PERCEPTIONS, KNOWLEDGE, ATTITUDES, AND CERVICAL CANCER PREVENTION BEHAVIOR AMONG HEALTH AND NON-HEALTH SCHOLAR

Solikhah Solikhah [1,*], Nahdiya Ayu [2], Monthida Sangruangake[4]
[1,2,3] Faculty of Public Health, Universitas Ahmad Dahlan, Jln. Prof. Dr. Soepomo SH, Yogyakarta 55164, Indonesia
[4] Faculty of Nursing, Khon Kaen University, Khon Kaen, Thailand
* corresponding author: solikhah@ikm.uad.ac.id

ABSTRACT

Cervical cancer remains public health problem worldwide, including in Indonesia. It ranks second as the cause of death in Indonesia, and one of them is the youth group. This study aimed to explore distinguish perception, knowledge, attitude, and cervical cancer prevention among health and non-health scholars in Indonesia. This study designed with analytical observational and a cross-sectional approach. Proportional random sampling was used to collect 364 samples based on two criteria for the type of study program, with 168 samples obtained from health scholar participants student samples and 196 from non-health participants. Data analysis used univariate and bivariate analysis using independent T-tests. Finding of this study reported that there were differences in perceptions of cervical cancer prevention between health (mean= 17.34, SD=2.11) and non-health students (mean=16.80, SD=1.94). This finding pattern similar with variables knowledge. Both knowledge and attitude variables showed significant differences between the two groups (p-value knowledge= is 0.001 and p_value attitude= 0.000). There are differences in perceptions, knowledge, and attitudes towards cervical cancer prevention in health and non-health scholars, Indonesia.

Keywords: Perception, Knowledge, Attitude, Behavior, Cervical Cancer Prevention

INTRODUCTION

Cervical cancer is still the fourth most common cause of death in women in all countries. Globocan in 2020 states that new cases of cervical cancer in women in the world are 604,127 cases and deaths from cervical cancer are 341,831 cases (Sung et al., 2021). Countries in Asia such as China, Indonesia and India have a major contribution to the incidence of cervical cancer (Agustiansyah et al., 2021). This is because the country has a large population. Then followed by countries in Africa, Latin America, Europe, North America, and Oceania (Bray et al., 2018) (Zhang et al., 2021) (Tanaka et al., 2022). In Indonesia, the number of new cases is 36,633 and deaths from cervical cancer are 21,003 cases in 2020. Because of this, cervical cancer is one of the most common cancers suffered by

Indonesian women (The Global Cancer Observatory, 2020). Cancer Dharmais Hospital in 2018 showed that cervical cancer was the second most common cancer after breast cancer suffered by the Indonesian people, followed by lung cancer (Gondhowiardjo et al., 2021) (Setiawan et al., 2020).

Adolescents aged 15-26 years are a high-risk population for contracting sexually transmitted infections and cervical cancer due to risky behavior such as free sex, this can be influenced by the social environment and cultural influences (Dewi et al., 2017) (Plummer et al., 2012). Based on a survey conducted by Global School Health in 2015 showed that as many as 0.7% of girls and 4.5% of boys had risky sex (Kementrian Kesehatan, 2019). The proportion of women aged <35 years with cervical cancer increased from 9% to 25% (Manik Karuniadi and Putu Widiastini, 2020).

Based on these data, if cases of cervical cancer are not immediately prevented, then this disease can cause increased morbidity, infertility and death rates so that it becomes a serious threat to women. So that cervical cancer prevention behavior is important for every woman such as maintaining the cleanliness of the reproductive organs, HPV immunization, and implementing a healthy lifestyle (Winarti et al., 2018).

The lack of information about the dangers, ways of spreading, and prevention of HPV infection is one of the factors that affect the knowledge of adolescents to carry out cancer prevention behavior (Poudel and Sumi, 2019), (Kasymova et al., 2019). This causes the incidence of cervical cancer to still increase significantly (Dethan and Suariyani, 2017). In addition, the high incidence of cervical cancer is caused by a lack of information, knowledge, and awareness about cervical cancer (Rahul Ganavadiya et al., 2018). Therefore, this study aimed to distinguish perception, knowledge, attitude, and cervical cancer prevention among health and non-health scholars in Indonesia. We took students bachelor degree at Universitas Ahmad Dahlan (UAD), Indonesia. UAD has several bachelors and post graduate

programs including health and non-health in those programs. UAD is one of university in Indonesia that majority of students comes from many islands in Indonesia. Therefore, this study aimed to evaluate the differences perception, knowledge, attitude, and cervical cancer prevention among health and non-health scholars in Indonesia.

