

# INCREASING WOMEN OF CHILDBEARING AGE'S KNOWLEDGE OF REPRODUCTIVE ORGANS SELF-EXAMINATION (ROSE) FOR EARLY CERVICAL CANCER DETECTION WITH A DEMONSTRATION METHOD IN RIAU PROVINCE

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## Abstract

**Background:** Nurses play an essential role in health services. According to the policy of the Minister of Health of the Republic of Indonesia, number 40 of 2017, they have independent authority as professionals and develop professional careers. Many hospitals still have not implemented policies for developing professional career paths for clinical nurses. **Introduction:** Optimal understanding of the examination of early detection of cervical cancer in women, can prevent cervical cancer, that is, malignant diseases that can attack the reproductive organs of a woman. Goal: By having women of childbearing age self-examine for cervical cancer screening using a demonstration method in the province of Riau, this study aims to increase knowledge about reproductive organs. **Methods:** A pre-experimental-test-post-test design from one group was used in this study, and a demonstration time of counseling was given for 30 minutes, given twice for two weeks to women of childbearing age, to more quickly understand the content of the video. Using the purposive sampling technique, a total of 55 respondents were included in the study, which was carried out in the Garuda Pekanbaru Health Center's working area. The Reproductive Organs Self-Examination (ROSE) knowledge questionnaire served as the measuring tool and underwent validity and reliability testing. Using the Wilcoxon test, univariate and bivariate data analyses were performed. **Results:** Enhancing women's knowledge of reproductive organs through self-examination among those of childbearing age is crucial for cervical cancer screening, employing the demonstration method in Riau Province. The results obtained in this study, show that the p-value is 0.000, indicating the demographic profile of the participants. It revealed that 49.1 percent were in the late adulthood stage, 49.1 percent belonged to the Minang tribe, 80 percent were multiparous women, 50.9 percent had a high school education, and 72.7 percent were housewives. **Conclusion:** The identification of cervical cancer screening through the ROSE technique has the potential to enhance the understanding of women in their reproductive years regarding the implementation of cervical cancer screening. **Recommendation:** This study can serve as a reference for healthcare institutions to increase women's knowledge during childbearing age when they are very at risk of being easily exposed is about the prevention of cervical cancer.

**Keywords:** Cervical Cancer, Early Detection, Knowledge, ROSE, Women Childbearing Age.

## INTRODUCTION

Cervical cancer is a malignancy in the female cervical organs, where the main cause is the Human Papilloma Virus and 90% of women have the main complaint is yellowing vaginal discharge, odor, and itching coming out of vaginal fluid (Tezcan, 2014). Cervical cancer is an abnormal disease of the cervix characterized by uncontrolled growth of abnormal cells. The malignancy of cancer cells damages tissues, invades neighboring parts of the body, and spreads to other organs (Nurlelawati et al., 2018). This virus is associated with 90% of cervical squamous cell carcinomas (Daniyal et al., 2015).

HPV numbers 16 and 18 cause invasive cervical cancer (Fowler et al., 2021). Cervical cancer is the fourth most common cancer in the reproductive organs of a woman worldwide, precisely located on the cervix (Arbyn et al., 2020). If all women do not take good care of their reproductive organs, an estimated 26 million men will suffer from cervical cancer, and of these, 17 million women will die needlessly from cervical cancer by 2030 (Manafe, 2014).

The Ministry of Health of the Republic of Indonesia has identified that in 2019, the incidence of cervical cancer jumped sharply to 23.4 per 100,000 women and the average mortality rate was 13.9 per 100,000 women, which has resulted in almost 50% of maternal deaths due to cervical cancer.

The Riau Provincial Health Office in 2017, recorded 1,278 positive women with cervical cancer. Cervical cancer patients were found in 681 cases, with a prevalence of 0.063 per 100,000 population, (Riau Provincial Health Office, 2020). Cervical cancer is a reproductive health problem that needs attention from various parties (Mayanda, 2019).

