Behaviour of cervical cancer prevention among fertile age woman: health promotion approach

Julinda Malehere[1], Ni Ketut Alit Armini[2], Elida Ulfiana[2], Kartika Indaswari Dewi[3]
[1]Ende Hospital, Ende, Indonesia
[2]Basic Nursing Department, Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia
[3]Department Public Health, Faculty of Public Health Universitas Airlangga, Surabaya, Indonesia

Article Info

ABSTRACT

Cervical cancer incidences have tremendous effects on patients' quality of life and their families and affect government health expenditure. Prevention and early detection action are urgently needed. This study aimed to analyze the prevention behavior of cervical cancer of fertile ages women based on the Health Promotion Model. This study involved 196 samples taken by cluster sampling. Independent variables included personal factors, including ages, perceived health status and culture, perceived benefits, perceived barriers, self-efficacy and attitudes related to activities, husband's support, and situational influences. The dependent variable was the behavior of cervical cancer prevention. Data were collected using a questionnaire then analyzed by logistic regression with $\alpha < 0.05$. There was a relationship between perceived barriers (p=0.004) and situational influences (p=0.021) with cervical cancer prevention behavior. However, there is no relationship between personal factors, perceived benefits, self-efficacy, attitudes related to activity, and husband's support. Further research can be conducted through a qualitative framework to explore cervical cancer prevention of fertile age's women.

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Corresponding Author:

Ni Ketut Alit Armini
Faculty of Nursing, Universitas Airlangga
Campus C, Mulyorejo Street, Surabaya 60115, Indonesia
Email: nk.alita@fkp.unair.ac.id

1. INTRODUCTION

Cervical cancer is the fourth leading cause of death from all types of cancer in women worldwide [1], [2] according to the World Health Organisation, about 266,000 women die every year and 7.5% are caused by cervical cancer. Nearly 90% of deaths from cervical cancer occur in low-resource areas [3]. Cervical cancer is still a health threat to this day, so to prevent this it is necessary to take curative action for cervical cancer sufferers [4].

Based on data from the Indonesia Ministry of Health in 2015, 1.1% every hour women die from cervical cancer and 2.5% increase in cervical cancer sufferers in women. In 2013 the prevalence of cervical cancer patients increased by 0.8% with an estimated total of 98,692 cases [5]. Prevention of cervical cancer can be done by conducting early health checks (screening) because cervical cancer has a long preinvasive phase [6]. The incidence of cervical cancer can affect the quality of life of patients, their families, and aspects of government health financing, so prevention and early detection are needed [4].

In Indonesia, cervical cancer prevention programs include primary prevention through risk factor control and human papillomavirus (HPV) vaccination. Secondary prevention is carried out through early detection of cervical cancer using the visual inspection with acetic acid (VIA) method to be applied to low

resource areas. Tertiary prevention is carried out through palliative and rehabilitative care and cancer survivor groups in the community cancer [5], [7]. Primary and secondary prevention through HPV vaccination, control of risk factors, and early detection is the most effective prevention efforts in preventing cervical cancer. This requires attention from various parties to reduce the incidence of cervical cancer.

The low utilization of cervical cancer prevention services in low and middle-income countries is caused by individual barriers, including lack of knowledge and awareness about risk factors and prevention of cervical cancer, age, marital status, socioeconomic status, religious and cultural beliefs, society. barriers in the form of the stigma associated with reproductive health and health care system factors [8]. The behavior of women of childbearing age in cervical cancer prevention is supported by personal factors (age, occupation, education, income, knowledge about cervical cancer cancer [9]. In Indonesia, 13.0% or 20,928 cervical cancer sufferers died, and 10.3% or 9,498 people died [10]. The 2016 East Nusa Tenggara Provincial Health Office report, from 1,230,854 women aged 30-50 years, as many as 5,365 have had cervical examinations carried out, with positive VIA results for as many as 674 women of reproductive age. In Ende District, the number of cervical cancer patients diagnosed with cancer at Ende Hospital from 2015 to 2017 as many as 19 people, and 2 of them died [11].

The application of a healthy lifestyle, namely regular health checks, staying away from cigarette smoke, being diligent in physical activity, a healthy diet with balanced calories, adequate rest, and managing stress, is one of the efforts to prevent cancer in general, including cervical cancer, implementation of cervical cancer prevention programs with early detection [12]. The Health Promotion Model (HPM) predicts a person's health behavior and shows a person's multidimensional interaction with the environment to maintain health. This theory helps nurses understand the determinants of individual health behaviors that form the basis of behavioral interventions to improve health behaviors [13]. This study aimed to analyze the prevention behavior of cervical cancer in women of childbearing age based on the Health Promotion Model.

