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CORRELATION BETWEEN AGE AND PARITY WITH THE RESULT OF VISUAL INSPECTION WITH ACETIC ACID (VIA) IN PEKALONGAN REGENCY

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Abstract

Cancer is one of the leading causes of death worldwide. The high prevalence of cancer in Indonesia needs to be monitored by preventing and early detection measures that health service providers have taken. Cervical cancer screening is carried out by Visual Inspection with Acetic Acid (VIA). This study aimed to determine the relationship between women's age, parity, and pregnancy >35 years with the results of the VIA examination. This research was an observational analytic study with a cross-sectional approach. The sample of this study was the total population who followed the VIA examination in Pekalongan Regency in 2018 and obtained 216 respondents. Multivariate analysis in this study was using multiple logistic regression. The results of this study indicate that there is no significant relationship between age and pregnancy >35 years old with VIA examination results (p-value:0.217 and 0.624). There is a significant relationship between parity and the results of the VIA examination (p-value:0.015). For health workers, especially midwives, should motivate married women and risk experiencing cervical cancer to carry out VIA examinations regularly. The Public Health Office should provide the facilities and infrastructure in all health facilities so that the public can carry out VIA examinations regularly, periodically in their respective territories.

***Keywords**: Age, Parity, VIA*

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1. Introduction

Breast cancer and cervical cancer are the types of cancer that contribute to women in Indonesia. Data from the Ministry of Health as of January 31st, 2019, the incidence of cervical cancer was 23.4 per 100,000 population with an average death rate of 13.9 per 100,000 population, meaning that almost 50% of women with cervical cancer ended in death. Cervical cancer can be found in the pre-cancerous stage (pre-cancerous lesions) by the VIA and Pap smear methods. This detection can reduce mortality and health financing.[1]

Based on national data, 12.2% of women aged 30-50 years had undergone cervical cancer early detection through VIA.[1] Based on the results of VIA for the early detection of cervical pre-cancerous lesions, the sensitivity of VIA examination was 84%, specificity 89%, positive predictive value 87%, and negative predictive value 86%. In addition, the parallel diagnostic test of Pap Smear and VIA examination showed a sensitivity value of 81%. It was

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accompanied by an increase in the specificity value to 96% and an increase in the positive predictive value reaching 94% and the negative predictive value 88%. Furthermore, VIA has a high sensitivity for early detection of cervical pre-cancerous lesions. [2]

Solekhah (2012) stated that the risk of cervical cancer is more than 35 years old because the reproductive system has reduced function at that age. However, epidemiological studies show that risk factors can also occur in women who are sexually active from an early age (<20 years) and frequently change sex partners.[3]

The awareness of Indonesian women to carry out early detection of cervical cancer regularly was still low. The coverage of early detection in Indonesia was less than 5% so that many cases of cervical cancer were found at an advanced stage which often causes death. [4] Mayura's previous research (2012) showed that the test with VIA had good sensitivity and specificity for diagnosing cervical dysplasia to be relied upon as a screening tool for cervical cancer. [5]

Data from Pekalongan Regency 136,168 women of childbearing age should be screened for cancer. However, until now, it had not met the target of 50 percent. Based on data in 2016, 10 women suffering cervical cancer and 20 women suffering breast cancer. At the Public Health Office of Pekalongan, 13 public health centers provide VIA examination services. The purpose of this study was to determine the relationship between women's age, parity, and pregnancy > 35 years with the results of the VIA examination in Pekalongan Regency. The novelty of this study was in the independent variable used, namely age during pregnancy, to find out other factors that theoretically have a relationship with a positive result from VIA examinations

2. Method

This type of research was an observational analytic study with a cross-sectional approach. The population was all participants of the VIA examination program, which was carried out at STIKES Muhammadiyah Pekajangan Pekalongan in collaboration with the Midwifery Diploma Programme and 'Aisyiah Pekalongan Regency in March 2018, and obtained 216 respondents. The sample was taken using total sampling by looking at the data from the examination or medical records.