Factors linked to cervical cancer screening include inadequate knowledge of the disease, incorrect cancer diagnoses, and a negative attitude about surgery. Cervical cancer screening can be greatly impacted by low understanding and ignorance of the screening technique (Endalew et al., 2020). Low cervical cancer screening rates are also largely caused by cultural norms, beliefs, and unfavorable opinions about cancer (Fentie et al., 2020).

Lower knowledge about HPV, the majority of women consider it as the cause of cervical cancer, but not infrequently women do not even know the cause of cervical cancer, so with their ignorance, women do not want to act to know what cervical cancer is. Women comprehend the advantages of screening in preventing the development of cancer once they have access to basic health information, and if given the chance, they will go above and beyond screening (McCarthy et al, 2017).

Some obstacles to obtaining information about HPV, include not knowing how it is used, the use of the vaccine, when it should be given to the mother, how old the mother is when taking HPV, and from where the vaccine should be obtained, so most women do not try to get the vaccine, to prevent cervical cancer. Riz et al. in 2020).

A high incidence of cervical cancer and a high risk of HPV infections are linked to several factors. To increase the use of primary and secondary preventive interventions, knowledge and attitudes about these issues are crucial (Bhatt and Bathija, 2018). To prevent cervical cancer in women, it is now known that thorough screening for the disease and good socialization can help detect early signs of the disease (Cunningham et al. (2015)). The enhancement of women's factor in cervical cancer screening is a potential role for health workers and healthcare providers (Al-A.

Effective screening programs, particularly the Pas smear, have helped developing nations combat cases of cervical cancer since treatment and screening can stop the disease before it reaches the next stage, though many screenings are conducted.

In impoverished nations like Cambodia, where most individuals lack access to basic testing, this is still the case (Touch & Oh, 2018). Women are eager to have a Pap smear test if given the opportunity because they think it can be a beneficial tool in the detection of cervical cancer (Heena et al., 2019).

Keep in mind by all women, that the main cause of cervical cancer is the human papillomavirus, which can spread rapidly through sexual intercourse. There are many other risk factors, including having many sexual partners, engaging in sexual activity as a child, having a large number of children, getting married and having children young, not cleaning and hygienic female organs, having a low socioeconomic status, using hormonal contraceptives for more than five years, having STDs, and smoking (Kasa et al, 2018). It has been demonstrated that a decrease in cervical cancer awareness poses a threat to its prevention and treatment. Women who are diagnosed with the disease have physical, financial, psychological, and charitable challenges in their everyday lives, which negatively impacts their quality of life (Binka et al, 2017). In both developed and developing nations, HPV vaccination is the key to ending cervical cancer (Yuanyue et al., 2018).

Effective preventive programs have the potential to significantly lower the incidence of cervical cancer, but there are drawbacks to any widespread screening initiative that targets healthy populations. By identifying and treating pre-cancer cases before they develop into cancer, screening primarily reduces the risk of cervical cancer. Furthermore, screening helps identify women who may benefit from cervical cancer treatment when the disease is still treatable in its early stages.

It is not possible to prevent anything by screening alone. Treatment must be connected to. Likely, the screening program won't have any effect on the incidence of cervical cancer if such a link cannot be established. A preventive program can also lead to favorable results in terms of the caliber of medical facilities and services; these can include updated training for healthcare professionals, better infrastructure, heightened awareness of women's reproductive health, and the creation of a quality control and quality assurance program. Screening carries some risks, including the possibility of over-detection of pre-cancer in all screening tests discussed here. E. false-positive results), resulting in women who aren't more likely to develop invasive cancer at that time being overtreated. Nonetheless, the advantages of early identification of cervical pre-cancer (i.e. E. true-positive outcomes) when cancer treatment is available, far exceed the comparatively minor side effects that any of the treatment modalities mentioned have on women. The chance of receiving a false-negative result from screening poses an even greater risk because it could lead to the absence of disease symptoms and a lost window of time for treating pre-cancerous or early-stage cancer.

