

Clinical Evaluation For Cancer Cerviks Detection With Pap Smears Testing

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Abstract. Cervical cancer is a type of cancer that arises from the cells of the lower cervix which is connected to the vagina. According to the Global Burden of Cancer Information (GLOBOCAN) from the International Agency for Research on Cancer (IARC), in 2012 there were 16 cases of cancer per 100,000 population worldwide, with a total of 569,847 new cases. In Indonesia, cervical cancer screening is still inadequate due to a lack of information about its benefits among Indonesian women. Around 5% of women in Indonesia have knowledge about pap smears and receive early detection services through this test. The results of structured interviews with anatomical pathology laboratory officers at RA Kartini Hospital Jepara show that pap smear examinations for the detection of cervical cancer have increased every year. Objective: To find out an overview of the evaluation of cervical cancer detection clinics through examining pap smear results at RA Kartini Hospital, Jepara. Research method: This research uses a quantitative descriptive method with a survey research design. The population in this study was 70 women with pap smear examinations from January to December 2023. Based on data from the anatomical pathology laboratory, it was stated that of the 70 women who underwent cervical cancer screening via pap smear, data was obtained for 51 women with evaluation results and 19 women without evaluation. The population used in this study were women who underwent pap smears with an evaluation of 51 women. Sampling using the total sampling method came from secondary data sourced from reports from the anatomical pathology section of Kartini Jepara Hospital. The test analysis used is Descriptive statistics percentage. Research Results: The results of the research show that the distribution of characteristics of patients who underwent Pap smear examinations was mostly 32 women (62.7%) aged 31-60 years, and the frequency distribution of Pap smear evaluations in detecting cervical cancer was negative for 41 women (80.4%). % is declared negative if the anatomical pathology is negative for intraepithelial lesion or malignancy (NILM), NILM atrophic vaginitic, NILM non-specific chronic inflammatory process, NILM non-specific inflammatory process. Frequency distribution of pap smear evaluation in detecting cervical cancer with positive results of 10 women (19.6%) were declared positive if the anatomical pathology was low-grade squamous intraepithelial lesion (L-SIL) or atypical squamous cells (ASC-US) or atypical glandular cells or High-grade squamous intraepithelial lesion (H-SIL) or atypical glandular cells (AGS). Conclusion: The majority of people in the pap smear examination were adults with an age range of 31-60 years, 32 women (62.7%) and the highest number of pap smear evaluation results were 41 women (80.4%) with negative results.

Key words: Cervical cancer, Pap smear

INTRODUCTION

Cervical cancer is a type of cancer that develops in the cells of the cervix, especially at the bottom of the uterus which connects to the vagina. Most cases of cervical cancer are affected by various types of Human Papillomavirus (HPV) infection, which is a sexually transmitted infection. Some types of HPV do not show visible symptoms and the infection can heal on its own without requiring treatment. There are also types of HPV that can cause genital warts, although this type does not increase the risk of cervical cancer (Prastio & Rahma, 2023).

According to information from the Global Burden of Cancer (GLOBOCAN) and the International Agency for Research on Cancer (IARC), in 2012 there were 16 cancer cases per 100,000 population in the world, with the number of new cases reaching 569,847. Malawi, with a population of 1 million, has 75 cases, followed by Mozambique and Comoros. Based on data from the World Health Organization (WHO) in 2014, there were more than 528,000 new cases and 266,000 deaths due to cervical cancer worldwide in women aged 15-44 years. Cervical cancer is the fourth most common cancer in women, with around 570,000 new cases in 2018 and accounts for 6.6% of total cancer cases in women. About 90% of cancer deaths occur in low- and middle-income countries (Prastio & Rahma, 2023).

Cervical cancer screening in Indonesia is still very low due to lack of information about cervical cancer screening. For Indonesian women, only around 5% of women are exposed to pap smears (Hanifah & Sulistyorini, 2019) and receive early detection services through pap smear tests (Wahidin & Febrianti, 2020). The government has implemented an early detection program for cervical cancer as regulated in the Regulation of the Minister of Health of the Republic of Indonesia No. 796/MENKES/SK/VII/2010 concerning Technical Guidelines for Controlling Breast and Cervical Cancer. Currently, the cervical cancer early detection program has been optimized to improve the prevention and early detection of

cancer in Indonesian women, including facilitating free pap smears through the National Health Insurance (BPJS Health). However, despite this government program, there are still many women who do not undergo cervical cancer screening (Umami *et al.*, 2021).

