

The Effectiveness of The Use of Cervical Cancer Prevention Guideline Book on Women Participation in Visual Inspection with Acetic acid (VIA)

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Abstract—Cervical cancer is the second leading cause of death for women in the world after breast cancer. It is estimated that every 40-45 new cases occur and around 20-25 people die due to cervical cancer. In Kudus, the coverage of early detection of cervical cancer by the VIA method is only 2% of the number of women aged 30-50 years. This study aims to determine the effectiveness of health promotion and guidebook on the early detection of cervical cancer as an effort to increase the participation in women's VIA examination. This study was quasi-experimental with the design of the pretest posttest non equivalent control, The samples as many as 66 respondents were divided into two groups selected taken using consecutive sampling technique. Later on, the data were analyzed using McNemar and Chi Square tests. The results showed McNemar test results in the intervention group found there was an increase in knowledge and participation in the VIA examination compared to the control group. Obtained differences between the intervention group and the control group using the Chi Square test with the *p* value of 0.003. Providing health promotion and guidebooks for early detection of cervical cancer are very effective in increasing the knowledge and women participation of VIA examinations in Mejubo Subdistrict, Kudus Regency.

Keywords—Guideline book, VIA Participation

I. INTRODUCTION

Health is an important thing for people, without health, they may not be able to carry out daily activities. Healthy condition according to the *World Health Organization* (WHO) is a state of well-being which includes physical, mental, and social conditions that are free from disease or disability. Health is an important factor to improve the quality of human life socially and economically. [1]

The problem of maternal mortality in Indonesia can be caused by a number of factors, such as maternal mortality, such due to the causes directly involving bleeding. Bleeding becomes the main causes of death mostly due to. In there are also indirect causes of maternal mortality in Indonesia, such as anemia and cervical cancer [2]

According to Virginia & Mayer (2012) [3], cervical cancer is a type of cancer that occurs in the cervical area, which is the part of the uterus located below which opens towards the vaginal opening. This cancer is caused by the *Human Papilloma Virus* (HPV) infection. Based on the data from the Ministry of Health of the Republic of Indonesia around 490,000 women worldwide are diagnosed with cervical it includes 240,000 cases of female deaths due to cervical cancer which the 80% of cases occur in developing countries. According to the Indonesian Cervical Cancer Care Foundation in 2012, cervical cancer patients in Indonesia reach 15,000 cases, while in Central Java, there are 2,259 cases. [4]

Some factors that can increase the incidence of cervical cancer include the lack of information about how to prevent cervical cancer, high parity with short labor distances, having sexual relations at a young age or getting married at a young age, changing sexual partners, being passive and active smokers, long-term use of oral contraceptives for more than 5 years, sexually transmitted diseases, and low economic status [5]

The high number of cases in developing countries is due the limited access to screening and treatment, not different from the lack of information, participation, and knowledge of the community which can cause the prevalence of cancer continuing to increase every year. In developing countries, there are still many women are not well-informed on cervical cancer and also the health service is inadequate. This is due to the low

economic level and lack of knowledge of women about how to prevent cervical cancer. [6]

The best prospect in the prevention of cancer is to make people aware through health education. If women, especially mothers, get enough knowledge about the dangers of cervical cancer and the benefits of IVA examination, they will realize the importance of early detection and prevention. Until now, most Indonesian people, especially women, are still relatively unfamiliar with the importance of Visual Inspection with Acetic acid (VIA) or pap smears to detect the possibility of having cervical cancer early. [7]

This study aims to determine the effectiveness of health promotion using a guidebook for early detection of cervical cancer as an effort to participate in women's VIA. Health education using leaflet promotion media, can easily be lost or left behind after counseling. In this study, researchers replaced the leaflet promotion media with a cervical cancer prevention guidebook, in which the researchers hope that after counseling the book would be kept and be read again.

