

## The Influence of Education About Cervical Cancer Through Online Meeting on The Knowledge of Adolescent Women

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### ABSTRACT

**Introduction:** Cervical cancer ranks first after breast cancer in developing countries, the only one being Indonesia. Cervical cancer is a sexually transmitted disease that originates from an infectious virus, namely the human papilloma virus, which triggers changes in the behaviour of cervical epithelial cells. Reproductive health problems faced by women today are increasing infections in the reproductive organs, eventually causing cancer. The prevalence of women with cervical cancer is high due to their tendency to marry at a young age and their limited economic capacity, which limits their access to information. Provision of health education through Zoom meetings, considering the limitations due to the pandemic, really needs to be done for adolescents as a preventive effort considering that teenagers are very vulnerable to having free sex. **Objective:** The effect of education through a zoom meeting on cervical cancer on the knowledge of young women in SMA Negeri 1 Lumbung in March 2022. The research used is a quantitative study. **Method:** The research used is a quantitative study. A tool for data collection using a questionnaire while the total sampling technique with a sample of 40 students. **Result:** The results of data analysis using a t-test on the effect of education through zoom meetings on cervical cancer obtained a significant value because the value of  $t \text{ count} > t \text{ table} = 15,627 > 2,023$  and the value of  $p \text{ value} = 0.05 > 0.000$ . **Conclusion:** From the results of the study, it can be concluded that there is a significant effect of health education between before being given health education and after being given health education.

**Keywords:** cervical cancer, teenagers, zoom meeting.

## Introduction

Cervical cancer ranks first after breast cancer in developing countries, the only one being Indonesia. Cervical cancer is a sexually transmitted disease that originates from a viral infection, namely the human papilloma virus, which stimulates changes in the behavior of cervical epithelial cells. The reproductive health problem faced by women today is an increase in infections in the reproductive organs, which eventually lead to cancer. Efforts that need to be made to prevent cervical cancer include providing health education through online media to increase young women's knowledge about cervical cancer (Adesta & Natalia Nua, 2021).

Cancer is the abnormal growth of a cell or tissue that grows and develops uncontrollably, the growth rate is excessive, and eventually it affects other organs. This cancer grows on the epithelium, or the outer layer of the uterine surface, which is then called cervical cancer. This cancer is caused by the Human Papilloma Virus (HPV). Cervical cancer is a very dangerous disease that many women experience, to be precise in the cervical area (Kurnaesih, Lindasari, & Andi, 2018).

Cervical cancer is caused by the Human Papilloma Virus (HPV), which is transmitted through sexual intercourse or intimate relationships (marital sex) with men who often change partners at an early age or in adolescence, namely age 16 years. This can increase the risk of cervical cancer. Such as smoking habits, lack of nutritional intake, long-term use of oral contraceptives, sexual activity among adolescents, and long parity (number of births that are more or less frequent) (Kurnaesih et al., 2018).

The causes of cervical cancer in the world are lack of knowledge, delays in treatment or early screening which results in many victims dying, even though this cancer can be prevented in several ways, namely by doing PAP SMEAR and IVA which will make it easier to find out the symptoms of cervical cancer (Siregar, 2019).

Prevention of cervical cancer can be emphasized by making prevention efforts. Efforts that must be made by health workers in dealing with the increasing number of cancers include taking precautions and ensuring early detection in adolescents to prevent cervical cancer in the future. Prevention of cervical cancer is needed to be able to change the behaviours of adolescents in maintaining their reproductive health. Through prevention and detection as early as possible, it will increase the likelihood of increasing the incidence of cervical cancer cases in women. The strategy in this prevention is by conducting education through health promotion or counselling (primary prevention), a healthy lifestyle that aims to prevent disease, and screening in the form of pap smears (secondary prevention) to reach viral infections (HPV). Pap smear screening is able to detect changes early on the cervix before they develop into cancer cells and can be cured immediately (Siswoaribowo, et., al., 2021)

According to the World Health Organization (WHO), adolescence is a transitional period in which physical and psychological changes occur from childhood to adulthood. Psychological changes in adolescents include intellectual, emotional, and social life. Physical changes include the sexual organs, namely the reproductive organs, which have reached maturity and are starting to function properly. The age limit for teenagers is 10–19 years (Purbosari, Rahayu, Sari, & Nuraini, 2021)

Developments in the adolescent age range occur dynamically and rapidly, both physically, psychologically, intellectually, socially, and in terms of sexual behaviour, which is associated with the onset of puberty. This characteristic pattern of rapid growth and development causes adolescents to have a great sense of curiosity, to like adventure and challenges, and to tend to dare to take risks without careful consideration. This leads to the growing problem of adolescent reproductive health, which involves free sex, the spread of

venereal diseases, and pregnancies outside of marriage or pregnancy. Unwanted behaviours, such as abortion and young marriage, can have negative consequences. As many as 75% of deaths in adolescents occur due to behavioural factors. Several diseases that arise due to adolescent behavioural factors include accidents, teenage pregnancy, sexually transmitted diseases, eating disorders, and drug and alcohol abuse (Siregar, 2019).