2. RESEARCH METHOD

Design studies this study used a descriptive-analytic design with a cross-sectional approach. The study population was women of childbearing age couples in Puskesmas Rewarangga, Ende Regency, East Nusa Tenggara, Indonesia. The sample size was 196 respondents selected by random cluster sampling representing women of childbearing age in three villages in the working area of the Puskesmas Rewarangga.

This study used an instrument in the form of a questionnaire to measure demographic data, cervical cancer risk factors, cervical cancer prevention behavior, and factors according to the Health Promotion Model components, including i) personal factors (age, health status, and culture), ii) the benefits of action, iii) barriers to action, iv) self-efficacy, v) attitudes, vi) interpersonal factors, vii) situational factors. The research questionnaire uses a Likert scale. The HPM factor variable for positive statements with code 4=strongly negative statements, 3=agree, 2=disagree, 1=strongly disagree, the opposite assessment is for negative statements. Variables score of HPM factor (code 2) when the value of T≥median and negative codes when the value of the T<median. The instrument's validity and reliability test was carried out on 20 women of childbearing age in different regions before being submitted to the respondent.

The research was conducted in three villages in the Puskesmas area, namely Tiwutewa, Kedebodu, and Ndungga. Based on data on women of childbearing age obtained from the person in charge of the auxiliary health center, the researcher then made a sampling table and then randomly selected respondents. The data collection by visiting the respondent's house. The researcher accompanies each respondent when filling in the data. The research data analysis was univariate and multivariate using the logistic regression test with a significance level of α<0.05. If the p-test result <0.05, then H1 is accepted, which means a significant relationship. Statistical data were analyzed using IBM SPSS 25. The research protocol was approved by the Health Research Ethics Committee of the Faculty of Nursing, Airlangga University No. 1177-KEPK.

3. RESULTS AND DISCUSSION

In this section, it is explained In this section, it is explained the results of research and at the same time is given the comprehensive discussion. Results can be presented in figures, graphs and tables. The discussion can be made in several sub-chapters.

3.1. Characteristics of respondents

This study conducted on 196 respondents. The characteristic of the respondent showed in Table 1. Table 1 shows that the most of the respondents aged between 36-45 years (55.6%), almost half ber of elementary education (46.9%), and did not work (46.4%).

Table 1. Demographic data of respondents

Category	n	%
Age (years)	17-25	6.1
	26-35	35.7
	36-45	55.6
	46-55	2.6
Education	Elementary school	46.9
	Junior high school	22.4
	Senior high school	19.9
	Higher education	10.7
Profession	Civil servants	4.1
	Private employees	3.1
	entrepreneur	6.1
	Does not work	46.4
	Farmer/Weaver	40.3

3.2. Risk factors and cervical cancer

Table 2 reveals that most of the respondents were married at the age of 26-35 years (51.5%), and married only once. Most of the respondent had been pregnant 1-2 times (54.6%) and had 1-2 children (56.6%). Most of the respondents had heard information about cervical cancer (75%) and the primary source of information from health workers (56.1%), almost all respondents had never had an inspection visual acetat (IVA)/Pap Smear (88.8%). They had no family history of the disease of cancer (96.9%). Cervical cancer prevention behaviour was partly positive as many as 143 people (72.9%).

Table 2. Risk factors and cervical cancer prevention behaviours

Category		n	%
Age of marriage (years)	<17	3	1.5
	17-25	91	46.4
	26-35	101	51.5
	36-45	1	.5
Number of children	0	8	4.1
	1-2	111	56.6
	3-4	64	32.7
	>4	13	6.6
Heard about cervical cancer	Never	49	25.0
	Ever	147	75.0
Source of cervical cancer information	Television/Radio/Newspapers	35	18.9
	Health workers	110	56.1
	Friends/Family	2	1.0
Performing an IVA/Pap Smear	Never	49	25.0
	Ever	147	75.0
Family history of cancer	No	190	96.9
	Yes	6	3.1
Behaviour preventers has cervical cancer	Positive	143	72.9
	Negative	53	27.1

