72		
Intention				
Experiment	Pre-test	76,39	4,56	0,005
	Post-test	80,95		
Control	Pre-test	78,53	4,05	0,004
	Post-test	82,58		

In the experiment group based on table 4, the average level of knowledge, attitude, and intention for early detection of cervical cancer in respondents during pre-test increased during post-test. Statistical test results obtained knowledge levels (p-value 0.002), attitude (p-value 0.023) and intention (p-value 0.005) indicate that there was a mean difference in the knowledge level, attitude, and intention for cervical cancer screening between before and after the intervention with the provision of educational video. In the control group, the average knowledge level, attitude and, intention for early detection of cervical cancer in respondents during pre-test increased during post-test. The results of statistical tests obtained the level of knowledge (p-value 0.001), attitude (p-value 0.000), and intention (p-value 0.004) which shows that there was a mean difference in the value of knowledge level, attitude and, intention for cervical cancer screening with the provision of education through pocketbooks.

Health education is a component of health and medical programs consisting of advanced efforts to change the behavior of individuals, groups, and communities which is a change in the way of thinking, behaving, and doing to help the experiment of changes behavior, prevention of disease and promotion of healthy living. Health education can be done by various methods and media such as movies, drama videos, storybooks, leaflets, posters, and lectures[15] Health education methods with the utilization of media such as videos, books, brochures, etc. are effective modifications to improve the scope of cervical cancer screening based on previous systematic review research.[16] The provision of health education improves knowledge and attitudes about early cervical cancer detection of IVA-type with a p-value of 0.000.[17] Health education also affects the increase in interest in cervical cancer screening.[18] In this study, health education through the provision of video and pocketbooks are an influenced by increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. This is in line with the previous study mentioned that there is an increase of average score on knowledge and attitudes by providing audiovisual and visual media education about early detection of cervical cancer p-value 0.000.[19] A recent study in 2021 also mentions that there was an influence of counseling with audiovisual media on the level of knowledge before and after counseling about cervical cancer.[20]

Video is an audiovisual educational medium. Audiovisual method education is the provision of information with media that can display the elements of images and sounds simultaneous when communicating with messages or information to reveal an event and object with its actual circumstances. Health education audiovisual methods are considered more attractive and understandable. The study mentioned that the video delivery intervention group with a paired sample t-test showed a result of 0.0015. It can be concluded that there was a difference in the value of early detection behavior of cervical cancer during pre-test and post-test. In the control group with the provision of media leaflets, there was no average increase before and after the intervention p-value of 0.476.[21] Other studies also mentioned that there are different visits for cervical cancer screening in the group of education through videos and leaflets.[22] This shows that the provision of video as a medium of health education is considered effective to increase the knowledge levels, attitudes, and intentions that can affect the formation of behavior.

Knowledge is a factor that facilitates the realization of a certain behavior so often referred to as the predisposition factor in the concept of behavior Lawrence Green (1980). Knowledge is a very important domain for the formation of behavior. Positive behavior can last a long time if based on sufficient knowledge. This is because behavior occurs due to coercion or rules that can be learned and required to do.[23] Previous American research has found that women with good knowledge are 6.5 times more likely to have early detection of cervical cancer (OR 6.49; 95% CI 2.8-14.7).[24] While a study in Indonesia stated that women with good knowledge are 5.8 times more likely to have cervical cancer screening.[25]

Attitude is a factor in the occurrence of a behavior. Attitude is the readiness to react to objects. Attitude has three main components: cognition, affection, and conation. In the conation component, there is a tendency to act. The three components of the attitude form one whole attitude (total attitude). This is evidence that attitude is very closely related to the occurrence of a behavior. Attitude is covert behavior that can be manifested by real behavior (overt behavior) when a person has reached the stage of acting.[23],[26] The intention is a cognitive and conative representation of an individual's readiness to display behavior. The intention is the determinant and disposition of behavior until the individual has the right opportunity and time to display real behavior. Attitudes and intentions are associated with early detection behaviors of cervical cancer with a p-value of 0.001 and 0.009, consecutively.[27] Women with good attitudes have the potential to do early detection of cervical cancer by 5 times compared to women with negative attitudes. The ratio of the probability of women with positive intentions to detect cervical cancer is 8.83.[28]