II. METHOD

This study was conducted in Payaman Village, Mejobo Sub-District, Kudus Regency, using a quasi-experimental method with a pretest posttest non equivalent control group design. The population in this study were 220 women in the rural village who had active sexual relationships. The number of samples in this study were 66 people who met the inclusion and exclusion criteria, divided into 2 groups, namely the intervention group and the control group. Included in the inclusion criteria are women who are married, do not have children or who already have children. Meanwhile, those included in the exclusion criteria were women who experienced pain and menstruation during the study. The sampling technique used was consecutive sampling. The data collection in this study employed interview techniques and questionnaire dissemination. The questionnaire questions given to were about the knowledge on cervical cancer including the signs of cervical cancer symptoms, their causes, ways to prevent them, health information obtained, the media to find information about cervical cancer and the intended health facilities for early detection of cervical cancer. The statistical tests used McNemar and Chi Square tests. This research was conducted in September - October 2018. This research was approved by the ethics committee of the Muhammadiyah Kudus University.

III. FINDING

a. Univariate Analysis

Based on the work in the intervention group and the control group, the number of respondents was dominated by the women having status as of a housewife. As working is considered to provide the environment where the women can experience and directly or indirectly learn many things, the housewives may lose opportunities to learn from the workplaces. Therefore, many housewives' knowledge is limited to

the household issues so that they are not exposed to knowledge on how to prevent cervical cancer.

Based on the results of the study it is noted that the age of the respondents included in the category of reproductive age category for intervention group had 27 people (82%) and the control group was 23 people (70%). The highest level of education of respondents is at the high school level, including 19 people (58%) in the intervention group and 17 people (52%) in the control group. In term of working, many respondents who do work or become full housewives were 20 people (61%) in the intervention group and 18 people (55%) in the control group. For family support, the majority of respondents in the interval group did not receive family support for conducting VIA that is 20 people (60%), and in the control group there were 23 respondents who did not receive family support (70%).

The intervention group when conducted pretest had good knowledge of 20 people (61%), while in the control group it was dominated by the bad knowledge group of 25 people (76%). When posttest in the intervention group had 31 people (94%) good knowledge, and in the control group, there were 20 people having poor knowledge (61%).

The participation in VIA in the intervention group and control group, when pretested, was dominated by respondents who did not participate in the VIA. After the posttest, respondents' participation rose to 19 people (58%) for the intervention group and 7 people (21%) for the control group.

b. Bivariate Analysis

The cervical cancer prevention guide book is very effective in increasing the knowledge of the intervention group about cervical cancer. Along with the increasing knowledge in the intervention group, it also increases the participation in VIA. They are more confident and no longer afraid to have an early detection through VIA.

Table 1. The Analysis of the effectiveness of health education with a guideline book on the knowledge to prevent cervical cancer before and after being given to the intervention group

| | | Knowledge before intervention | | | | Total | | P value |
|-------------------------------|------|-------------------------------|------|-----|-----|-------|------|---------|
| | | Well | | Bad | | n | % | |
| | | n | (%) | n | (%) | | | |
| Knowledge before intervention | Well | 19 | 57,6 | 1 | 3 | 20 | 60,6 | 0,003 |
| | Bad | 12 | 36,4 | 1 | 3 | 13 | 39,4 | |
| Total | | 31 | 94 | 2 | 6 | 33 | 100 | |

Based on table 3, it is known that the results of McNemar's test on health education with the cervical cancer prevention guidebook in the intervention group received p value of 0.003 (<0.05) Than, it could be declared that it is effective in the knowledge after being given to the intervention group.

Table 2. The Analysis of the effectiveness of health education with a guideline book on women's knowledge to prevent cervical cancer

| | | Knowledge before intervention | | | | Total | | P value |
|-------------------------------|------|-------------------------------|------|-----|-----|-------|------|---------|
| | | well | | Bad | | | | |
| | | n | (%) | n | (%) | n | (%) | |
| Knowledge before intervention | Well | 8 | 24,5 | 0 | 0 | 8 | 24,2 | 0,063 |
| | Bad | 15 | 45,1 | 0 | 0 | 15 | 45,1 | |
| Total | | 13 | 39,4 | 0 | 0 | 13 | 100 | |

Based on table 4, it is known that the results of McNemar's test on health education with a guide to prevention of cervical cancer before and after in the control group, cannot the women's knowledge with a p value of 0.063 (> 0.05).