3.3. Relationship health promotion model and cervical cancer

Table 3 shows that the analysis of the health promotion model using logistic regression test. Table 3 describes that the factors associated with cervical cancer prevention behaviour were action inhibition factors (p=0.004 Exp (B)=3.134) and situational factors (p=0.021 Exp (B)=2.467). The Health Promotion Model components, such as interpersonal factors (age, health status, culture), benefits of action, self-efficacy, attitudes, and interpersonal factors, do not show a significant relationship. Most women of childbearing age in the Rewarangga Public Health Center, Ende Regency, mostly have good cervical cancer prevention behavior, but some have damaging behavior. The majority of respondents are in the range of late adulthood, namely 36-45 years. The level of maturity determines beliefs that affect health behavior [14]. Age is one of the biological factors that indirectly affect a person's behavior. The analysis of Health Promotion Model factors on cervical cancer prevention behavior indicates the effect of perceived barriers and situational factors. HPM components such as personal factors (age, health status, culture), benefits of action, self-efficacy, attitudes, interpersonal factors did not significantly affect. Women of childbearing age couples aged 30-50 years are subject to the government to prevent because rehearsal group for cervical cancer, 47% of cervical cancers occur at a younger age than 35 years [15]. Age maturation affects the understanding of someone to information.

Table 3. Health promotion model and cervical cancer prevention behaviour

| Variable | Cervical cancer prevention behaviours | | | | | | | |
| Health promotion model factors | B | SE | Wald | df | Sig. | Exp (B) | 95% CI for EXP (B) | |
							Lower	Upper
F. Personal; Age	.224	.307	.531	1	.466	1.251	.685	2.282
F. Personal; Status Kes	.126	.384	.107	1	.743	1.134	.534	2.407
F. Personal; Culture	.624	.423	2.170	1	.141	1.866	.814	4.278
Action-benefit	.639	.421	2.306	1	.129	1.895	.830	4.324
Action barrier	1.142	.393	8.468	1	.004	3.134	1,452	6.766
Self efficacy	.456	.449	1.031	1	.310	1.578	.654	3.806
Attitude	-392	.452	.752	1	.386	.676	.278	1.639
Interpersonal factors	.825	.426	3.744	1	.053	2.282	.989	5.264
Situational_effect	.903	.393	5.291	1	.021	2.467	1.143	5.326
Constant	-6.128	1.737	12.449	1	.000	.002		

Poor knowledge and not actively seeking information significantly affect cervical cancer prevention and control behaviour [3], [8]. Strengthening the dissemination of information about cervical cancer to all groups wan ita childbearing age would be good if, from a young age, she is already equipped with knowledge about cervical cancer, thus increasing the prevention opportunity. There was no relationship between perceived health status with cervical cancer prevention behaviors.

In contrast to Ahmad [16], cervical cancer prevention behavior is influenced by perceptions of the potential harm and severity of the disease. According to Pender *et al.* [13], perceived health status is one of the psychological factors that indirectly affects behavior. However, most people will act after a risk event; lack of knowledge and information also affects cervical cancer prevention behavior [17]. The respondents' education level was mostly primary school, and respondents had never heard about the cervix's cancer. Knowledge does not guarantee good behavior because the transition of knowledge into behavior depends on internal and external factors include value, motivation, and confidence. There is no relationship between the culture of cervical cancer-preventive behaviors.

In contrast to the research of, Nguyen-truong [18] stated that cultural barriers cause women to delay cervical cancer screening. Desperate shame and fear of being diagnosed so that women do not do early detection of cervical cancer [19]. Ende people adhere to customs and culture. The husband has the highest position in the family and is the influence in every decision of the family. The perceived benefit is not related to cervical cancer prevention behavior, which means that the high perceived benefit does not make a person take cervical cancer prevention, according to the research of Titisari *et al.* [19], which states that there is no relationship between perceived benefits and participation of women of childbearing age (*wanita usia subur*/WUS) in the IVA examination.

Perceived benefits are mental representations of positive consequences that reinforce behavior [14]. Respondents have a high perception of benefits but do not perform the behavior of cervical cancer prevention. The fear of screening procedures, fear of diagnosis, and consequences make women who already know the importance of cervical cancer screening do not do it [9]. Information exposure also plays a crucial role in influencing a person's behavior to prevent cervical cancer [20].

The majority of respondents realized that preventive measures are better because they are cheaper than curing if they have cervical cancer. However, the perception of benefits does not entirely positively impact cervical cancer prevention because of shame and fear of the procedure during the examination. Efforts to increase information are necessary to make the community aware of its benefits if it is healthy and free from cervical cancer [21]. There is a significant relationship between perceived barriers and cervical cancer prevention behavior. The connection between the perception of the barriers to participation in the IVA examination [22]. In contrast, no relationship between respondents' perception of barriers and positive IVA treatment-seeking behavior [20]. Barriers generate reasons for avoiding behavior and influence the intention to engage in certain behaviors.