It is important to make sure that screening is limited to the target population specified by the national program and that funds are set aside sufficiently to support screening for all of these women as well as any required follow-up. For women who are diagnosed with cancer to obtain the proper care and referral, the screening program must also guarantee the existence of a working referral system.

Department of Health in Indonesia there three initiatives underway to prevent cervical cancer, according to 2010's No. 796/MENKES/SK/VII. Primary preventive measures include health promotion and targeted protection programs that use information about cervical cancer, healthy lifestyle choices, and HPV vaccination administration to lower risk. Given the low level of knowledge among women of childbearing age regarding cervical cancer prevention, the best approach to raise awareness of the disease is through health advice. After people see a particular object, they gain knowledge. Human senses—hearing, taste, smell, touch—are the sources of sensations. It is through the eyes and ears that humans learn (Notoatmodjo, 2014). It's critical to

comprehend cervical cancer prevention strategies because fertile women are susceptible to the disease (Zibako et al. 20, 2021). Improving the self-examination of reproductive organs by women of childbearing age is essential for cervical cancer early diagnosis using a demonstration technique. Individuals can witness directly the procedures involved in cervical cancer early detection. A study conducted by Triharini M et al. (2019) demonstrated that improving mothers' knowledge and attitude towards early detection of cervical cancer through Reproductive Organ self-examination led to a significant increase in awareness and attitudes regarding early detection. Similarly, research by Rosdiana, Zubaidah, Norfitri R, and Alkai S (2022) revealed that mothers who received training in the Reproductive Organ Self Examination (ROSE) Method were able to comprehend and implement early detection measures for cervical cancer effectively.

Health counseling using guidebooks makes it easier for someone to receive and understand information about how to prevent cervical cancer and easy ways to increase knowledge (Febrini, 2020). With the health counseling method using guidebooks, learning can easily be received by the community (Patidar, 2013). Research by Mamiri et al, (2020) explained, the use of guidance and Counseling methods, found a significant effect on self-efficacy in tuberculosis patients from the phenomenon and description above, the researcher chose to conduct research with the title Increasing of Reproductive Organs Self-Examination Knowledge Women of Childbearing Age for Early Detection Cervical Cancer with Demonstration method.

### **Objectives**

This study aims to improve women's reproductive organ self-examination (ROSE) knowledge by using a demonstration approach in the province of Riau for the early identification of cervical cancer.

### **METHOD AND DESIGN**

A pre-experimental-test-post-test design from one group was used in this study, and a demonstration time of counseling was given for 30 minutes, given twice for two weeks to women of childbearing age, to more quickly understand the content of the video. Using the purposive sampling technique, a total of 55 respondents were included in the study, which was carried out in the Garuda Pekanbaru Health Center's working area. The Reproductive Organs Self-Examination (ROSE) knowledge questionnaire served as the measuring tool and underwent validity and reliability testing. Using the Wilcoxon test, univariate and bivariate data analysis was performed in the Pre-Experiment research design with the One Group Pre-Post Test design. The sampling method utilized was nonprobability sampling, specifically the purposive sampling type as outlined by Sugiyono (2017).

Inclusion criteria for participation in the study encompassed women of childbearing age between 20-45 years who are married, have no prior history of reproductive organ diseases, and lack knowledge regarding cervical cancer prevention. Maintaining respondent confidentiality was a priority for the researchers as emphasized by Sumantri (2015). The researchers delivered a session on Increased Knowledge of Reproductive Organs Self-Examination for Women of Childbearing Age to aid in the early detection of cervical cancer using a Demonstration method. Each session lasted for 30 minutes and was conducted twice. Subsequently, after a 3-day interval, respondents were requested to complete the questionnaire once more.

