Correlation of Interpersonal Factors, Situational with Cervical Cancer Prevention in Woman of Childbearing Age

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Abstract: Cancer is the main cause of death and disability in the world, especially in women. Regarding cervical cancer, women can be pressed to participate in primary and secondary prevention. Cervical cancer prevention in Indonesia is not a priority for women of childbearing age. This research used a cross-sectional approach. Simple random sampling was and 159 woman of childbearing age were selected as respondents. Independent variables involved interpersonal and situational factors. The dependent variable was the prevention of cervical cancer. Data were collected by questionnaires and analyzed using Spearman's Rho test with a significant level of $\alpha \leq 0,05$. This showed the relationship between interpersonal factors with cervical cancer prevention at $p = 0.000$ and situational factors relating to cervical cancer prevention at $p = 0.000$. Interpersonal factors and situational factors have a significant relationship with the primary and secondary prevention of cervical cancer. These results can be referenced in future research related to other factors of HPM theory such as previous experience, urgency, perceived benefits of actions, the perceived barriers of actions, activity related to effects, and commitment in prevention. Health officers should try to improve information about cervical cancer prevention methods in a form that people can easily understand.

1 BACKGROUND

Cancer is the leading cause of death and disability throughout the world, especially in women *(Ginsburg et al., 2016)*. Cervical cancer that strikes women should be suppressed by conducting primary and secondary prevention (Febriani, 2016). Cervical cancer prevention efforts in Indonesia has still not given priority to women of childbearing age. Women have not made efforts to prevent cervical cancer. This is related to social and cultural factors, hereditary habits, lack of resources, economic factors, and inadequate health care facilities (Ompusunggu & Hill, 2011). The government has issued a policy on the prevention and early detection of cervical cancer by using Visual Inspection with Acetic Acid (VIA). However, some studies suggest that few women know about the risks and early detection of cervical cancer (Rosser et al., 2015).

Cervical cancer is still the fourth ranked affecting women around the world with 527 624 women each year contracting the disease, and 265 672 deaths as a result (Kessler, 2017). There are an estimated 40,000 new cases of cervical cancer in Indonesia each year. Indonesia has the highest number of sufferers of cervical cancer at approximately 36%. The East Java Province ranked first for most cases of cervical cancer with a figure of 21 313 (Ministry of Health, 2015). Data Lamongan in 2016, positive IVA test data for 169 people, *a Pap smear* grade II/ III/ IV of 631/8/2 than 2,423 people were examined by the age of 30-50 years (Department of Health, 2016). PHC Data Lamongan 2016 positive VIA test data by 73 and the data *pap smear* as much as 22 class 1 and class 2 as many as 65 of the 219 people who checked in with the number of women of childbearing age by 12 996 people. The *Health Promotion Model* by Nola J Pender focuses on an individual's ability to maintain its health with the belief that it is better to act to prevent disease and attempt an action that leads to the improvement of the condition (Alligod, MR & Tomey, 2006). Interpersonal factors are sourced from the family and this group of people is one of the factors that influences the behavior of women regarding Pap Smears (Mouttapa et al., 2016). Situational factors related to access or service may inhibit or support the behavior of cancer prevention (Chigbu, Onyebuchi, Ajah, & Onwudiwe, 2013; Kim et al., 2012). The study (Armini, Kurnia, &

Hikmah, 2016) based on the Health Promotion Model demonstrates that good personal factors enhance efforts to prevent cervical cancer. It is important to follow interpersonal factors and situational analysis to prevent cervical cancer in women of childbearing age.

2 METHODS

This study used the *Desktriptif-analytic design: Cross-sectional approach.* The population of this study comprised of 271 people. Samples were taken from 159 people. The sampling technique used in this study was *probability sampling* with *simple random sampling.* Independent variables in this study were interpersonal factors (family, peers, and health workers) and situational (choice, demand characteristics, and environment). The dependent variables in this study are the primary and secondary preventions of cervical cancer in women of childbearing age. This study used a questionnaire instrument. This questionnaire, relating to interpersonal factors, associated domain suggestions regarding cervical cancer prevention, social support that comes from family, peers, and health workers, and the influence of others who are already taking steps to prevent cervical cancer. The questionnaire contained 12 closed questions requiring yes and no answers. The situational factors associated with the prevention of cervical cancer were the level of participation of people living around women of childbearing age in the prevention of cervical cancer, the environmental conditions for the prevention of cervical cancer which contained three questions with a choice of yes and no answers. The questionnaire investigated cervical cancer prevention efforts that have been conducted, containing nine questions with the possible answers 'never', 'rarely', and 'frequently'. The research was conducted in Puskesmas Lamongan in June–July 2017. The results were analyzed using *Spearman's Rho test* with significance level $\alpha \leq 0.05$.