The ethics applied in this research were free from exploitation and used the principle of respecting human rights by giving informed consent and maintaining the confidentiality of respondent's information. A closed-ended question was used to collect data. VIA examination results data collected from medical records.

Data analysis was performed using univariate and bivariate analysis. The chi-square test was used to see the relationship by using the significance value (p-value).

3. Results and Discussion

The results of this research that has been carried out on 216 respondents can be seen in the table below:

Table 1. Distribution of Respondents Characteristics

Characteristics	f	%
Age (year old)		
20-35	57	26.39
>35	159	73.61
Parity		
Nullipara	6	2.78
Primipara	40	18.52
Multipara	165	76.39
Grandemultipara	5	2.31
Age during Pregnancy (year old)		
< 35	212	98.15
≥ 35	4	1.85
VIA Results		
Negative	204	94.44
Positive	12	5.56

Based on the table above, 159 respondents (73.61%) were aged > 35 years. Most of the respondents have given birth 2-5 times (multipara), 165 respondents (76.39%). Based on age during pregnancy, only a small proportion of respondents experienced pregnancy at

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the age of > 35 years, namely four respondents (1.85%). The results of the VIA examination stated that only 12 respondents (5.56%) were positive.

Table 2. Correlation Between Age and The Results of VIA Examination

Age (year old)	The Results of VIA Examination				p-value
	Negative		Positive		
	f	%	f	%	
20-35	52	24.07	5	2.32	0.217
> 35	152	70.37	7	3.24	
Total	204	94.44	12	5.56	

Based on the table above, 159 respondents (73.61%) were aged > 35 years. Most respondents had given birth 2-5 times (multipara), 165 respondents (76.39%). Based on age during pregnancy, only a small proportion of respondents experienced pregnancy at the age of > 35 years, namely four respondents (1.85%). The results of the VIA examination stated that only 12 respondents (5.56%) were positive.

The analysis results obtained a p-value of 0.217 (> 0.05), which means there is no significant relationship between age and VIA results. Simbha et al. (2019) previous research found that respondents with first sexual intercourse who were less than 20 years old consistently increased the risk of cervical pre-cancerous lesions.[6] This study does not follow the previous study, which stated a significant relationship between age and the results of the VIA examination. [7] Comparison of cervical cancer cases found in women aged 35-55 years with women under 35 years as much as 50%: 50% cases[8].

Other research results stated that the mature a person's age is, the better their level of awareness in early detection of cervical cancer. Age showed an adult development and maturity in thinking and working that affects women of childbearing age willing to detect cervical cancer early. The risk of cervical cancer can be reduced if early detection were carried out.[6]

Marriage age less than 20 years has a greater risk of cervical cancer because the uterine cells are still immature at a young age, so these cells are not susceptible to chemicals carried by sperm and all kinds of changes. If the uterus is immature and given stimulation, the cells become out of balance with the cells that die.[9].

The age group 35 years consisted of most of the patients who visited for the IVA examination. The risk of cervical cancer can increase 2-fold at the age of 35 to 60 years. Other studies also stated that women with cervical cancer were between 30-70 years. Stage IA of cervical cancer is more often found in the 30-39 year age group, while stage II is more often found in the 60-69 year age group; the highest proportion is in stage III and IVA[10].

Pakubuana's research (2016) on the characteristics of women with a positive VIA were respondents with age > 35 years (53.8%) and age of marriage less than 20 years (53.8%).[11] The results of this study are in line with the results of Manoppo's research (2016), which stated that there was no significant relationship between maternal age and the incidence of cervical cancer, meaning that young and older people have the same chance suffer cervical cancer. The ideal age for early screening is done at the age of 25 years. Because at this age, women often experience harmless changes in the cervix, so screening did not identify them as abnormal.[12]

Tabel 3. Correlation Between Parity and The Results of VIA Examination

Parity	The Results of VIA Examination				p-value
	Negative		Positive		
	f	%	f	%	
Nullipara	5	2.32	1	0.46	0,015
Primipara	34	15.73	6	2.78	
Multipara	160	74.07	5	2.32	
Grande	5	2.32	0	0	
Total	204	94.44	12	5.56	

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Table 3 shows a p-value of 0.015 (<0.05), which means a significant relationship between parity and the examination results. This finding follows the results of other studies, which stated that having many children (more than 5) increases the risk of cervical cancer incidence.[7] The more often a woman gives birth, the higher the risk of cervical cancer if the distance between pregnancies is too close and related to the labor and hormonal changes.[9].

