ISSN : 2579-4426
e-ISSN : 2580-6432
Fakultas Keperawatan Universitas Klabat
Bekerjasama dengan PPNI Provinsi Sulawesi Utara
Volume 8, No.2, Oktober 2024
Online Journal: http://ejournal.unklab.ac.id/index.php/nutrix

THE CORRELATION BETWEEN AGE OF MARRIAGE WITH CERVICAL CANCER INCIDENCE IN X HOSPITAL MANADO

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Abstrak

Kanker serviks adalah salah satu jenis kanker yang paling umum menyerang wanita. Pernikahan dini usia < 20 tahun diyakini sebagai salah satu faktor risiko untuk perkembangan kanker serviks, Sel serviks yang belum matang, pada usia muda, sel mukosa pada leher rahim masih dalam tahap perkembangan dan belum matang sempurna. Hal ini membuat sel-sel tersebut lebih rentan terhadap perubahan abnormal yang dapat memicu kanker. Studi ini bertujuan untuk menganalisis hubungan antara usia pernikahan dan kejadian kanker serviks. Metode: Penelitian ini menggunakan desain kasus-kontrol dengan 100 responden, 50 kasus dan 50 kontrol, sampel menggunakan metode pengambilan sampel total. Data dikumpulkan melalui catatan medis dan wawancara. Analisis data dilakukan dengan menggunakan uji chi-square. Hasil: Sebanyak 27 responden (54%) wanita yang menikah di bawah usia 20 tahun menderita kanker serviks, dan 23 responden (46%) wanita yang menikah di atas usia 20 tahun menderita kanker serviks. Hasil uji statistik menunjukkan adanya hubungan yang signifikan antara usia pernikahan dan kejadian kanker serviks (p=0.026), dengan nilai korelasi 0.222, yang dianggap lemah karena berada dalam rentang (0.20-0.399). Terdapat hubungan yang signifikan antara usia pernikahan dan kejadian kanker serviks. Wanita yang menikah pada usia < 20 tahun memiliki risiko lebih tinggi untuk menderita kanker serviks dibandingkan dengan yang menikah pada usia ≥ 20 tahun. Peneliti selanjutnya disarankan untuk melakukan studi lebih lanjut untuk mengidentifikasi faktor-faktor lain yang berperan dalam hubungan antara usia pernikahan dan kanker serviks, serta untuk mengevaluasi intervensi pencegahan kanker serviks di kalangan wanita yang menikah padausiamuda**.**

Kata kunci: Kanker serviks, Usia pernikahan

Abstract

Cervical cancer is one of the most common cancers affecting women. Marriage at a very young age< 20 years is suspected to be one of the risk factors for the occurrence of cervical cancer, immature cervical cells, at a young age, the mucosal cells in the cervix are still in the developmental stage and not fully mature. This makes these cells more susceptible to abnormal changes that can trigger cancer. This study aims to analyze the relationship between the age of marriage and the incidence of cervical cancer. Method: This study uses a case control design with 100 sample respondent, 50 case and 50 control using total sampling method. Data were collected through medical records and interviews. Data analysis using Spearmen rank. Results a total of 27 respondents (54%) of women who married under the age of 20 suffered from cervical cancer, and 23 respondents (46%) of women who married over the age of 20 suffered from cervical cancer. The statistical test results indicate a significant relationship between the age of marriage and the incidence of cervical cancer (p=0.026), with a correlation value of 0.222, which is considered weak as it falls within the range of (0.20-0.399). There is a significant relationship between the age of marriage and the incidence of cervical cancer. Women who marry at age < 20 years have a higher risk of suffering from cervical cancer compared to those who marry at age ≥ 20 years. Recommendation future researchers should conduct further studies to identify other factors that play a role in the relationship between marriage age and cervical cancer, and evaluate cervical cancer prevention interventions among women who marry at a young age.