The rise of free sex in adolescents puts them at risk of developing cervical cancer. In her teenage years, a woman's cervix is immature, so it is vulnerable to stimulation and viral attacks. The female reproductive organs will be active and developing where the cells divide selectively. At that time, there should not be any stimulation that would make the changes in cell properties abnormal. Abnormal cells that will cause cervical cancer. The infection process can last for the next 5–10 years. Women who are exposed to this virus do not feel sick immediately. However, after so many years, he felt sick, even though he had been infected for a long time.

According to WHO data, the number of cervical cancer patients continues to rise each year, more than 270,000 women die from cervical cancer each year, with developing countries accounting for more than 85% of these deaths. According to the 2018 Riskesdas, the prevalence of cancer in Indonesia has reached 1.79 per 1000 population. In 2019, there was another increase, reaching 569,647 cases; per 100,000 cases, there were 29.9 new cases and more than half of the deaths. Because of the high number of cervical cancer cases in Indonesia, WHO has designated Indonesia as the country with the highest number of cancers. According to data from the Indonesian Cancer Foundation, in the Ciamis district, there are 3 people with cervical cancer, including 1 teenager and an elderly person (Widianti et al., 2021).

In Indonesia, it is estimated that 40 thousand new cases of cervical cancer are found each year. According to pathology-based cancer data at 13 pathology laboratory centers, cervical cancer is a cancer that has the highest number of sufferers in Indonesia, which is approximately 36%. From data from 17 hospitals in Jakarta in 1977, cervical cancer ranked first, with 432 cases among 918 cancers in women. At Dr. Hospital Cipto Mangunkusumo, the frequency of cervical cancer is 76.2% among gynecological cancers. Most patients came at an advanced stage, namely stages IIB and IVB, accounting for as much as 66.4%. Cases with stage IIB, which is a stage with impaired kidney function, are 37.3% of all cases (Rasjidi, 2009).

The largest number of cervical cancer screenings were in the provinces of West Java, Central Java, and East Java. The estimated number of cervical cancer sufferers in the province of West Java is quite large. The number of cases of cervical cancer in West Java province is 15,635. Until 2013, there were 405 trainers assigned to provide training to early detection providers in each province in Indonesia. The trainers consist of gynecological obstetricians, oncology surgeons, general practitioners, and midwives. Of all the provinces in Indonesia, only Aceh Province does not have early detection trainers, while West Nusa Tenggara province has the most trainers, namely 36 people. It is hoped that the number of trainers will increase so that the number of providers and screening will also increase (Pusat Data dan Informasi Kementerian, 2015).

Cervical cancer incidence rates exist in the majority of cities/counties. Women show that the frequency of cervical cancer every year increases and becomes a problem. Cervical cancer data in Ciamis Regency shows the incidence of cervical cancer with a frequency of 1.03%, including in the granary area, which is included in the scope of Ciamis Regency (Lelly, 2020). Cervical cancer is still an important problem in developing countries. More than 80% of women with cervical cancer are diagnosed at an advanced stage due to poor access to health facilities, lack of awareness of cervical cancer, lack of facilities for screening, and the

absence of treatment programs. The peak age for cervical cancer is 47 years old; around 10% occurs at the age of 65 years (Nita & Indrayani, 2020).

More than 30% of cancer deaths are caused by five behavioral and dietary risk factors, namely high body mass index, lack of consumption of fruits and vegetables, lack of physical activity, and use of cigarettes and alcohol. Other risk factors for cervical cancer are related to sexual activity at a young age (16 years), sexual relations with multiple partners, suffering from HIV at the same time as HPV, and women who smoke. Parlhli estimates that 40% of cancers can be prevented by reducing the risk factors for these cancers. The problems found in cervical cancer sufferers include coming to a health service after entering an advanced stage and having metastasized to other organs. This is because at an early stage they have not shown specific symptoms and signs so that the patient does not realize that he has cancer cervix (Sukmawati, Mamuroh, & Nurhakim, 2020).

The government's efforts to follow up on the incidence of cervical cancer are by way of outreach to various elements of society about cervical cancer, especially to young women, which aims to recognize and educate the public about the dangers of this disease and how to prevent and treat it. The government also emphasizes that people carry out early screening to prevent cervical cancer.

Knowledge is the participant's understanding of the given topic. Knowledge is the ability to receive, retain, and use information that is influenced by experience and skills. Most of the knowledge a person has comes from both formal and informal education, personal and other people's experiences, the environment, and the mass media (Moudy & Syakurah, 2020).