In 2018, there were 19,734 cases of cervical cancer in Central Java Province, with the Temanggung area having the highest proportion of positive VIA tests, namely 26.7% (BPS, 2021). One of the causes of cervical cancer is HPV infection and Herpes simplex virus type 2, which are known to be factors that trigger cervical carcinoma. In addition, sperm contains complement histones which can react with cervical cell DNA. The alkaline nature of sperm can cause hyperplasia and neoplasia in cervical cells. Cervical cancer is characterized by abnormal cell growth in the cervix (Ahmad, 2020 in(Rochayati & Ernawati, 2023).

Pap smear is an accurate, simple and affordable cervical cancer detection test. This test is done by examining cells taken from the cervix under a microscope. Pap smears are generally cheap, fast, and can be done in clinics, hospitals and other health facilities. This test can be done at any time, except during menstruation. Every woman who has had sexual relations is advised to undergo a pap smear once a year (Wahidin & Febrianti, 2020).

The low level of education and knowledge regarding Pap smears is caused by ignorance or lack of information about preventing cervical cancer through Pap smear tests, which can result in cervical cancer not being detected early. When a woman has sufficient knowledge, beliefs will arise regarding the importance of pap smears. Pap smears are done well if they are supported by the people around them. Social support from the family refers to the help and assistance that the family considers available and can be given to other family members (Wahidin & Febrianti, 2020). Increasing public knowledge and attitudes about cervical cancer is an important investment in cancer prevention, both through changing behavior and early detection of cervical cancer (Porajow *et al.*, 2024).

Based on research by(Prastio & Rahma,(2023) There is a relationship between education level and knowledge about early cervical cancer screening showing a p value of 0.000 for female UISU employees. This relationship is very consistent, because the education level of employees varies from SMA/SMK, D3, S1, to master's. Differences in data based on educational experience, level of social interaction, study time, and various examinations carried out by highly qualified UISU staff show that employees with higher education better understand the importance of early screening for cervical cancer through Pap smears.

The low awareness of women of childbearing age (WUS) to undergo Pap smear examinations is caused by various reasons, such as lack of knowledge about the symptoms of cervical cancer, such as vaginal bleeding and bleeding outside the menstrual cycle, fear of the diagnosis results, embarrassment about undergoing examinations, and lack of understanding. about the importance of pap smears. This happens because women of childbearing age often never receive information about the importance of examinations for married women (Wahidin & Febrianti, 2020).

Several factors that hinder Pap smears include the behavior of women of childbearing age who are reluctant to undergo examinations due to lack of knowledge about Pap smear tests, embarrassment, and fear of cervical examinations. Health workers, especially those in economically weak circles, also affect access to information, facilities and health services which are still limited to carrying out pap smears. Other reasons include confusion and doubt about the importance of the examination, lack of information about its benefits, fear of the results of the examination, and considerations from the husband or family (Enggayati & Idaningsih, 2018).

Based on research by Samaria (2022) Education or health promotion is carried out to increase understanding and knowledge of women of childbearing age and influence their motivation to carry out early detection of disease. This health education was delivered to female participants of childbearing age over 21 years in Bogor, both individually and in groups. The educational activity was attended by 40 women of childbearing age. The pretest results showed an average score of 5.48, while the average posttest score reached 9.68. There was an increase in the average knowledge score of 4.2 between pretest and posttest, with a p-value of 0.00 (CI 95%). These results indicate that the increase in knowledge is statistically significant. This educational activity succeeded in increasing understanding regarding early detection of cancer in women of childbearing age.