3.2. Differences in the average of knowledge levels, attitudes, and intentions for cervical cancer screening in the experiment group and control group

Analysis with simple linear regression showed that a meaningful difference between the intention for detection of cervical cancer in the experiment group and the control group. The differences can be seen in table 4:

Table 4. Differences in the average of knowledge levels, attitudes, and intentions in the experiment group and the control group

Group	n	Mean±SD	Mean Difference	p-value
Knowledge				
Experiment	50	63,41±10,312	3,88	0,092
Control	50	67,29±11,531		
Attitude				
Experiment	50	79,74±7,061	0,03	0,985
Control	50	79,71±9,168		
Intention				
Experiment	50	80,95±8,431	1,63	0,001
Control	50	82,58±11,902		

The difference in the mean value of knowledge levels in the experiment group and the control group was 3.88. The results of the statistical test showed a p-value of 0.092 which means there was no significant difference between the knowledge levels of the experiment group compared to the control group. The mean attitude score for cervical cancer screening in the experiment group and control group showed a difference of 0.03. The results of the statistical test showed a p-value of 0.985. Therefore it can be concluded that there is no significant difference between the value of attitudes in the experiment group and the control group. However, the average value of the experiment group was higher than the control group. The results concluded that the provision of video media is effective for increasing knowledge and attitudes but does not have a meaningful influence on the increase in the level of knowledge and attitudes with a value of $p > 0.05$. The results of previous research also stated that the provision of video media had no significant effect on the increase in knowledge and attitude. The assumption of the researchers in the study, the provision of the video did not affect the increase in knowledge level and attitude due to the ability to absorb different information from each respondent and the lack of intention and willingness of respondents to look at the information from the video.[29] This leads to a lack of information provided by researchers. In line with the study, the researchers' assumption of this study is that the provision of interventions in the form of providing information through video conducted online is also a difficulty in this study. Researchers are limited to being able to control whether respondents pay attention to the video and fill out questionnaires and answer statements in earnest. This can affect the results of the study.

The difference in the average value of the intention of the experiment group and the control group was 1.63. Based on statistical tests showed a p-value of 0.001 so that there can be a significant difference between the intention for cervical cancer screening in the experiment group and the control group. Intervening with educational video significantly affected the increase in the value of intention for cervical cancer screening. This is in line with a previous study that states that the desire for early detection of cervical cancer increased from 35.8% to 94.2% after intervention with a video p-value of 0.001.[30]

Planned Behavior theory explains that a person's behavior begins with an intention to behave and an intention to behave is influenced by a person's attitude towards the behavior.[31] Therefore, the provision of good manners is necessary to produce good intentions. Research suggests that positive attitudes are associated with intentions for early detection of cervical cancer (95% CI: 4,048, 9,387).[32] results of the study are supported by other studies that state that a positive attitude is the strongest determinant for the formation of good intentions OR 1.26.[33] Meanwhile, qualitative research in 2019 states that a person's knowledge of an object contains two aspects, namely positive aspects and negative aspects. Both of these aspects will determine a person's attitude. If more and more positive aspects of the object are known, it will lead to more positive attitudes.[34] Good knowledge can lead to good attitudes. This is in line with a previous study that mentioned that there is a relationship of knowledge with attitudes towards early detection of cervical cancer with a p-value of 0.000.[35] Based on the results of the study above, the provision of educational video and pocketbooks is effective for increasing the knowledge levels, attitudes, and intentions for cervical cancer screening. The provision of video media affects the intention of behaving in the early detection of cervical cancer. Knowledge, attitude and, intention as a unit are factors that influence the formation of behavior.

4. CONCLUSION

In the experiment group, there was a mean difference in knowledge levels, attitudes, and intentions before and after being given an intervention by providing educational video. In the control group, there was also a mean difference in knowledge levels, attitudes and, intentions before and after the intervention with the provision of education through pocketbooks. There was a significant difference between the intention for early detection of cervical cancer in the experiment group and the control group. Educational methods of providing video and pocketbooks are effective for increasing the level of knowledge, attitudes, and intentions for cervical cancer screening. Educational video significantly affected the increase in the value of intention for cervical cancer screening. Video can be used for health promotion media to increase women's participation in cervical cancer screening. For other researchers can develop other media to increase women's participation in cervical cancer of pandemic Covid-19

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