One-and two-variate analysis was used to analyze the data. Women's knowledge of reproductive age in experimental groups was found to have changed both before and after the intervention, according to a bivariate analysis employing a = 0.05 Wilcoxon test. Ethical Approval Number: 432/UN.19.5.1.8/KEPK.FKp/2022.

## RESULT AND DISCUSSION

**Table 1: Characteristics of Research Respondents (N = 55)**

Characteristic	Number of Respondents	
	N=55	100%
<b>Age of Respondents:</b>		
Late Teens (17–25)	9	16,4
Earlier Adults (26–35)	19	34,5
Late Adults (36-45)	27	49,1
<b>Parity:</b>		
Nullipara	1	1,8
Primiparous	10	18,2
Multiparous	44	80,0
<b>Education:</b>		
Not Attending School	0	0
Primary Education	3	5,5
Secondary Education	8	14,5
High School Senior	28	50,9
College/D3/S1, etc	16	29,1
<b>Occupation:</b>		
Work	15	27,3
Housewife	40	72,7
Total	55	100

Table 1 shows that the highest age of respondents is Late Adult (36-45 years), 49.1%. The majority of multiparous parity is 80.0%, Senior High School education 50.9%, housewife 72.7.

**Table 2: The mean level of education among women who are fertile both before and after receiving Enhanced Understanding of Reproductive Organs Self-Examination of Childbearing Age Women for Early Cervical Cancer Detection by Demonstration Technique**

Group	Number	Mean	SD	Min	Max
<i>Pre-test</i>	55	15,98	3,280	7	21
<i>Post-test</i>	55	20,11	1,257	16	22

Table 2, The data indicates that, on average, women of childbearing age have increased their knowledge of reproductive organ self-examination by 15 points, with a standard deviation of 3 points 280, for the early detection of cervical cancer. Women of reproductive age have an average increased knowledge of 20 points11, with a standard deviation of 1 point 257, for the self-examination of their reproductive organs to detect cervical cancer early through demonstration methods. Between 16 and 22, is the lowest and maximum value that was obtained.

**Table 3: Wilcoxon Test Analysis Results**

Variable	Amount	Mean	SD	Min-Max	p-value
<i>Pre-test</i>	55	15,98	3,280	7-21	0,000
<i>Post-test</i>	55	20,11	1,257	16-22	



Table 3 presents data from 55 participants who were given more information about the reproductive organs and how to self-examine women of childbearing age to detect cervical cancer early. The results show that before being 20.11 (SD = 1.257), the respondents' score was 15.98 (SD = 3.280). The pre-test values, which were 7–21 at the lowest and maximum, rose to 16–22 in the post-test. A p-value of 0.000 was obtained from statistical test results using the Wilcoxon test. This demonstrates that raising the awareness of reproductive organs among women who are ready to have children is an effective way to increase their knowledge.

## DISCUSSION

### Meaning of Credentials in Professional Practice of Nursing

It was found that the majority of the research participants were in their late adult years. The National Family Planning Coordinating Board (Badan Koordinasi Keluarga Berencana Nasional/BKKBN) (2016) states that women are most fertile between the ages of 20 and 45. Fertile women must learn more about the prevention of cervical cancer. Age affects a person's thinking and capacity for catching. Notoadmodjo (2017) asserts that knowledge grows with age. In agreement with the results of Malahere et al. 2019 a mature age, when the peak age is achieved, for late adulthood to establish opinions about something that influences health behavior. The findings also show that some late-adult women still engage in harmful cervical cancer preventative practices.

The study revealed that most respondents had multi-level equality, with a majority of women having a parity >4 being at higher risk of developing cervical cancer. Fitriyani's research found that a significant portion of respondents had a high parity rate, with women who have given birth frequently being more susceptible to HPV due to reproductive organ wounds. This can lead to cervical cancer if left untreated. The majority of respondents had a secondary education, which plays a crucial role in increasing awareness and knowledge about cervical cancer prevention. Messakh's study highlighted that women with higher education levels are more likely to be informed and knowledgeable about the disease. Additionally, a study on health education through online media in Sikka District in 2020 demonstrated the importance of knowledge and behavior in preventing cervical cancer among women of childbearing age.