The frequency of pregnancy increases the risk of cervical cancer due to a history of infection in the genital area. Women with high parity > 3 times risked 5.5 times to suffer cervical cancer. Another study also stated that parity is a risk factor for cervical cancer, with a risk of 4.55 times in women with parity > 3 times[10].

The research results by Hety (2011) found that from 40 patients giving birth, 60% of patients with cervical cancer had a history of high parity, 40% of patients develop cervical cancer with a history of low parity. 42.5% of patients had cervical cancer at stage 0. 4. 45% of patients at stage I and 12.5% of patients at stage II. Mann Whitney test results obtained a p-value of 0.236, which means that there was a relationship between parity and the incidence of cervical cancer.[13]

The results of Husna's research (2018) showed that respondents influence the incidence of cervical cancers with multiparity parity (> 2). The more often women gave birth, the greater the risk of cervical cancer. Women who have high parity should be screened with a Pap smear because it can reduce the incidence of cervical cancer, especially in older age.[14].

Table 4. Correlation Betwwen Age During Pregnancy > 35 years and The Result of VIA Examination

Age During Pregnancy	The Result of VIA Examination				p-value
	Negative		Positive		
	f	%	f	%	
< 35	200	92.59	12	5.56	0.624
≥ 35	4	1.85	0	0	
Total	204	94.44	12	5.56	

Table 4 shows a p-value of 0.624 (> 0.05) which means no significant relationship between age during pregnancy over 35 years and the results of the VIA examination. Manoppo's (2016) Previous study stated no significant relationship between parity and maternal age with cervical cancer. This is because the age of a person when she was pregnant for the first time or had sex for the first time affected the incidence of cervical cancer—the younger the age at first pregnancy or sexual intercourse, the risk of cervical cancer increases. Women who were 17 years of age or younger at the time of their first pregnancy had twice the risk of developing cervical cancer than women who had their first pregnancy at 25 years or older.[12].

The research results by Wahyuningsih and Mulyani (2016) stated that respondents who had sex for the first time at 20 years had a 0.009 times risk of experiencing cervical pre-cancerous lesions.[10] Manoppo also stated that a person's age when they were pregnant for the first time or had sex for the first time affected the incidence of cervical cancer. The younger the age at first pregnancy or sexual intercourse, the risk of cervical cancer increases. Women who are 17 years old or less at the time of their first pregnancy have twice the risk of cervical cancer than women who are pregnant for the first time at 25 years or older.[12] Ages 35-50 years are at risk of cervical cancer because this disease takes 7 to 10 years for invasive cancer to occur so that most of the occurrence or known after old age.[15].

This study has various limitations beyond the researcher's ability, resulting in the expected results not being maximized. Limitations and constraints in this study include the source of data used in this study: secondary data taken from medical records using data formats and data collection methods with documentation guidelines without seeing the patient and controlling directly so that researchers cannot know what was happening right away.

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4. Conclusion

There is no significant relationship between age and age during pregnancy with the results of the VIA examination. There is a significant relationship between parity with the results of the VIA examination. Midwives Should motivate women who are married and have a risk for cervical cancer to carry out VIA examinations routinely. The Public Health Office can provide facilities and infrastructure in all health facilities to carry out regular VIA examinations in their respective regions. Future researchers are expected to develop research by adding other independent variables to find out other factors that theoretically have a relationship with positive VIA results in women.