Health education can be carried out in various ways, namely face-to-face (offline) and online. Health education in the network can be provided through online media such as YouTube, Facebook, Twitter, WhatsApp, Instagram, Zoom meetings, and others. Online media integration is seen as an interactive process that allows the exchange of information at the same level between the audience and the sender of the message, creating feedback communication (Adesta & Natalia Nua, 2021).

A zoom meeting is one way to avoid having to meet in person. Zoom Meeting is an internet-based application for video conferencing that is used for discussion or information sharing. This method is used to conduct outreach to adolescents, which aims to provide information to adolescents about cervical cancer (Widianti et al., 2021).

According to research conducted by Ira Purbosari with the title "Efforts to Prevent Cervical Cancer Increase Through Socialization on How to Prevent Cervical Cancer in Adolescents," this PPM activity was carried out in collaboration with Muhammadiyah 1 Taman Sidoarjo High School students, totaling 58 grade 12 students. The results of this study showed an increase in knowledge in female students of SMA Muhammadiyah 1 Taman Sidoarjo (Purbosari et al., 2021). The advantages and disadvantages of using online media are that we can present material as much as possible, and the disadvantage is that we cannot meet face-to-face and interact directly (Sembada et al., 2022).

Based on a preliminary study conducted by researchers on November 16, 2021, with 15 class XII students at SMA Negeri 1 Lumbung, five out of 15 female students know about cervical cancer. However, 10 out of 15 of their students do not know extensively about cervical cancer, such as its causes, treatments, prevention, risk factors that can trigger cervical cancer, or even how to detect this disease early. Young women at SMA Negeri Lumbung do not know about it at all. This is due to the lack of information about cervical cancer.

Therefore, the researcher is interested in taking the title "The Influence of Education Through Zoom Meetings About Cervical Cancer on the Knowledge of Young Women at SMA

Negeri 1 Lumbung". Because the pandemic is still ongoing, changes in information dissemination are required. So the authors use Zoom meetings to streamline counseling as well as minimize the spread of COVID-19. Not only in providing information, but Zoom meetings can be used in education, offices, and other matters. One of them is conducting health education to increase knowledge about diseases; this is very effective during a pandemic like this.

### **Objective**

The effect of education through a zoom meeting on cervical cancer on the knowledge of young women in SMA Negeri 1 Lumbung in March 2022.

### **Method**

This research method used an experimental design with a one-group pretest-posttest design. The population in this study was all female students of class XII SMA Negeri 1 Lumbung, as many as 40 people, consisting of 20 students from XII IPA and 20 students from XII Social Sciences. This sampling is non-probability with total sampling, namely, the sampling method is carried out by taking all members of the population as respondents or samples. This research was conducted at SMA Negeri 1 Lumbung on March 22, 2022.

This research begins with a preliminary survey to obtain the data needed for the research. Data were taken from SMA Negeri 1, Lumbung, and the District Health Office. Looking for various literature reviews to serve as references used in preparing research proposals.

Data collection was carried out by collaborating with teacher staff at SMA Negeri 1 Lumbung. After the appropriate data is collected, it will be easier to collect female respondents from classes XII IPA and XII IPS. Gathering in one place is at risk of spreading COVID, but the author emphasizes maintaining health protocols such as using masks and maintaining distance when indoors to minimize the spread of COVID-19. But previously, the respondents were asked for their willingness to participate in the study by signing an informed consent.

After the pretest questionnaire has been completed by the respondents, the next stage is providing treatment by providing education about cervical cancer through Zoom meetings. The final stage is that the respondent is asked to fill out a posttest questionnaire with the same questions, but the numbering is random.

Data analysis in this study used univariate and bivariate analysis, in which the T-test was used to determine the partially significant role of the independent variable on the dependent variable by assuming that other independent variables are considered constant at SMA Negeri 1 Lumbung.

### **Result**

Based on the results of research at SMA Negeri 1 Lumbung, the following study results were obtained:

#### **1. Univariate Analysis**

Univariate analysis in this study describes the characteristics of the respondents.

a. Characteristics of Respondents

Table 1. Frequency Distribution of Knowledge Values About Cervical Cancer for Young Girls Before and After Being Given Education Through Zoom Meetings at SMA Negeri 1 Lumbung.