3 RESULT

Based on reproductive history, results show that most respondents had been pregnant <3 times at 110 respondents (69.2%). Most respondents used birth control; a small proportion were not using contraception. Most respondents were married at 149 respondents (93.7%), while there were 10 (6.3%) respondents who had never married or were widowed. The most commonly used contraceptive was the injection at 92 respondents (57.9%). Respondents who had used family planning within a period of <5 years and 5–10 years, respectively, was 47 respondents (29.6%). Regarding the respondents' age when first experiencing sexual intercourse, 140 respondents (88.1%) were >18 years. The number of respondents that already knew about cervical cancer was 107 respondents (67.3%).

There were 37 respondents (23.3%) that had already done tests, i.e. IVA /*Pap smear*, while 122 respondents (76.7%) had not done these tests. There were only two respondents (1.3%) who had been given the HPV vaccine; this was due to a health pr program in the workplace.

Table 1: Demographic data of respondents (n = 159)

No	Demographics		f	%
1	Age	18–35 years	75	47.2
		36–49 years	84	52.8
2	Education	Elementary school	17	10.7
		Junior high school	23	14.5
		Senior high school	85	53.5
		College	34	21.4
3	Work	Government officials	6	3.8
		Private employees	32	20.1
		Traders	23	14.5
		Housewives	98	61.6
4	Family income	<Rp.1.702.780	67	42.1
		> Rp.1.702.780	92	57.9

Table 2: Reproductive history (n = 159)

No	Characteristics	Criteria	f	%
1.	Pregnant experience	None	7	4.4
		<3 times	110	69.2
		≥3 times	42	26.4
2.	Marital Status	married	149	93.7
		widowed	10	6.3
3.	History of contraception used	None	32	20.1
		1 type	92	57.9
		2 type	26	16.4
		3 type	6	3.8
		4 type	2	1.3
		5 type	1	0.6
4.	Period of contraception used	None	32	20.1
		<5 years	47	29.6
		5–10 years	47	29.6
		>10 years	33	20.8
5.	Type of Contraception	None	32	20.1
		Injection	87	54.7
		Oral	21	13.2
		Implant	6	3.8
		IUD	9	5.7
		Tubectomy	4	2.5
6.	The first sexual intercourse	≤ 18 years	19	11.9
		>18 years	140	88.1
7.	Knowledge about cervical cancer	Not yet	52	32.7
		Knows	107	67.3
8.	Assessment IVA/Pap Smear	Not yet	122	76.7
		Yes	37	23.3
9.	The HPV vaccine	Not yet	157	98.7
		Yes	2	1.3

Table 3: Interpersonal, situational, and prevention factors (n = 159)

Variable	Criteria	f	%
Interpersonal Factors	Low	78	49.1
	Medium	44	27.7
	High	37	23.3
Situational Factors	Low	53	33.3
	Medium	54	34
	High	52	32.7
Cervical cancer prevention efforts	Insufficient	23	14.5
	Sufficient	136	85.5

As many as 78 respondents (49.1%) had low

Table 4: Interpersonal relationship factors in the prevention of cervical cancer (n = 159)

Interpersonal Factor	Cervical cancer prevention efforts				Total	
	Insufficient		Sufficient			
	f	%	f	%	∑	%
Low	20	12.6	58	36.5	78	49.1
Medium	2	1.3	42	26.4	44	27.7
High	1	0.6	36	22.6	37	23.3
Total	23	14.5	136	85.5	159	100
Spearman rho p = 0.000 r =0.299						

Table 5: Relationship of situational factors and the prevention of cervical cancer (n = 159)

Situational Factor	Cervical cancer prevention efforts				Total	
	Insufficient		Sufficient			
	f	%	f	%	∑	%
Low	14	8.8	39	24.5	53	33.2
Medium	8	5.0	46	28.9	54	34
High	1	0.6	51	32.1	53	32.7
Total	23	14.5	136	85.5	159	100
Spearman rho p= 0.000 r =0.283						

interpersonal factors and only 37 respondents (23.3%) were in the high category. Respondents with situational factors in the medium category were 54 respondents (34%), while 52 respondents (32.7%) belonged to the higher category. Sufficient cervical cancer prevention efforts indicated a high number of 136 respondents (85.5%).

For women of childbearing age, the prevention of cervical cancer in the 'sufficient' category indicates that 58 people (36.5%) have low interpersonal relationships. According to the results, 42 people (26.4%) have medium interpersonal relationships, and only 36 people (22.6%) have high interpersonal relationships. However, one respondent (0.6%) showed that a lower level of cervical cancer prevention efforts proved to demonstrate high interpersonal relationship factors.