Table 3. The analysis of the effectiveness of health education with a guideline book on the VIA participation to prevent cervical cancer before and after being given to the intervention group

| | | Participation before intervention | | | | Total | | P value |
|-----------------------------------|-----|-----------------------------------|------|----|------|-------|------|---------|
| | | Yes | | No | | | | |
| | | n | (%) | n | (%) | n | (%) | |
| Participation before intervention | Yes | 10 | 30,3 | 0 | 0 | 10 | 30,3 | 0,004 |
| | No | 9 | 27,3 | 14 | 42,4 | 23 | 69,7 | |
| Total | | 19 | 57,6 | 14 | 42,4 | 33 | 100 | |

From the table above, it is known that the results of the McNemar test on the participation of VIA in the intervention group showed the pvalue of 0.004 (<0.05), so that it could be declared effective in increasing women's participation in VIA before and after being given to the intervention group.

Table 4 The Analysis of the effectiveness of health education with a guideline book on VIA Participation to prevent cervical cancer before and after being given to the control group

| | | Participation before intervention | | | | Total | | P value |
|-----------------------------------|-----|-----------------------------------|------|----|------|-------|------|---------|
| | | Yes | | No | | | | |
| | | n | (%) | n | (%) | n | (%) | |
| Participation before intervention | Yes | 5 | 15,1 | 0 | 0 | 5 | 15,1 | 0,500 |
| | No | 2 | 6,1 | 26 | 78,8 | 28 | 84,9 | |
| Total | | 7 | 21,2 | 26 | 78,8 | 33 | 100 | |

Based on table 6, it was found that the McNemar test for participation in VIA before and after the control group was found to be unable to increase women's participation in VIA with p value 0.500 (> 0.05).

Table 5. The Analysis of the differences in VIA participation between the intervention group and the control group after being given health education using a cervical cancer prevention guideline book.

| Participation variable | Participation | | | | P value |
|------------------------|---------------|------|----|------|---------|
| | Yes | | No | | |
| | n | (%) | n | (%) | |
| Intervention | 19 | 57,6 | 14 | 42,4 | 0,003 |
| Control | 7 | 21,2 | 26 | 78,8 | |

From the Chi Square test results, it is obtained that the p value is 0.003 (<0.05). Thus, it can be concluded that there is a difference after being given health education using the manual for cervical cancer prevention of women's participation in VIA between the intervention group and the control group

IV. DISCUSSION

1. Based on Characteristics

Based on the results of the study it was known that the intervention group and the control group were the respondents in the with the reproductive age category. When associated with health knowledge, reproductive age has the maturity to make decisions in attitudes and actions for prevention of an illness. [7] The risk for cervical cancer is higher in women of the unproductive age of 36-55 the years, but now there has been an increase in the number of women of reproductive age who experience abnormal cells of the body so that before the age of 30 years it is recommended to detect this cervical. [8]

In the level of education, most respondents have high school education. With the level of secondary education, one will more easily digest a new experience and knowledge [9]. The lower the level of individual education, the lower the interest in preventing a disease. [10]

Moreover, the intervention and the control group were dominated by women as housewives thus workplace provide experience and knowledge directly or indirectly in the way that many housewives who only relate to people around the house don't know how to prevent cervical cancer.

