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# The Influence of Characteristics And Patterns of Women Behavior On The Case of Pracancerous Cervical Lesions at Community Health Centers in Pemalang District

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**Abstract**

Cervical cancer is a malignant disease that is preceded by the condition of precancerous cervical lesions, namely the existence of cervical intraepithelial dysplasia / neoplasia (NIS). This study attempted to analyze the effect of characteristics and patterns of women behavior on the case of precancerous cervical lesions. The study belonged to observational study with a cross sectional study design. For more, the subjects of the study involved the population of 60 women who were positive for precancerous cervical lesions, while the number of sample was the same as the population, namely 60 respondents sampled by using total sampling technique. Their data were analyzed by using path analysis model. In conclusion, the factors of socioeconomic, age, history of STIs (Sexually Transmitted Infections) directly influence the case of precancerous cervical lesions and indirect effects of parity followed by the use of contraception on the case of precancerous cervical lesions.



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## INTRODUCTION

Cancer is a pathological cell growth (Anwar, 2011). It is one of the major causes of death throughout the world. Cervical cancer is a disease with the highest prevalence in Indonesia in 2013, namely 0.8%. It was decided based on the estimation of the number of sufferers of cervical cancer in the Central Java and East Java Provinces (Kemenkes RI, 2015).

Indonesia cervical cancer patients are generally aged 45-55 years old. In relation to this, the older a woman is, the higher the risk of cervical cancer will be (Yusuf, 2015). One of several factors which can increase the risk of cervical cancer is when the age of the women is ≥35 years old, they will have a risk of 15.7 times for cervical cancer compared to women aged <35 years. Meanwhile, multiparous women have a risk of 14, 7 times for cervical cancer compared to primiparous women (Jasa, 2016).

Nutrition, parity, oral contraception use and environmental factors such as smoking are the prominent risk factors for cervical cancer (Kjellberg et al., 2000). Another risk factors for HPV infection are early age sexual intercourse and promiscuity (Darmayanti et al., 2014). Nindrea (2017) states that first sex age, number of sexual partners, smoking, hormonal contraception use and history of leukorrhea are related to precancerous cervical lesions. Aryani et al (2015) mention that 50% of female prostitutes in the brothel in Tegal City suffered from STIs (Sexually Transmitted Infections).

Cancer processes begin with the development of mutated cells into dysplasia cells. The cells with mild dysplasia, fair dysplasia, severe dysplasia, finally become carcinoma in situ (CIS), then develop again into invasive carcinoma. The development of dysplasia into carcinoma in situ takes 1-7 years, while carcinoma in situ formation to invasive carcinoma are in the range of 3-20 years (Riksani, 2016). Ferdausi et al's study in Bangladesh (2015) shows that according to the screening results, most women with CIN-1 conditions were found in slums.

The screening methods for early detection of cervical cancer in Indonesia which are more capable, inexpensive and effective are usually done via visual inspection of acetic acid (inspeksi visual asam asetat) (Depkes RI, 2006). Shobeiri et al. (2007) state that there are many factors that can increase the risk of precancerous cervical lesions such as multiparity> 3, abortion> 1, gravida> 3, marriage> 1, so it is very important for the government to provide facilities for early detection of cervical cancer screening. Sheth & Maitra (2014) in their study state that women who are detected having precancerous cervical lesions have to undergo cryotherapy procedures as a treatment for their healing efforts. In relation to the previously mentioned explanations, this study aimed to analyze the effect of characteristics and patterns of behavior of women on the case of precancerous cervical lesions. The benefits of this study are as information for the public about the importance of early detection of cervical cancer in an effort to prevent cervical cancer.

## METHODS

This study carried out observational study with a cross-sectional study design to assess the characteristics and patterns of female behavior on the case of precancerous cervical lesions. The population in this study were women who were positive for precancerous cervical lesions in Pemalang District in 2016 with a total of 60 people. For more, the sampling was the same as the population of 60 respondents.