Housewives made up the bulk of the study's respondents. According to Masrurroh's (2019) research, this study supports the notion that, with the average respondent being a housewife, there is a correlation between occupation and knowledge of early detection of cervical cancer through VIA among women of childbearing age. Because of their work environment, which can both directly and indirectly impart knowledge, the majority of respondents, according to research by Finaninda et al. (2015), are housewives with less knowledge. Curiosity-driven sensory processes can yield knowledge, which can then serve as the foundation for the development of behavior (Donsu, 2017). Women of childbearing age can develop attitudes, interests, and behaviors related to cervical cancer prevention by having a solid understanding of the disease. Knowledge is influenced by both internal and external factors, according to Wawan and Dewi (2017). Internal factors include age, occupation, and education, while external factors include sociocultural and environmental factors. The pre-test questionnaire results indicated that following health counseling, knowledge about women of childbearing age increased. The post-test assessment identifies the lowest

score as 16 and the highest score as 22, with an average score (mean) of 20.11 percent. The results of the study, the lowest number was 7 and the highest number was 21, with an average score (mean) of 15.98 percent. The study's findings indicate that by learning more about cervical cancer, women of childbearing age who had no prior knowledge of the disease's prevention may come to understand it and become interested in it.

Fitriyani's research (2021), found that the results of increasing respondents' knowledge based on pretest and post-test average scores and pre-test average and post-test scores were 63.33 to 82.17, having a significant result, p-value: 0.000, the researchers indicate that health counseling methods are very effective in increasing knowledge on early detection of cervical cancer for women. Lubis & Tanjung's research (2021), Identifies, that the average value of knowledge before and after treatment is given leaflet media has increased, namely 10.23 to 14.30 with p-value = 0.001.

According to Nurmala (2018), health education is a dynamic, structured learning process that tries to change behavior by enhancing knowledge, developing new skills, and altering attitudes toward leading a healthy lifestyle. A person can obtain and comprehend a variety of facts from the cervical cancer prevention guidebook, which can then be utilized as material for thought and decision-making (Febrini, 2020).

The findings indicated a p-value of 0.000, indicating that there are variations in the reproductive organ self-examination knowledge of women of childbearing age, before and after being taught how to use this method as a demonstration of cervical cancer prevention. Using the guiding and counseling strategy, research by Mamiri et al. (2021) showed a substantial effect on knowledge both before and after a health education intervention, it indicates a p-value of (0.000). A difference in awareness about cervical cancer screening between before and after health education is demonstrated by research by Barus & Panggabean (2020), with a p-value of (0.03). According to research by Adesta & Nua (2020), knowledge and behavior in the prevention of cervical cancer in women of childbearing age in public health in Nanga, Sikka District, are significantly impacted after Health Education about Early Detection of Cervical Cancer Through Online Media is offered with a p-value of 0.000. The study conducted by Messakh (2019) revealed a noteworthy distinction in the level of awareness of cervical cancer among women in Sumowono village who were of childbearing age and pre- and post-audiovisual health education.

The results of the study, from the average pre-test and post-test scores, indicated that p-value (0.000), while for bivariate data analysis with Wilcoxon statistical test, identified significant knowledge in the average knowledge in women of reproductive age before and after obtaining the provision of reproductive organ self-examination (ROSE) education for early detection of cervical cancer through demonstration methods in the working area of Garuda Public Health Center, Pekanbaru, Riau Province.

## CONCLUSION

The study, which had 55 participants, aimed to teach women of reproductive age how to self-examine their reproductive organs (ROSE) to obtain a better understanding of the early identification of cervical cancer.

### Conflict of interest disclosure

In the research, writing, and/or publication of the paper, the author(s) state, there is no conflict of interest.

### Recognitions

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