Based on family support it is known that some of the respondents in the intervention group and the control group did not receive family support for conducting VIA. In families, husbands have an important role to play in encouraging wives to prevent disease [11]. The lack of health promotion on the prevention of cervical cancer to the family causes the low level of community knowledge making it difficult to change the unhealthy into healthy behavior in the community. [12]

Based on the knowledge and women participation it was found that respondents had good knowledge at the pretest in the intervention group, but there was little participation of women in conducting VIA. In contrast to the control group, the

majority of respondents had poor knowledge at the pretest and slightly improved on their knowledge after the posttest. Knowledge is a factor that can influence individual health behavior. Individual interest and motivation in making decisions to prevent an illness are factors that cause changes in healthy behavior. Thus, it can be concluded that attitude and healthy behavior will not successfully work if not accompanied by other supporting factors. [13]

2. The knowledge before and after being given health education using a manual for treating cervical cancer in the intervention group and in the control group.

The results of the study stated that knowledge in the intervention group and the control group experienced an increase after being given health education using a manual in preventing cervical cancer.

The results of this study are in line with the research conducted by Kusumaningrum *et al* (2016) [14] which states that there is a significant difference in knowledge before and after peer group education in the intervention group. The average knowledge of WUS after being given education has increased compared to before being given education.

3. The participation in VIA before and after being given health education uses a cervical cancer prevention guideline book in the intervention group and in the control group.

The results of the study stated that women's participation in VIA increased after being given health promotion using the cervical cancer prevention guidebook in the intervention and control groups. The difference in the completeness of the information directly and indirectly obtained by women in Mejobo raises different perceptions on cervical cancer. This information difference is an obstacle to the realization of behavior for early detection of cervical cancer. Therefore, many respondents in the control group did not participate in VIA.

The results of this study are supported by research conducted by Einstein *et al* (2012) [15] stating that there is a relationship between knowledge and the participation of VIA in Keden Village. The respondents who are well-informed and have enough knowledge participate in performing VIA.

The women who gain knowledge from health education about cervical cancer will be more vigilant about cervical cancer. As a result, the women of both reproductive and non-reproductive age will conduct VIA as a way to prevent cervical cancer.

4. The different participation in VIA detection in participation received VIA between intervention groups and control groups given health education using cancer prevention guideline book

The group that was given an intervention in the form of health education using a cervical cancer prevention guideline shows a higher change compared to the control group who that did not get intervention. Then it can be concluded that the intervention given successfully changed the attitude of women in conducting VIA. The knowledge gained by in the intervention group after being given health education using a cervical cancer prevention guidebook, could be then used to encourage the participation in performing VIA compared to the control group.

Health education does not only provide information, but also creates activities that can empower individuals to make decisions about their health problems. [17]

V. CONCLUSIONS

Health education using a cervical cancer prevention guidebook is very effective in increasing women's knowledge and participation in VIA examination. There were differences in participation in VIA examinations between the intervention group and the control group after being given health education using a guide book for prevention of cervical cancer in women in Payaman Village, Mejobo Sub-District, Kudus Regency.

From the results of this study, it is expected that health workers, especially in the Puskesmas in Mejobo Sub-district, are able to provide regular education to women in both reproductive and non-reproductive age about cervical cancer. It is crucial to conduct so that there is no difference in information about prevention of cervical cancer.

VI. REFERENCES

- [1] Rijkaart DC, Berkhof J, Rozendaal L, van Kemenade FJ, Bulkman NW, Heideman DA, "Human papillomavirus testing for the detection of high-grade cervical intraepithelial neoplasia and cancer: final results of the POBASCAM randomised controlled trial," *Lancet Oncol*, vol. 13, no. 3, pp. 78-88, 2012.
- [2] Bruni L, Albero G, Serrano B, Mena M, Gómez D, Muñoz J, Bosch FX, de Sanjosé S, "CO/IARC Information Centre on HPV and Cancer (HPV Information Centre)," *Human Papillomavirus and Related Diseases in Indonesia*, Indonesia, 2018.
- [3] Virginia A., Moyer MD, "Screening for Cervical Cancer: U.S Preventive Services Task Force Recommendation Statement," *Annals of Internal Medicine*, vol. 153, no. 12, pp. 880-894, 2012.
- [4] Dinas Kesehatan Provinsi Jawa Tengah, "Buku Profil Kesehatan Provinsi Jawa Tengah Tahun 2012," Dinas Kesehatan , Jawa Tengah, 2012.
- [5] Irianto K, *Epidemiologi Penyakit Menular Dan Tidak Menular Panduan Klinis.*, Bandung: Alfabeta, 2014.