The primary data in this study were collected using questionnaires and interviews. Meanwhile, the secondary data were obtained through data on patients with precancerous cervical lesions in the District Health Office of Pemalang, several Community Health Center (Puskesmas) in

Pemalang District, including Puskesmas Mulyoharjo, Puskesmas Kebondalem,

Puskesmas Paduraksa and Puskesmas in Taman Sub-district, including Puskesmas Kabunan, and Puskesmas Banjardawa in 2016. The relationship between independent and dependent variables through mediator variables was analyzed by path analysis models. Besides, the model specifications in the analysis of this study path were illustrated through the relationship between the variables studied. The variables studied were differentiated according to endogenous and exogenous variables. The endogenous variables in this study consisted of intermediate and dependent variables, including 2 variables (contraception use and precancerous cervical lesions), while the exogenous variables in this study were socioeconomic, parity, age and history of sexually transmitted infections (STIs).

**Path Analysis Results**

The results of data processing of path analysis with the help of IBM SPSS STATA 13 software obtained the following results:

1. Model Specifications

The model specification described the relationship between the variables studied. In this study there were five observed variables, namely social status, parity, PMS history, age and type of contraception.

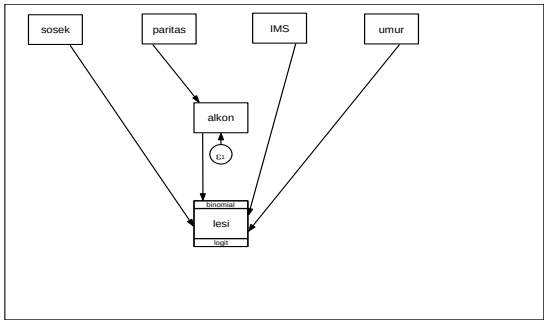


**Figure 1.** Structural Model

Figure 1 shows values of the relationship between each exogenous variable and endogenous variables.

2. Suitability of the Model and Parameter Estimation

The path analysis model was made by researchers based on theories which have been checked / tested for its suitability with the best variable relationship model. It was made based on the sample data collected by researchers.

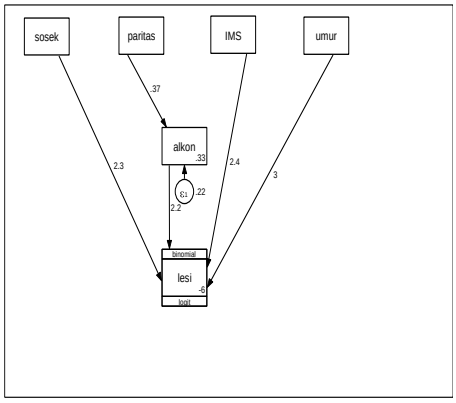


**Figure 2.** Structural model with estimate

The parameter estimation shows the causal relationship between the variables indicated by the regression coefficient (b). Regression coefficient shows the relationship between independent and dependent variables in the original measurement unit. In addition, table 4.2 shows that the results of SPSS 22 computer software program for windows calculation gained regression coefficient between variables. Further, the regression coefficient b between social status and precancerous cervical lesions resulted positive value of 2.3 with the value of asymp.ign (p) was 0.038 <0.05. Therefore, it was significant. Moreover, the regression coefficient b between parity with contraception resulted positive value of 0.37 while the asymp.ign (p) value was 0.002 <0.05. Therefore, it was declared significant. Next, the coefficient value of contraception with precancerous cervical lesions resulted positive value of 2.2 with an asymp.ign (p) value of 0.049 <0.05. In conclusion, it was significant. Besides, the regression coefficient value b between the history of STIs and cervical precancerous lesions resulted positive value of 2.4 with the value of asymp.ign (p) was 0.051 <0.05. As a result, it was considered significant. The

coefficient value between the age with precancerous cervical lesions resulted positive value equal to 3 with the value of asymp.ign (p) was 0.028 <0.05, and was declared significant.

**Table 1.** The Results of Path Analysis on the Effect of Characteristics and Pattern of Women's Behavior on Cervical Pre-cancer Lesions

| Variables | Path Coef | CI (95%) | | p |
|---|---|---|---|---|
| | | Lower Limit | Upper Limit | |
| Indirect Effect | | | | |
| Contraception Parity | 0.37 | 0.13 | 0.61 | 0,002 |
| Direct Effect | | | | |
| Precancerous Cervical Lesions | 2.3 | 0.12 | 4.47 | 0,038 |
| Socioeconomic | 2.2 | 0.007 | 4.49 | 0,049 |
| | 2.43 | -.008 | 4.88 | 0,051 |
| Contraception STIs | | 0.33 | 5.63 | 0,028 |
| Age | | | | |
| Log likelihood Ratio p=-52.23 | | | | |