No	Category	Pre Test		Post Test	
		F	%	F	%
1	Good	0	0	28	70.0
2	Enough	5	12.5	11	27.5
3	Less	35	87.5	1	2.5
Total		40	100	40	100

2. Bivariate Analysis

a. The Effect of Education Through Zoom Meetings

Table 2. The Effect of Education Through Zoom Meetings About Cervical Cancer on the Knowledge of Young Women at SMA Negeri 1 Lumbung

Variabel	Mean	Standar Deviasi	Mean	t hitung	t tabel	p value
The impact of cervical cancer education through Zoom meetings on young women's knowledge.						
Before being given education through a zoom meeting.	0.842	1.947				
After being given education through a zoom meeting.	14.95	2.241	1.550	15.627	2.023	0,000

**Discussion**

1. Knowledge of young women before being given education through zoom meetings

Based on the results of a study of 40 female students, it was found that the knowledge of young women before being given education through Zoom meetings was mostly in the less category, namely that of 35 female students (87.5%). After being given education through Zoom meetings, most of them were in the good category: 28 students (70.0%). It can be said that the understanding of students at SMA Negeri 1 Lumbung has increased and is now good, which was previously in the less-good category.

2. Adolescent knowledge of cervical cancer after attending a zoom meeting.

Based on the results of the study of 40 female students, it was found that the knowledge of young women at SMA Negeri 1 Lumbung after being given health education at a Zoom meeting regarding cervical cancer placed most of the female students in the good category, namely 28 female students (70.0%). There was an increase in the knowledge of young women about cervical cancer obtained through educational Zoom meetings, and besides that, respondents were motivated to find information about cervical cancer themselves by looking for it on the internet. This is consistent with the theory that the purpose of education is to change those who do not know (Savitri & Kirnantoro, 2013).

3. The effect of education through zoom meetings about cervical cancer on the knowledge of young women at SMA Negeri 1 Lumbung

Based on table 1.2, it shows that there is a difference or influence between the pre-test and post-test scores for students at SMKN 1 Lumbung with  $t$  count = 15,627 and  $t$  table = 2,023 and a sig (2-tailed) level of 0.000 0.05. Based on the results of the paired  $t$ -test, the sig. (2-tailed) = 0.000 <  $\alpha$  = 0.05 . So it can be concluded that there is or there is an effect of education through Zoom meetings about cervical cancer on the knowledge of young women at SMA Negeri 1 Lumbung.

This proves that before carrying out health education, most, or 87.5% of respondents, were known to have insufficient knowledge of cervical cancer. After receiving health education, most of the 70.0% of respondents were found to have good knowledge of cervical cancer. There is a difference in the average value of knowledge before health education of 0.842. While the average value after being given health education is 14.95. So it can be concluded that there is a significant influence on the provision of education to young women at SMA Negeri 1 Lumbung.

This research is also in line with research (Kembar Tsani Rochman, 2019) entitled "The effect of health education about cervical cancer on efforts to prevent cervical cancer in SMA Negeri 1 Sleman Yogyakarta," with the results that there was a significant effect. The results obtained before being given health education were: 6 female students (14.7%) high, 32 students (78%) moderate, and 3 students (7.3%) low, and after being given health education, 16 students (39.0%) high, 23 students (56.1%) moderate, and 2 female students (4.9%) low. There was an increase of 10 respondents (24.4%) with high prevention efforts, moderately 9 respondents (22.2%), and 1 respondent (2.2%) with low efforts.

This research is also in line with the research of Amalia Ratna Kusumaningrum (Widya, Husada, No, & Corresponding, 2021) which states that education about cervical cancer is very important, especially for high school girls who will later become their stock of knowledge. But in this study, there were still some respondents whose knowledge was lacking or in the less category, and this was due to several factors, namely: First, the limited time for delivering the material is only one day. Second, material is provided through Zoom meetings so that some participants are not too focused on the material provided. Third, depending on the internet network experienced by some participants, the material provided was not optimally captured by the participants. and after being given health education, the respondents were in the good category.

One of the causal factors that affects one's knowledge is the information factor, because a lack of information can slow down the knowledge a person acquires (Indah, 2019). Providing health education is one way to increase knowledge. Health education is a planned effort to influence, improve protection, and provide assistance so that a person has the ability to behave as expected. The success and provision of health education are influenced by several factors, including learning needs, motivation to learn, ability to learn, learning environment, and learning facilities.

## **Conclusion**

Based on the results of the study entitled The Effect of Education Through Zoom Meetings About Cervical Cancer in Young Girls at SMAN 1 Lumbung which has been discussed in previous chapters, it can be concluded:

1. The knowledge of young women at SMA Negeri 1 Lumbung before being given a zoom meeting education about cervical cancer was mostly in the less category, namely 35 students (87.5%).
2. The knowledge of young women at SMA Negeri 1 Lumbung after being given a zoom meeting education about cervical cancer is mostly in the good category, namely that of 28 students (70%).
3. There is a significant influence on the effect of education through zoom meetings about cervical cancer on young women's knowledge because the value of  $t_{count} > t_{table} = 15.627 > 2.023$  and if  $\alpha > p \text{ value} = 0.05 > 0.000$ .

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