METHOD

This study used an analytic observational design with an approach cross-sectional. This study was conducted from April-May 2022. This study was approved by the Ethics Committee of the Universitas Ahmad Dahlan (approval number:012204028) and all participants were informed of this research and provided written informed consent. All methods were initiated following the Declaration of Helsinki. The population in the study were all health and non-health students at Universitas Ahmad Dahlan Class of 2019 and 2020 with a total population of 11,383 students. Samples were taken as many as 364 samples. The sampling technique used proportional sampling using simple random sampling for each faculty, so that the total sample of health students was 168 students and the sample of non-health students was 196 students. Data was collected using an electronic questionnaire, namely the google form sheet. In this study, there were three independent variables: perception (5 questions), knowledge (6 statements), and attitude (6 statements), as well as one dependent variable: behavior (6 statements). All four variables are classified using a Likert scale ranging from 1 (strongly disagree), 2 (disagree), 3 (undecided), 4 (agree), and 5 (strongly agree). This study also examined sociodemographic variables, including age, source of school fees, parents' occupation, history of HPV vaccination, and cancer history. This research instrument has also been evaluated by experts for content validity and construct validity, with a score of 0.928%. Then, the data analysis used was univariate and bivariate analysis using independent t tests.

RESULTS AND DISCUSSION

1. Univariate analysis

This research was conducted at Universitas Ahmad Dahlan, Yogyakarta, Indonesia in April-May 2022. The respondents in this study were 364 students in the 2019 and 2020 batches from all faculties at Universitas Ahmad Dahlan. The number of respondents obtained from filling out an electronic questionnaire survey through a Google form sheet which was opened on April 23, 2022 to May 30, 2022. However, there were only 360 female students who were willing to fill out this research questionnaire, while 4 others were not. So that the total of all respondents in this study were 360 female students.

Table 1. Characteristic participants in this study

Characteristics	Health		Non-Health	
	N	%	N	%
Students	168	47	192	53
Age				
≤19 Years	39	23	28	14
20 Years	62	37	92	48
21 Years	60	36	57	30
22 Years	6	3	11	6
≥23 Years	1	1	4	2
Source of education costs				
Scholarship	0	0	9	5
Comes from parents/adoptive parents/family	168	100	183	95
Parent's occupation				
Civil Servant	73	43	55	29
Entrepreneur	84	50	88	46
Laborer	3	2	25	13
Farmer	4	2	16	8
Retired	3	2	3	1
Doesn't work	1	1	5	3
HPV Immunization				
No, if you have never received	161	96	184	96
Yes, if you have received HPV immunization	7	4	8	4
History of Cancer (Doctor's Diagnosis)				
Yes	2	1	4	2
No	166	99	188	98

Table 1 shows that the number of students from health is 168 (47%) students, while respondents from non-health students are 192 (53%) students. Most of the health and non-health students who filled out this questionnaire were 20 years old, 62 (37%) health students and 92 (48%) non-health students. The source of education costs for the most respondents came from

parents/adoptive parents/family as many as 168 (100%) health students, while 183 (95%) non-health students. Most of the respondents' parents work as entrepreneurs, namely 84 (50%) health students and 88 (46%) non-health students. Health students who have been immunized with HPV are 7 (4%) people, while in non-health students there are 8 (4%) people who have been immunized with HPV. The history of cancer (based on doctor's diagnosis) in health students is 2 (1%) people, while in non-health students are 4 (2%) people.

Based on Table 2 it can be seen that the average perception, knowledge, attitude and behavior of health scholar is higher than that of non-health scholar. While, Table 3 shows that there are differences between perceptions, knowledge, and attitudes of cervical cancer prevention between health and non-health scholar, because these variables have a p value values < 0.05. While the behavioral variable, the *p value* is 0.627 (> 0.05), which means that there is no difference in cervical cancer prevention behavior between health and non-health scholar.