The results from the *Spearman rho* p = 0.000 H1 indicate that there is a relationship between interpersonal factors and the prevention of cervical cancer in women of childbearing age. R = 0.299 indicates an insignificant relationship between the variables of interpersonal factors and prevention of cervical cancer in women of childbearing age.

The statistical test results from the *Spearman Rho* p = 0.000 H1 accepted that there is a relationship between situational factors and the prevention of cervical cancer in women of

childbearing age. R = 0.283 showed that variables in situational factors and the prevention of cervical cancer in women of childbearing age have an insignificant relationship.

4 DISCUSSION

There is a relationship between interpersonal factors and the prevention of cervical cancer in women of reproductive age with low levels of relationships in a category. Most respondents have interpersonal factors in the low category, but in cervical cancer prevention efforts in the behavior of respondents is sufficient. Primary prevention is a healthy behavior that is generally carried out in everyday life, while secondary prevention efforts such as IVA examinations/Pap tests are not done immediately. Most respondents were educated past high school or its equivalent, at colleges, or were housewives. A total of 23 respondents were housewives whose distance from other houses was great, so the degree of socialization of such individuals was less and respondents only gained support from family who lived at home but did not receive support from others, such as neighbors or posyandu groups. According to research by Torres et al. (2013) communication between group members positively and negatively affects the screening, encouragement, and discussion of health problems and can subsequently influence health-seeking behavior, causing lower interpersonal factors for prevention efforts.

Interpersonal factors that are the highest in this study lie in the domain of social support relating to family support in the prevention of cervical cancer. Social support comes from a family able to provide a positive influence, but the influence of others who have less impacts prevention efforts. Domain social support relates to the help given by the family for the prevention of cervical cancer; husbands are especially important in influencing the decisions made by wives or other family members to reduce the risk of cervical cancer. Some respondents were health workers who had high interpersonal factors and can provide information about cancer prevention efforts.

Interpersonal factors, with the lowest influence on others who are already making efforts to prevent cervical cancer, are related to family members who have previously been tested using IVA /Pap smear. There were 61 respondents that stated they have family members who already carry out secondary prevention and many family members of

respondents who have not done tests using an IVA /Pap smear.

Regarding marital status, most (149) respondents are married and the participants' husbands work as private employees and civil servants, which facilitates communication between them. Most husbands can provide support after knowing the results of the IVA test program (Chigbu et al., 2013). Families can contribute to the prevention of cervical cancer by providing support and motivation (Fallahi, Shahrbabaki, Hashemian, & Kahanali, 2016). Family support, especially from female relatives, provides encouragement and motivation for individuals to perform a pap smear test (Madhivanan, Valderrama, Krupp, & Ibanez, 2015). Prevention efforts that are sufficient in the region are supported by the regions' existing additional service for cervical cancer prevention conducted by health workers. These are supported by midwives and assisted by volunteer mothers at the time of commemorating the cancer world with lectures. According to research by Rosser, Njoroge and Huchko (2015), educational interventions to improve knowledge about cervical cancer can improve prevention efforts. A total of 140 respondents had sexual intercourse at age >18 years and 110 respondents have been pregnant <3 times, reducing the risk of cervical cancer. Being married and pregnant at an early age means the risk is ≥ 3 times the risk, increasing the incidence of HPV infection and cervical cancer (Kessler, 2017).

There are several reasons that the 58 respondents with low interpersonal factors, who make sufficient effort for the prevention of cervical cancer. These respondents have the notion that a pap smear examination is only done when there is a complaint around the pubic area. Respondents think healthy conditions do not need to be checked. A total of 107 respondents know about cervical cancer but do not yet understand fully the information. Thirty-seven respondents have already done IVA/Pap smear tests, but the prevention of cervical cancer by respondents making sufficient efforts rarely pay attention to the current state of stress and the fact that they rarely slept for more than eight hours. A total of 37 respondents have already done IVA/Pap smear tests. This is powered by age, of which most of the respondents were aged between 21 and 49 years. According to research by Hajializadeh et al., (2013) the age range of 21–49 years is associated with Pap smear test completion.