## RESULTS AND DISCUSSION

The data from the 60 respondents described the characteristics of each datum. First, social economic characteristic showed that from 60 respondents, 39 respondents (65%) with low socioeconomic levels experienced precancerous cervical lesions. This is supported by a study of Singh et al. (2012) that there is a link between the low economic group with the case of precancerous cervical lesions, namely the inability to make early cervical cancer detection routinely. Also, Latha's study (2017) mentions that the prevalence value on precancerous cervix in women in rural community was 10% higher. Second, parity showed that 38 respondents (63.4%) who had low level of parity risk (multipara and grandemultipara) suffered from precancerous cervical lesions. This fact is similar to Darmayanti et al's study (2015) which states that there is a relationship between parity and the case of cervical cancer. Third, age characteristic showed 37 respondents (61.7%) who were in early adult and late adult age suffered from cervical precancerous lesions. This finding is in line with Teame et al.'s study (2018) that women aged 40-49 years old have 2.4 times higher chance of having precancerous cervical lesions. This is supported by the results of study by Irabor et al. (2018) that many women with cervical cancer are found at the age of> 35-50 years old.

The results of the study of 60 respondents elaborated the data of behavioral patterns, namely the history of STIs (Sexually Transmitted Infections) which showed that 4 respondents (6.7) suffered from precancerous cervical lesions. This is associated with Riksani's study (2016) that women who happened to experience STI have a higher risk of cervical cancer. This finding is further supported by the findings of a study by Aryani et. al (2015) that 50% of female prostitutes in the brothel in Tegal experienced STIs. Next, the use of contraception showed that 56 respondents (93.4%) used hormonal contraception. This result is in line with Parwati et. Al's study (2010) that use of hormonal contraception increases the risk of precancerous cervical lesions.

**Table 2.** Characteristics of respondents

| Variables | N | % |
|---|---|---|
| Socioeconomic | | |
| Low Socioeconomic Status | 39 | 65 |
| High Socioeconomic Status | 21 | 35 |
| Parity | | |
| Never give birth | 5 | 5 |
| Parity 1 | 17 | 17 |
| Parity 2 | 20 | 20 |
| Parity 3 | 10 | 10 |
| Paritt ≥4 | 8 | 8 |
| Age | | |
| Late adolescence (17-25 years old) | 13 | 21.7 |
| Early adulthood (26-35 years old) | 24 | 40 |
| Late adulthood (36-45 years old) | 20 | 33.3 |
| Early old age (46-55 years old) | 3 | 5 |
| Late old age (56-65 years old) | 0 | 0 |
| STI history | | |
| Moderat/ever suffer from STI | 4 | 6.7 |
| Never suffer from STI | 56 | 93.3 |
| Contraception | | |
| Never use contraception | | |
| Oral pill < 5 years | 4 | 6.7 |
| Oral pill ≥ 5 years | 1 | 1.7 |
| Injection < 5 years | 4 | 6.7 |
| Injection ≥ 5 years | 23 | 38.3 |
| Implants < 5 years | 28 | 46.7 |
| Implants ≥ 5 years | 0 | 0 |
| IUD < 5 years | 0 | 0 |
| IUD ≥ 5 years | 0 | 0 |
| | 0 | 0 |

## CONCLUSION

Based on the results of the study and discussion, the researchers draw five conclusions. First, there is a direct influence of socioeconomic and precancerous cervical lesions. The lower the socioeconomic level the more at high risk of precancerous cervical lesions. Second, there is an indirect effect of parity with precancerous cervical lesions. The more parity a person has, the higher the risk of the case of precancerous cervical lesions will be. Third, there is a direct influence of age and precancerous cervical lesions. The older the age, more risks of having a precancerous cervical lesion. Fourth, there is a positive influence between the histories of STIs (sexually transmitted infections) with precancerous cervical lesions. The more positive the history of STIs, the higher the risk of experiencing precancerous cervical lesions. Fifth, there is a direct influence of the use of contraception and precancerous cervical lesions. It means that the more a person exposed to hormonal contraception, the more risks for precancerous cervical lesions will be.

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