Previous research by Widyaningsih *et al.* (2023) showed the survey results show that parents' knowledge regarding Human Papillomavirus (HPV) Vaccination in grade 5 elementary schools in the

Randulawangi health center area is mostly at a moderate level, with 32 respondents (40.5%) in this category, followed by the good category with 30 respondents (38%) and the less category with 17 respondents (21.5%). This data shows that parents' understanding of vaccines is still limited by their perception of the information they receive. This research describes parents' understanding of the indications, objectives, schedule, benefits, side effects, and contraindications of the HPV vaccine. Respondents had the lowest understanding regarding the side effects of HPV vaccination, while the highest understanding was related to the HPV vaccination schedule. In general, the scope of parental knowledge shows that the majority of respondents only understand a few aspects, so their knowledge can be categorized as moderate.

Behaviors related to pap smear examinations include attitudes of women who are hesitant to take part. Supporting factors include the behavior of health workers in providing information to women, although currently they are still at the stage of introduction and incomplete understanding of how to analyze and carry out these examinations. Because of this, most women still lack information and have not had a pap smear. Increased awareness is expected to increase participation in screening programs. With a better understanding of the cervix and related issues, women can be aware of the risk of cervical cancer and the importance of screening to actively participate in this program (Puspitasari *et al.*, 2011 in (Khoirunnisa *et al.*, 2023).

RSUD RA Kartini Jepara is a type B educational hospital which provides regional health services in Jepara Regency. RSUD RA Kartini Jepara provides rooms and services for people registered in the integrated social welfare data (DTKS). for cervical cancer services at pap smear examinations, RSUD RA Kartini Jepara provides BPJS services making it easier for people to carry out examinations at no cost and has good quality service in Jepara.

METHODS

This type of research is a descriptive study with a survey design. Descriptive study is a research method carried out with the aim of creating an objective picture or description of a situation (Notoatmodjo, 2012). The descriptive survey method is directed at describing or describing a situation in a community or society. The data used in this study uses secondary data, namely by looking at Medical Records (MR) results of pap smear anatomical pathology examinations to detect cervical cancer. The population in this study was 70 women with pap smear examinations from January to December 2023. Based on data from the anatomical pathology laboratory, it was stated that there were 51 women with evaluation, and 19 women without evaluation. The population used in this study were women who underwent pap smears with an evaluation of 51 women. In this study, the total sampling method was used, namely members of the population were used as samples (Ariani & Ayu, 2014). In this study, the samples used were medical records for cervical cancer during pap smear examinations of 51 women.

RESULTS AND DISCUSSION

Table 1. Frequency Distribution of Respondent Characteristics including Age and Evaluation of Pap Smear Examination at RSUD RA Kartini Jepara

No	Variable	Frequency	Percentage (%)
1.	Age		
a.	Young Adult (19-30 year)	16	31,4
b.	Adult (31-60 year)	32	62,7
c.	Elderly (>60 year)	3	5,9
	Total	51	100,0
2	Evaluation Pap Smear		
a.	Negative, namely Negative For Intraepithelial Lesion or Malignancy (NILM) or NILM atrophic vaginitic or NILM non-specific chronic inflammatory process or NILM non-specific inflammatory process		30,4
b.	Positive is low-grade squamous intraepithelial lesion (L-SIL) or atypical squamous cells (ASC-US) or atypical glandular cells or High-grade squamous intraepithelial lesion (H-SIL) or atypical glandular cells (AGS)	10	19,6
	Total	51	100,0

The results of the study showed that the frequency distribution of pap smear evaluation in detecting pre-cancerous lesions was negative, with 41 women (80.4%) declared negative if the anatomical pathology was NILM (Negative for intraepithelial lesion or malignancy). NILM research results were 35 respondents (56.8%), NILM Atrophic Smear was 1 respondent (2.0%), NILM non-specific chronic inflammatory process was 2 respondents (3.9%) and NILM non-specific inflammatory process was 3 respondents (5.9%). The results of this study are supported by research Mastutik *et al.*, (2015) cervical cytology screening with pap smears was carried out by 140 women aged 41-51 years, with 90 people coming from the Tanah Kali Kedinding Community Health Center, Surabaya and 50 people from Mawadah Medika Hospital, Mojokerto. The results showed that the highest number of pap smear samples with negative results (NILM) was 121 (86.4%).