Keywords: *Cervical Cancer, marriage age*

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Introduction

Cervical cancer is one of the most common types of cancer among women, with a high prevalence in developing countries. In Indonesia, cervical cancer contributes about 9.2% of the total cancer cases, making it the second leading cause of death after breast cancer (Luthfa et al., 2023). Data indicates that many cervical cancer patients receive advanced stage diagnoses, frequently as a result of inadequate knowledge and access to health screenings (Khadijah & Vitianingsih, 2019).

Cervical cancer, or carcinoma of the cervix, is a malignancy that arises in the cells of the cervix, the inferior segment of the uterus that links to the vagina. This malignancy is mostly induced by the Human Papillomavirus (HPV), a virus transferred by sexual intercourse (Pittara, 2022). In the early stages, cervical cancer patients usually do not experience symptoms. However, as the disease progresses, symptoms that may arise include bleeding outside of the menstrual cycle., abnormal discharge, pelvic pain, pain during sexual intercourse (Kemenkes, 2021). These symptoms often appear when cancer has reached a more advanced stage, making it important to undergo regular check-ups for early detection.

Data from the WHO indicates that in 2020, there were around 604,000 new instances of cervical cancer globally, resulting in over 342,000 fatalities from the disease (Rokom, 2024). Indonesia reported 36,633 new cervical cancer cases, resulting in 21,003 fatalities attributed to the disease (Bantar, 2024). Data from Manado indicates that the majority of patients present for treatment in a critical state, with approximately 70-80% of cases identified at an advanced stage (Hanifa, 2024). The age at which one marries significantly influences the chance of developing cervical cancer. Studies indicate that women who marry before the age of 17 are at an elevated risk of having cervical cancer(Margareta & Lutfiasari, 2021). This results from the dynamic alterations in cervical cells during adolescence, which may be initiated by early sexual activity and HPV infections (Puspita, 2022).

Immature cervical cells, at a young age, the mucosal cells in the cervix are still in the developmental stage and not fully mature. This makes these cells more susceptible to abnormal changes that can trigger cancer (Santoso, 2021). At a young age, the cervix is very sensitive to carcinogenic stimuli, making it more susceptible to cellular changes that can lead to the emergence of a pathological transformation zone in the cervical epithelium (Sanjose, 2024).

Research conducted by Natalia (2024) shows a relationship between early marriage and cervical cancer, indicating an accelerated progression of the disease and an earlier onset of cervical cancer among women who marry at a younger age. Another study by Sanjose (2024) found that women who marry before the age of 20 face a significantly higher risk of developing cervical cancer. This research indicates that early marriage is a significant risk factor for cervical cancer.

Hospital X in Manado, as a referral center in the region, has experienced a significant increase in the number of patients with cervical cancer, both those admitted for inpatient care and those coming for outpatient treatment. This has drawn the attention of researchers to investigate the relationship between the age of marriage and the incidence of cervical cancer at Hospital X in Manado.

Methods

The research design used is an analytical approach with a Case Control Study design, which involves two groups of participants: cases and controls. This research was conducted by the author at one of the Hospital X in Manado. The study population includes all patients who have been treated in the inpatient department for reproductive disorders within the past two months.. The sample in this study is divided into two groups: the case group includes all patients

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treated in the reproductive disorders department in the last 2 months who have been diagnosed with cervical cancer based on medical records, while the control group includes all patients treated in the reproductive disorders department who have been diagnosed as not having cervical cancer or any other cancer based on the diagnosis book and have complete data.

The sampling technique in this study is total sampling, which corresponds to the population found in the inpatient reproductive disorders unit at Hospital X Manado, totaling 100 participants. The sample was taken based on the criteria of the case group: women under 20 years old who have experienced cervical cancer, and women aged 20 years and older who have experienced cervical cancer. The control group includes women under 20 years old who have experienced cervical cancer, women aged 20 years and older who have experienced cervical cancer, women under 20 years old who have not experienced cervical cancer, and women aged 20 years and older who have not experienced cervical cancer.

Inclusion Criteria: Case group, women aged < 20 years and ≤ 20 years and experiencing cervical cancer. Control group, women aged < 20 years and ≤ 20 years and not experiencing cervical cancer. Exclusion criteria: Case group, women aged < 20 years and ≤ 20 years and experiencing cervical cancer. Control group, women aged < 20 years and ≤ 20 years and not suffering from cervical cancer.