2. Bivariate analysis

Table 2. The proportion of perception, knowledge, attitude, and behavior among study participants

Variables	Scholar			
	Health		Non-Health	
	Mean	Standard deviation	Mean	Standard deviation
Perception	17.34	2.11	16.80	1.94
Knowledge	11.95	0.95	10.81	1.06
Attitude	21.57	2.08	20.62	2.25
Behavior	22.29	2.02	22.17	2.37

Table 3. Bivariate analysis using T dependent test

Variables	*p value*	t count
Perception	0.012	2.520
Knowledge	0.001	3.216
Attitude	0.000	4.119
Behavior	0.627	0.486

3. Discussion

Most of the respondents are aged 20-21. A person's knowledge is influenced by several factors, one of which is age. Along with the age of a person, the capture power and pattern

of thought will also increase. So that it will affect one's knowledge (Supriyadi et al., 2021). The older a person gets, the easier it will be to adapt to the environment so that they are willing to do cervical cancer prevention because of exposure to information sources (Winarti et al., 2018). The results of the research on the sources of the respondents' education costs were mostly from their parents/adoptive parents/families where the occupation of the parents/adoptive parents/families of the respondents were mostly self-employed, where the work of the parents themselves would affect the income of the parents. One of the factors that influence a person's attitude to prevent cervical cancer is parental income (Winarti et al., 2018). The results of research on HPV immunization showed that 7 (4%) health students had been immunized with HPV, while 8 (4%) non-health students had been immunized with HPV. As for the history of cancer (based on doctor's diagnosis) in health students as many as 2 (1%) people, while in non-health students as many as 4 (2%) people.

Based on the results of the bivariate test that has been carried out, it is found that there are differences in perceptions, knowledge and attitudes of cervical cancer prevention behavior between students' health and non-health. This is because people with a health education background have more opportunities about health such as from health seminars, lecturers, and other print and electronic media compared to people with non-health educational backgrounds (Setyaningrum et al., 2019). However, students who do not have a health education background usually also get some information about cervical cancer prevention such as HPV vaccination. It's just that they themselves do not really know what HPV means. Thus, their perception of HPV is still low (Ndikom and Oboh, 2017).

A person's attitude in preventing cervical cancer is influenced by several factors such as perception and knowledge. Health education has an influence on cervical cancer prevention attitudes (Obol et al., 2021) (Romli et al., 2020) (Simanullang, 2018). Health education affects a person's level of

knowledge, where the level of knowledge will determine a person's attitude (Dethan and Suariyani, 2017). his is due to the large amount of information obtained by health students about health, either through lecturers, the environment or friends from the same faculty, curriculum, health seminars, or personal experience (Setyaningrum et al., 2019). In addition, women with education with a health background are one of the drivers *preventive* so that they usually have a better cervical cancer prevention attitude compared to non-health students (Winarti et al., 2018).

However, although there are differences between perceptions, knowledge, and attitudes of cervical cancer prevention in health and non-health students, there is no difference in cervical cancer prevention behavior in the two groups of students. This could be because there are some health students who do not implement it in their lives (Osowiecka et al., 2021). In addition, knowledge is not the only factor that can affect a person's knowledge (Putri, 2013). Other factors that might cause no differences in cervical cancer prevention behavior in health and non-health students are the willingness to behave in a healthy manner, the tendency to act, lack of facilities and infrastructure, and the high cost of the HPV vaccine (Luvsan et al., 2022) (Alonso et al., 2019) (Zou et al., 2020) (Akumbom et al., 2022).

All students, not just health students, need to learn about reproductive health, cervical cancer, and HPV so that they have a good idea of how to prevent cervical cancer. By having a good view of how to prevent cervical cancer, people should be able to form attitudes, behaviors, and peer motivators that drive efforts to prevent cervical cancer (Giuseppe et al., 2020). Consistent with prior study, which found a strong relationship between perceived personal risk perception and the need for screening, a positive risk perception is significantly associated with the desire to get screened (Opoku et al., 2016).

CONCLUSION

Our study concluded that knowledge, attitudes, and perceptions were significantly difference of prevention for

cervical cancer among health and non-health students. However, there were no differences of cervical cancer prevention on behaviour among those groups. Regular and continuous education is needed with various strategies, to improve exercise habits, often eat fruits and vegetables, maintain reproductive health, avoid free sex, do not smoke, do not drink alcohol.

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