The perceived barrier is in the form of perceptions about unwillingness, inconvenience, cost, difficulty, or time used for an activity. The perception of high barriers directly deters someone from acting [23]. The most experienced obstacle in preventing cervical cancer is avoiding cigarette smoke because the husband is a smoker. Research Rosser [24] stated that the husband's knowledge of cervical cancer risk factors is still low. Need attention health centers to provide education to the husband as a partner in preventing cervical cancer. Most of the respondents have high self-efficacy and positive cervical cancer prevention behavior. There is no correlation exhibited significantly. No relationship between self-efficacy in cervical cancer prevention behaviors [23].

This fact is in contrast to the research of Tilaki and Auladi [15]. They stated that self-efficacy is a very significant factor in examining breast cancer. A person's knowledge of Health directly influences self-

efficacy. Improving communication and health knowledge is an effective strategy to increase self-efficacy [25].

It is essential to increase knowledge by providing education on cervical cancer risk factors and preventing them both to respondents and their partners as interpersonal factors that can support cervical cancer prevention. Attitudes do not affect cervical cancer prevention behavior. A positive attitude results in good behavior, but if it did not match the intention to carry out the believed behavior, it would not produce the expected behavior [26].

A person's attitude is very subjectively influenced by the intention to do what believes. Behaviors that impact will continue to be used while the air negative impact tends to avoid. Most of the respondents who received positive husband's support had positive cervical cancer prevention behavior. The study found there was no significant relationship between interpersonal relationships to cervical cancer prevention behavior. That interpersonal influence is not related to women's preventive efforts with breast cancer [27]. Puskesmas Rewarangga, as the research location, is a mountainous area. However, some respondents said the distance was not an obstacle for health because of road access and public transportation availability. Women are more motivated to detect cervical cancer early when family members or friends provide support [8], [28]. Peer invitations influence the mother's decision to perform IVA examinations.

Interpersonal influence does not significantly affect efforts to prevent cervical cancer. However, the husband's support as a partner is needed, such as giving attention, giving permission, and assisting respondents in preventing cervical cancer [22], [29]. Factors influenced respondents who received positive support from their husbands but had negative preventive behavior in the individual to act. There is a relationship between situational factors and cervical cancer prevention behavior. Most of the respondents had a positive situational influence and positive cervical cancer prevention behavior. Situational influences are personal perceptions and cognitions of situations that facilitate or inhibit behavior, including perceptions of available choices, demand characteristics, and environmental characteristics [30], [31]. This study analyzed the health promotion model factor conducted a cross-sectional approach, only describing the moment's state. Cervical cancer prevention behavior using a close-ended question questionnaire there may be a biased interpretation. The following behavior measurement needs to be done by exploring respondents' experiences in depth.

4. CONCLUSION

This study revealed that the Health Promotion Model factors related to cervical cancer prevention behavior were only perceptions of barriers and situational influences. Personal factors, perceived benefits, efficacy, attitudes, interpersonal influences did not significantly influence cervical cancer prevention behavior. The lower the perception of perceived barriers and the more positive the situational influence will positively impact cervical cancer prevention behavior. Further research needs to be done with in-depth interviews about the experiences of women of childbearing age in preventing cervical cancer.

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BIOGRAPHIES OF AUTHORS

Julinda Malehere 🆔 📇 SC Ⓟ Reserch interest in health, nursing, chronic disease, preventive care, Airlanga nursing alumni, worked as a nurse at Ende Hospital, East Nusa Tenggara. She can be contacted at email: julindamalehere@gmail.com.

Ni Ketut Alit Armini 🆔 📇 SC Ⓟ Recearch interest: Women Health, Family Planning, Oncology-Palliative Care, Nutrition. She can be contacted at email: nk.alita@fkp.unair.ac.id.

Elida Ulfiana 🆔 📇 SC Ⓟ Reserch interest in gerontics, community and family nursing, complementary. She can be contacted at email: elida_u@fkp.unair.ac.id.

Kartika Indaswari Dewi 🆔 📇 SC Ⓟ Research Interest: Public Health, Nutrition. She can be contacted at email: Kartika.indaswari.dewi-2018@fkm.unair.ac.id.