In a research study that conducted, one must not overlook the ethics of valuing and respecting the rights of the respondents involved. The initial phase of the research was conducted by creating an informed consent form signed by the community members who agreed to be respondents after receiving an explanation regarding the purpose and benefits of the study. The ethical principle considered by the researchers here is Autonomy, where respondents have the right to decide for themselves whether or not to participate in the research. Certainly, this research has good objectives and benefits, especially for the patients at the research site (Beneficence). In the implementation of this research, there are no dangerous elements or risks that could harm any party (Nonmaleficence). Furthermore, the collected data is kept private and confidential, and is used solely for research purposes (Confidentiality). The researchers do not discriminate against respondents based on religion, ethnicity, race, or nationality, and do not favor any particular group (Justice). Additionally, the researchers uphold the principles of truth and honesty. (Veracity).

The data was analyzed univariately to describe each variable using frequency distribution (percentage), followed by bivariate analysis using Spearmen rank to determine the relationship or test the significance between two variables, namely the independent variable and the dependent variable, with a significance value of < 0.05.

Result

After data collection and analysis using frequency and percentage formulas, the results are presented in the table below.

Table I. Results of Ctatistical Tests for Frequency and Percentage of Marriage Age and Cervical Cancer Incidence.

Category	Case (cervical cancer)	Control (non cervical cancer)
< 20 years	27 (54%)	16 (32%)
≥ 20 years	23 (46%)	34 (68%)
Total	50 (100%)	50 (100%)

Table 1 shows that out of 100 participants, patients with a marriage age of < 20 years accounted for 27 (54%) respondents in the cancer cases and 16 (32%) in the non-cancer control cases. Meanwhile, those with a marriage age of ≥ 20 years comprised 23 (46%) respondents in the cancer cases and 34 (68%) in the non-cancer control case.

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The relationship between the age of marriage and the incidence of cervical cancer yielded the following results.

Table 2. Results of Statistical Tests on The Relationship between Age of Marriage and The Incidence of Cancer

Variabel	*p-value*
Age of Marriage and cervical cancer incidence	0,026

Based on the results in table 2, it was found that the significant value is 0.026 ($\alpha \leq 0.05$) h0 accepted, indicating a relationship between the age of marriage and the incidence of cancer.

Discussion

Based on the data obtained from cervical cancer patients, it was found that individuals under 20 years of age experience cervical cancer more frequently. A woman greatly influences the maturity of her reproductive organs. If the age at first marriage is under 20, the risk of developing cervical cancer increases. The reproductive organs in teenage girls are very sensitive to stimulation, exposure to sperm, or substances carried by sperm. Immature mucosal cells tend to transform into cancer. Abnormal cells in the cervix can lead to cervical cancer. In addition, women involved in early sexual relationships should be aware of the risks of spreading infections and cancer cells from the vagina to external areas (Sekarayu & Nurwati, 2021)

The age of early marriage is a risk factor for the occurrence of cervical cancer. The younger a woman begins sexual activity, the greater the risk she faces of developing cervical cancer. At a young age, the epithelial cells of the cervix are not yet able to respond to sperm stimulation, which means that the female reproductive organs are not mature at a young age (Dewi et al., 2023). The reproductive organs reach maturity and are ready for fertilization at the age of 20 and above. The risk of cervical cancer increases with marriage at a young age, particularly when marrying for the first time between the ages of 15 and 20. Women of childbearing age under 16 who marry typically have a 10-12 times higher risk of developing cervical cancer. This is closely related to the maturity of the mucosal cells in the cervix. Young and immature cervical mucosal cells are not prepared to respond to external stimuli. Included in the chemical substances carried by sperm that can cause cervical cancer (Damayanti, 2023). An ideal marriage involves women over the age of 20, based on considerations of reproductive health. Marriage before the age of 20 can increase the risk of cervical cancer, immature uterine cells, and the likelihood of Human Papillomavirus (HPV) infection (Syakroni, 2021).