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6. References

1. Kementerian Kesehatan RI. *Profil Kesehatan Indonesia Tahun 2019*. 2020.
2. Wiyono, S; Iskandar, TM; Suprajono S. Inspeksi Visual Asam Asetat (IVA) untuk Deteksi Dini Lesi Prakanker *Serviks*. *Jurnal Media Medika Indonesia*. 2008 ;43(18):116-121.
3. Handayani IF. Perbandingan Karakteristik dan Pengetahuan tentang Kanker Serviks pada Wanita dengan Inspeksi Visual Asam Asetat (IVA) Positif di Pesisir dan Perkotaan. *Jurnal Kebidanan*. 2015 ;07(01):94-104.
4. Rahma RA, Prabandari F. Beberapa Faktor yang Mempengaruhi Minat WUS (Wanita Usia Subur) dalam Melakukan Pemeriksaan IVA (Inspeksi Visual dengan Pulasan Asam Asetat) di Desa Pangebatan Kecamatan Karanglewas Kabupaten Banyumas. Bidan Prada: *Jurnal Ilmiah Kebidanan*. 2012 ;3(1):1-14.
5. Mayura I. Sensitifitas dan Spesifitas Inspeksi Visual Asam Asetat pada Lesi Leher Rahim di Desa Nyambu Kediri Tabanan. *Tesis*. 2012. Universitas Udayana Denpasar.
6. Simbha C, Cintya P, Yuliyatni D, Ani LS. Faktor risiko lesi prakanker leher rahim pada wanita pasangan usia subur yang melakukan pemeriksaan IVA di Puskesmas Payangan Tahun 2016. *Jurnal Medika Udayana*. 2019 ;8(6):
7. Adam TRMM, Dharminto undefined Frida Cahyaningrum. Hubungan usia, paritas dan Personal Hygiene dengan Hasil Pemeriksaan Inspeksi Visual Asam Asetat (IVA) di Puskesmas Brangsong 2 Kecamatan Brangsong Kabupaten Kendal. *Jurnal Kebidanan*. 2017 ;6(2):103-107.
8. Soebachman A. *Awas 7 Kanker Paling Mematikan*. Syura Media Utama. 2011 ;
9. Suhartini L, Setyorini W. Hubungan Karakteristik Wanita Usia Subur (WUS) dengan Pengetahuan tentang Tes IVA di Puskesmas Kecamatan Cempaka Putih Periode Mei Tahun 2017. *HSG (Health Science Growth) Journal*. 2017 ;1(2):64-85.
10. Wahyuningsih T, Mulyani EY. Faktor Risiko Terjadinya Lesi Prakanker Serviks Melalui Deteksi Dini dengan Metode IVA. *Forum American Bar Association*. 2014 ;11(2):192-209.
11. Pakubuana MAl. Karakteristik Wanita Positif Lesi Prakanker Serviks dengan Metode IVA di Puskesmas Pembina Palembang. *Skripsi*. 2016. Universitas Muhammadiyah Palembang.
12. Manoppo IJ. Hubungan Paritas dan Usia Ibu dengan Kanker Serviks di RSU Prof. Kandou Manado Tahun 2014. *Jurnal Skolastik Keperawatan*. 2016 ;2(1):46-58.
13. Hety DS. Hubungan usia dan paritas dengan kejadian Ca Cervix di RSUD

DOI: 10.30591/siklus.v10i2.2446

p-ISSN: 2089-6778
e-ISSN: 2549-5054

Sidoarjo. *Jurnal Hospital Majapahit*. 2011 ;3(1):74-86.
14. Husna A. Hubungan Paritas dan Umur dengan Kejadian Kanker Serviks di RSU PKU Muhammadiyah Bantul Yogyakarta. *Naskah Publikasi.* 2018 ;
15. Pradya N. Hubungan Usia dan Penggunaan Pil Kontrasepsi Jangka Panjang terhadap Hasil Pemeriksaan IVA Positif sebagai Deteksi Dini Kejadian Kanker Leher Rahim Corelation of Age and Long-Term Use of Contraceptive Pills Against Positive IVA Examination Results For Ear. *Journal Majority*. 2015 ;4(7):13-18.

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