The results of the study showed that the distribution of characteristics of patients who underwent pap smear examinations was predominantly aged 31-60 years, namely 32 women (62.7%). Based on this research, it is supported by research (Pangesti, 2012) that women aged around 30-40 years show a high level of concern in preventing cervical cancer. The earlier women of childbearing age carry out self-examination, the sooner the possibility of cervical cancer can be identified.. According to research Tilong (2012) cervical cancer is a type of cancer that can affect women of all ages throughout the world. In general, this cancer often attacks and can cause death in women who are in the productive age range, especially between 30 and 50 years. In this period, women often still had economic and social responsibilities towards children and other family members.

According to research Mishra *et al.*, (2022) Only a few women know about cervical cancer diagnostic tests. The majority of those registered were between 31 and 40 years old (45.62%). The average age of patients was 32.99 years with a variation of 8.92 years. All subjects enrolled in this study were married; of them, 212 (97.6%) were multiparous, three (1.38%) were primiparous, and two women (0.92%) were nulliparous. All women who were part of this study had undergone cytological examination, with the majority of results being negative, of which 180 cases (82.94%) showed benign results, including those negative for intraepithelial lesions or malignancies (NILM). Research Firsty *et al.*, (2017) the majority of respondents were aged between 31 and 40 years (50%). This age range is considered the period in which women have the highest risk of developing cervical cancer. Therefore, it is recommended that women over 35 years of age undergo regular routine health checks, especially checks for symptoms of cervical cancer. Thus, if this disease is detected at an early stage, treatment will be more effective and can be prevented before it reaches an advanced stage. Yarlagadda *et al.*, (2018) research results the majority (57%) of women are between 31-40 years old. The study also compared the results obtained with pap smears and colposcopy. NILM was seen in 62 women. 87.09% of women who underwent NILM on pap smear had benign inflammatory lesions on colposcopy, 11.29% of women had low grade lesions and 1 of 62 women (1.61%) who underwent NILM on pap smear had high grade lesions on colposcopy.

Based on previous studies by Maulani *et al.*, (2022) community service activities I to IV participants had elementary and high school educational backgrounds. The majority of ages were 16-25 years. The highest number of diagnostic Pap smear results was non-specific chronic cervicitis, classified as Negative for Intraepithelial Lesion or Malignancy (NILM), namely 91 people (70%). Meanwhile, based on the results of community service by Fairuz & Dewi (2023) in the PIR II Bajubang Community Health Center working area, Maro Sebo village showed high enthusiasm in participating in this activity, although there were several women of productive age who were afraid of pap smear examinations. Residents who participated in the pap smear program were aged between 25 and 55 years. This activity involved taking samples directly from cervical smears by pathologists, with the help of several midwives and Jambi University FKIK students. The highest number of cytology results from pap smears showed NILM results, which were found in 27 resident women with negative examination results, including NILM anatomical pathology with non-specific chronic cervix.

In community service at the Unja Smart Clinic, Mendalo Darat Village, Muaro Jambi Regency regarding the clinico-cytopathology of precancerous cervical lesions, it was found that of the 60 women who participated, all met the requirements to undergo a pap smear examination. Participants who took part in the pap smear program were aged between 20 and 60 years, most of them were multiparous mothers, did not use a contraceptive method, had not yet gone through menopause, had complaints of vaginal discharge, had no gynecological history, and did not show any findings during the examination. The most frequent pap smear cytology results were (NILM) negative for intraepithelial lesion or

maligancy, found in 41 people (68.3%), while other patients experienced fluor albus (Fairuz *et al.*, 2021). Based on previous research, there is a correlation between fluor albus and cervical cancer, which shows the importance of having regular Pap smears every 6 months for women who have fluor albus or not. By detecting cervical cancer at an early stage, women can immediately get the right treatment (Isfentiani & Firdaus, 2014).