Factors that cause cervical cancer at a young age This infection often occurs in sexually active individuals, especially if sexual activity began at a young age. Carrying out active sexual activity and changing partners is a risk of transmitting HPV(Kashyap et al., 2019). Women with lower socioeconomic status may have less access to health services and routine screening, which may increase the risk of cervical cancer(Kashyap et al., 2019). Smoking can increase the risk of cervical cancer because the chemicals in cigarettes can damage cervical cells and weaken the immune system (Zhang et al., 2020). A study found a significant relationship between young marriage age and an increased risk of cervical cancer. Women who marry at a younger age show a higher risk compared to those who marry at an older age (Sanjose, 2024). Another study found that there is a significant relationship between parity and the age at first marriage with the incidence of cervical cancer (Santoso, 2021). Similar results from research by Winda Ratna Dewi et al (2023) indicate a strong connection between marrying at an age younger than 20 and an increased risk of experiencing cervical cancer.

Conclusion

Based on the results of the research that has been conducted, the researchers concluded that the majority of patients with cervical cancer are

under the age of 20. There is a correlation between the age of marriage and the incidence of cervical cancer, where the younger a woman is at the time of marriage, the higher the risk of developing cervical cancer.

Researchers recommend that the community increase awareness about the risks of early marriage on reproductive health, particularly cervical cancer, and the importance of delaying the age of marriage until at least 20 years old. For the government, creating programs that promote education and empowerment for young girls. To improve access and quality of cervical cancer screening, especially for women who marry at a young age, health services should promote HPV vaccination as a preventive measure against cervical cancer. Future researchers should conduct further studies to identify other factors that play a role in the relationship between marriage age and cervical cancer, and evaluate cervical cancer prevention interventions among women who marry at a young age.

Reference

Eko Budi Santoso. (2021). Hubungan Usia Pertama Menikah Dengan Kejadian Kanker Serviks Di Poli Kandungan RSUD X. *Info Kesehatan*, *11*(2), 394–398.

Kashyap, N., Krishnan, N., Kaur, S., & Ghai, S. (2019). Risk Factors of Cervical Cancer: A Case-Control Study. *Asia-Pacific Journal of Oncology Nursing*, *6*(3), 308. https://doi.org/10.4103/APJON.APJON_73_18

Kemenkes. (2021). *Mengenal Faktor Risiko Kanker Serviks*. https://upk.kemkes.go.id/new/mengenal-faktor-risiko-kanker-serviks

Khadijah, S., & Vitianingsih. (2019). The Relationship Between Ages, Ages of Marriage, Number of Children and The Result of Visual Inspection of Acetic In Sleman, Yogyakarta. *Healthy and Ageing*, 565–570.

Luthfa, A., Jingsung, J., Sekolah Tinggi Ilmu Kesehatan Pelita Ibu, K., & Tenggara - Indonesia, S. (2023). The relationship between married age and the incidence of cervical cancer at the Bahteramas General Hospital in Southeast Sulawesi Province. *Journal Pelita Sains Kesehatan*, *3*(5), 38–44. https://ojs.pelitaibu.ac.id/index.php/jpasaik/article/view/104

Margareta Andini, D., & Lutfiasari, D. (2021). *The Correlation Between Marital Age and The Incidence of Cervical Cancer*. *15*(6). https://doi.org/10.53350/pjmhs211561509

Puspita, I. N. I. (2022). *Does early marriage increase risk of cervical cancer? - Universitas Airlangga Official Website*. Unai News. https://unair.ac.id/does-early-marriage-increase-risk-of-cervical-cancer/

Sanjose, L. (2024). *International Journal of Nursing and Midwifery Research | International Journal of Nursing and Midwifery Research*. International Journal of Nursing and Midwifery Research. https://journals.iarn.or.id/index.php/ners/article/view/261

Zhang, S., Xu, H., Zhang, L., & Qiao, Y. (2020). Cervical cancer: Epidemiology, risk factors and screening. *Chinese Journal of Cancer Research*, *32*(6), 720. https://doi.org/10.21147/J.ISSN.1000-9604.2020.06.05