There were 36 respondents who had a high degree of interpersonal factors and prevention. Counseling by health officials and information from

neighbors who have used the IVA/*Pap smear* tests for cervical cancer encourages the respondents to maintain health so that women of childbearing age can take steps to prevent cervical cancer early. Neighboring women can provide a source of social support for healthcare associated with a *Pap smear* examination (Luque, Opoku, Ferris, & Guevara Condorhuaman, 2016). Level of education also motivates respondents to take precautions; as many as 85 respondents were educated past high school or equivalent and 34 were college educated. Education has a positive impact on the perception of cervical cancer in relation to the HPV vaccine (Kwan, Tam, Lee, Chan, & Ngan, 2011). Levels of education, at high school level or equivalent, encourage people to receive new knowledge (Vamos, Calvo, Daley, Giuliano, & López Castillo, 2015).

Two respondents had the HPV vaccine because they had a family history of cervical cancer and experienced reproductive problems. This was supported by the family income >Rp.1,702,780. The respondents' husbands worked as civil servants. Respondents' prevention efforts were in the 'sufficient' category because many respondents carried out primary prevention and behavior in everyday life. Secondary prevention of cervical cancer is to do tests such as IVA /*Pap smear,* but these are rarely done by the respondents; only 37 respondents conducted the IVA/*Pap smear* tests.

There were respondents who had a low interpersonal factors but cervical cancer prevention efforts because respondents obtain information from mass media and the Internet. Mass media is a useful tool for encourage testing IVA/*Pap smear* (De Vito et al., 2014).

There is a relationship between situational factors and the prevention of cervical cancer in women of childbearing age. Situational factors that have a relationship in this study relate to of environmental conditions for the prevention of cervical cancer in the region where there are community health clinics and health centers within the region tersebuat Lamongan ± 2 km. Factors that influence is less domain the level of participation of people living around women of childbearing age in the prevention of cervical cancer because some respondents were confused when filling out questionnaires on these domains because they did not know many women who had already had the IVA/*Pap smear* test.

Some respondents already knew about cervical cancer prevention program. Some were told by family members, or volunteers when filling out the questionnaire. Situational factors were included in the low category because most respondents hesitated when answering whether neighbors or mothers in the residential area already had IVA/*Pap smear* tests.

There were 51 respondents who had sufficient situational factors and prevention. This was because respondents knew that there are programs such as the IVA test/*Pap smear* close to the residence of respondents. When experiencing reproductive problems, respondents immediately went to visit the healthcare center, but inside the house, there are family members who smoke, thus affecting cervical cancer prevention efforts. Healthcare providers can influence and educate the reduction of incidences of cervical and breast cancer (Schoenberg, Kruger, Bardach, & Howell, 2013). The higher the situational factors, the higher the prevention of cervical cancer. Improved healthcare facilities will have a major impact on the prevention of cervical cancer (Rosser et al., 2015).

Some respondents (53) hesitated when filling in the level of participation of people living around women of childbearing age in the prevention of cervical cancer. Some respondents were confused when filling out the questionnaires in these areas because they did not know the information regarding women of childbearing age in the neighborhood that had taken the IVA/*Pap smear* tests.

There were 39 respondents that had low situational factors and take steps to prevent cervical cancer in the 'sufficient' category. Making an effort to prevent cervical cancer is a behavior that is often performed in daily life but lower situational factors of respondents means that if there are health problems that are not life-threatening, they do not need to check with the health clinic and are only given herbal medicine. When experiencing vaginal discharge or itching in the area around the genitals, respondents did not check into the health clinic because of their perception of it being a natural condition. Beliefs, behaviors, and stressors affect individuals in the prevention of cervical cancer (Daley et al., 2011).

Regarding available options in the prevention of cervical cancer, there were 96 respondents that never check their health with the health services. Some respondents had health problems related to reproductive issues. Types of birth control used by the respondents, as many as 87 types of injections and a history of contraceptive use many types of birth control use 1 as much as 92 response. Injections have side effects if used for a long time. Forty-seven respondents used contraception <5 years and 47 respondents used contraception for 5–10 years. Hormonal contraception can cause adverse

effects on reproductive disorders and weight-gain issues, pushing the respondents to make visits to the healthcare service (Simmons & Edelman, 2016; Wiebe, Brotto, & MacKay, 2011).

5 CONCLUSIONS

Most women of childbearing age have low interpersonal factors; the family/husband, neighbors, close friends and health workers still offer little support in the prevention of cervical cancer in Puskesmas, Lamongan. Various situational factors show almost an equal number of available options: the level of community participation and environmental conditions. Cancer prevention efforts are mostly in the category of pretty. Almost all have done to prevent cervical cancer primary prevention of secondary, but many are not doing. Low interpersonal factors that will inhibit cancer prevention efforts. Situational factors are almost balanced by the options available: the level of community participation and environmental conditions will support efforts to prevent cervical cancer in women of childbearing age, in the working area of Puskesmas Lamongan.

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