- [6] Warner KH, Kevin AA, David C, Diane DD, Robert AG, Francisco ARG, Walter KK, Stewart M, Edward JM, Debbie S, Mark S, Nicolas W, Herschel WL, Mark HE, "Use of Primary High-risk Human Papillomavirus Testing for Cervical Cancer Screening: Interim Clinical Guidance," *Gynecology Oncology*, vol. 136, no. 2, pp. 178-182, 2015.
- [7] Made Ni., Nunuk S., Pancrasia M, "Hubungan Tingkat Pengetahuan dan Sikap Wanita Usia Subur (WUS) dengan Pemeriksaan Inspeksi Visual Asam Asetat (IVA) di Puskesmas Buleleng I," *Jurnal Magister Kedokteran Keluarga*, vol. 1, no. 1, pp. 57-66, 2011.
- [8] Whitlock EP, Vesco KK, Eder M, Lin JS, Senger CA, Burda BU, "Liquidbased cytology and human papillomavirus testing to screen for cervical cancer: a systematic review for the U.S. Preventive Services Task Force," *Ann Intern Med*, vol. 155, no. 6, pp. 87-97, 2011.
- [9] Akinyemiju T, Ogunsina K, Sakhujia S, Ogbhodo V, Braithwaite D, "Life-course Socioeconomic Status and Breast and Cervical Cancer Screening: analysis of the WHO's Study on Global Ageing and Adult Health (SAGE)," *BMJ Live*, vol. 6, no. 11, pp. 05-13, 2016.
- [10] Sprague BL, Dietz AT, Gangnon RE, Ramchandani BS, Hampton JM, Robert SA, Remington MD, Newcomb PA, "Socioeconomic status and survival after an invasive cervical cancer diagnosis," *NIH Public Access*, vol. 117, no. 7, pp. 1-15, 2011.
- [11] Yerramilli P, Dugge O, Enkhtuya P, Knaul F, DEmaio AR, "Exploring Knowledge, Attitudes, and Practices Related to Breast and Cervical Cancer in Mongolia: A National Population-Based Survey," *The Oncologist*, vol. 20, no. 1, pp. 1266-1273, 2015.
- [12] Ronco G, Giorgi-Rossi P, Carozzi F, Confortini M, Dalla Palma P, Del Mistro A, "Efficacy of human papillomavirus testing for the detection of invasive cervical cancers and cervical intraepithelial neoplasia: a randomised controlled trial," *Lancet Oncol*, vol. 11, no. 2, pp. 49-57, 2010.
- [13] Pukkala, E., Malila, N., Hakama, M, "Socioeconomic Differences in Incide of Cervical Cencer in Finland by Cell Type," *Acta Oncologica*, vol. 49, no. 2, pp. 180-184, 2010.
- [14] Fadhilla HN., Mudigdo A., Rahardjo SS, "Effect of Age and Socio Economic Status on the Quality of Life of Patients with Cervical Cancer Undertaking Chemotherapy at Dr. Moewardi Hospital Surakarta," *Journal of Epidemiology and Public Health*, vol. 2, no. 1, pp. 11-19, 2017.
- [15] Kusumaningrum T., Pradanie R., Yunitasari, "The Role of Family and Quality of Life in Patients with Cervical Cancer," *Jurnal Ners*, vol. 11, no. 1, pp. 112-117, 2016.
- [16] Einstein MH., Joanne KR., Richard JC., Jacquelyn MS., James PH., Joseph PC, "Quality of life in cervical cancer survivors s: Patient and provider perspectives on common complications perspectives on common complications," *Gynecol Oncol*, vol. 1, no. 16, pp. 3-7, 2012.
- [17] Nursalam EF, Pendidikan Dalam keperawatan, Jakarta: Salemba medika, 2008.