Based on previous studies, the age group that performed the most pap smears was between the ages of 40 and less than 50 years (50.9%). Most of the patients who underwent this examination were married (97.6%), multiparous (70%), and the average parity was twice. Of the total 167 pap smear examination results collected, 157 (94.0%) showed negative results with negative lesions for intraepithelial lesion or malignancy (NILM). Nonspecific inflammation was the most common finding among all nonneoplastic outcomes (Ernawati *et al.*, 2019).

The results of this study show that the frequency distribution of pap smear evaluation in detecting cervical cancer is positive with 10 women (19.6%) declared positive if the anatomical pathology is AGS, ASC-US, Atrophic smear, H-SIL, L-SIL, atypical glandular cells. AGS research results 1 respondent (2.0%), ASC-US 1 respondent (2.0%), Atrophic smear 2 respondents (3.9%), L-SIL 3 respondents (5.9%), H-SIL 2 respondents (3.9%), atypical glandular cells 1 respondent (2.0%). The results of this study are supported by previous research that all women who participated in this study had undergone cytology examinations between the ages of 30-41 years. It was found that 37 women (17.6%) showed positive results with anatomical pathology of HSIL, ASCUS, and HSIL (Mishra *et al.*, 2022).

The results of this study also showed that women who carried out early detection of cervical cancer aged > 35 had positive results for Atrophic smear, H-SIL, L-SIL, and atypical glandular cells. Supported by previous research, the examination results showed that there were 39 cases (35.15%) with anatomical cytology of ASCUS, HSIL, LSIL, and squamous cell carcinoma, followed by cases with LSIL, HSIL, squamous cell carcinoma, and ASCUS (Zahirah *et al.*, 2024).

According to a previous study of 78 women, who constituted 6.9% of the clients who underwent pap smear cytology during this study, were among those invited from gynecology clinics. There is a correlation between obesity and cervical epithelial cell abnormalities. Cervical epithelial cell disorders are significantly more common in women over 40 years of age, single/separated women, widows, and unemployed women. This emphasizes the importance of positive behavioral change among women to overcome this health problem. Pap smear cytology results showed that in obese women, 48 people (24%) showed positive results with ASCUS, HSIL, and LSIL pap smear cytology. Meanwhile, in non-obese women, 18 people (9%) showed positive results with ASCUS, HSIL, and LSIL pap smear cytology (Okoro *et al.*, 2020).

Clinical-cytopathological correlation of cervical smears with the appearance of epithelial cell abnormalities with the incidence of abnormal squamous cells based on age group, it was found that the incidence of squamous cell abnormalities was found at the age of 30 - 45 years, namely positive results with ASCUS, LSIL, and HSIL lesions (Dewi, 2018). This is in accordance with the theory which states that the age of cervical cancer sufferers is generally in the range of 30 to 60 years. The process of the preinvasive latent phase becoming invasive takes approximately 10 years. The term LSIL refers to mild and moderate dysplasia. Several studies show that the risk of cervical carcinoma after dysplasia is 12% after 5 years, 18% after 10 years, and 30% after 20 years.

According to research in the city of Menara Bulian, Pap smear examinations were carried out on 29 married or sexually active women in the age range of 20-60 years, to describe the characteristics of the research subjects as a whole. Subject characteristics include age, number of pregnancies, type of contraception used, menopausal status, perceived complaints, sexual risk behavior, smoking history, age at first menstruation (menarche), and pap smear cytopathology results. It was found that the average age of the subjects was 43.5 years. A total of 75.8% of them were multiparous, and the same number (75.8%) did not use any contraceptive method. As many as 69.0% of subjects were not in menopause, and the majority (69.0%) did not have any complaints. As many as 93.1% of them had no history of risky sexual relations. Cytopathology results showed that 20.6% of the samples showed ASCUS lesions, while 3.4% showed LSIL in the sample group who had no complaints and were under 12 years of age. Therefore, it is recommended to carry out regular cervical smear examinations as a screening for precancerous lesions in the cervix, even if there are no complaints (Syauqi *et al.*, 2022).

CONCLUSION

The majority of women who underwent Pap smear examinations were adults aged 31-60 years, 32 women (67.2%). The results of the Pap smear evaluation in detecting cervical cancer were mostly negative for 41 women (80.4%).

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