

# THE EFFECT OF HEALTHY SELF-MANAGEMENT EDUCATION ON THE KNOWLEDGE OF NURSES WORKING IN COVID-19 TREATMENT ROOMS

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## ABSTRACT

*Covid-19 is a pandemic in the world today. Nurses are the forefront of handling Covid-19 so they are susceptible to infection, it is necessary to provide counseling on how to prevent Covid-19 in order to reduce the number of infected nurses. PPNI data on May 8, 2020, were 19 nurses who died and 53 positive people, currently the number still increasing. Adherence to health protocols believed to be able prevent transmission of Covid-19 among nurses. Providing education is method used to increase knowledge. This study aims to determine the effectiveness of providing online education on healthy self-management behavior to avoid Covid-19 transmission to nurses who work in the Covid-19 care unit in private hospitals. This study uses Quasi-Experiment method with Non-Randomized Without Control Group Pretest and Posttest Design approach. The population is all nurses who work in the Covid-19 care unit, with sample 116 people. The sampling technique used a purposive sampling with certain criteria. Based on the results of the statistical test with the Dependent T-Test, the value of  $P = 0.000 < 0.05$ , this indicates that there is a significant difference in knowledge before and after being given education about self-management to stay healthy.*

**Keywords:** Covid-19, Education, Nurse

## 1. INTRODUCTION

The world is currently experiencing a viral pandemic, namely covid-19. This virus was originally discovered in the Wuhan area, China, which began spreading in December 2019. This virus has been identified as a zoonotic coronavirus, similar to the SARS coronavirus and MERS coronavirus and named Covid-19. As of 8 February 2020, 33,748 confirmed cases and 811 deaths have been reported in China (Liu, et al., 2020). Coronavirus is one of the main pathogens that mainly targets viruses of the human respiratory system (Ruan, 2020). Previous outbreaks of coronavirus (CoV) including severe acute respiratory syndrome (SARS) -CoV and Middle East respiratory syndrome (MERS) -CoV which were previously characterized as agents that pose a major public health threat, as of March 12, 2020, Covid-19 confirmed. that 125.

On June 21, 2020, based on data from the Task Force for the Acceleration of Handling Covid-19, 216 countries had contracted the disease, and 8,708,008 confirmed cases, while 461,715 died. While in Indonesia alone on that date there were 45,891 positive. For the West Java province there were 2848 cases, while for the DKI Jakarta area there were 9830 positive cases. PPNI data on May 8, 2020, there were 19 nurses who died due to Covid-19 and 53 positive people, currently

the number is still increasing. Covid-19 is spreading fast. People can become infected without showing symptoms, but they can still spread it to other people. If we don't take preventive measures in the form of avoiding crowds, the number of infected people will explode and health service facilities will be overwhelmed so that many cases will not be handled (Indonesian Ministry of Health, 2020).

Nurses who are the forefront of being exposed to the corona virus are very vulnerable to being exposed to the corona virus, so PPNI calls on the fulfillment of personal protective equipment (PPE) for medical personnel, health workers must always be healthy, if they are not healthy they don't need to work first, maintain health, always think positively, take vitamins, get enough rest, comply with the Covid-19 SOP, such as the procedure for wearing PPE and Burning PPE, because this is very important to minimize the risk of getting Covid-19.

The best way not to become infected is to avoid being exposed to viruses. Covid-19 can spread from person to person through droplets when coughing or sneezing. then what can be done is: Wash your hands frequently with soap or hand sanitizer, avoid touching the face, especially the nose, mouth and eyes, clean the surface of objects touched by many people Physical Distancing, minimize physical contact with others, keep a distance of 1-3 meters with others, stay at home, avoid traveling to public places when not necessary, always wear a mask if you have to leave the house and interact directly with other people (WHO, 2020).

Nurses are at the forefront of handling Covid-19 so they are susceptible to contracting it, it is necessary to provide education on how to prevent Covid-19 so that there is no increase in the number of nurses who contract Covid-19. With this pandemic, a good education to do for nurses is through online education. Education will make the knowledge of nurses who initially do not understand will understand, both for individuals and groups (Notoatmojo, 2012).

Based on the available evidence, Covid-19 is transmitted through close contact and droplets, the people most at risk of infection are those who are in close contact with Covid-19 patients or who care for Covid-19 patients. To break the chain of transmission of Covid-19, it is necessary to prevent transmission, one of which is that education is needed, with current conditions, appropriate education is online. The online education will contain preventive behaviors for nurses / health workers including recommendations from WHO (2020) regarding procedures for protecting themselves at work from Covid-19 for health workers, first follow the health service facility management guidelines and tell colleagues about the Covid-19 safety procedures. 19, when entering the room where a suspected or confirmed case of Covid-19 is located, wear: disposable gloves, clean long sleeve robe, medical mask covering mouth and nose, eye protection, such as glasses.

Third In performing aerosol-generating procedures such as intubation, use a particulate respirator such as the N95 and check the tightness, all four boots and overalls are not required, and remember personal protective equipment must be changed if reused and also changed for each patient. Disposable personal protective equipment (eg, masks, gloves, disposable face shields) should be disposed of in a closed trash can and wash hands thoroughly. Single-use items should not be reused or sterilized. Do not touch eyes, nose or mouth with gloves or hands until hands are properly cleaned, and always wash hands. clean long sleeve robe, medical mask covering mouth and nose, eye protection, like glasses.

According to Ginting (2020), as much as 90% of services performed in hospitals are nursing services. Nurses are also at the forefront of dealing with Covid-19 patients so they are vulnerable to exposure to the virus. The actions taken by nurses in handling Covid-19 patients if they do not

comply with the correct recommendations / protocols can also have an impact on the nurses themselves, as evidenced by the number of nurses who become patients and some nurses also died from exposure to the virus. Thus the researchers intend to conduct counseling on self-management to stay healthy and avoid transmission during the Covid-19 pandemic for nurses who work in the Covid-19 care unit in order to break the chain of spreading Covid-19 to nurses.

## 2. METHODS

This study used a pre-experimental research design with this type of research, namely One-group pre-post design. The research method used is the pre-test and post-test, which aims to determine the initial and final measurements of the respondents (Sutiayatno, 2017). Measurement of preventive behavior was measured twice, including before treatment and after treatment. The treatment referred to in this research is the provision of education. The population in this study were nurses who worked in the Covid-19 care unit at a private hospital.

The unit of analysis in this study was the research subject, namely nurses who worked in the Covid-19 care unit in a private hospital, by paying attention to inclusion and exclusion criteria. The respondent in this study is someone who is the source of the research data, namely nurses who work in the Covid-19 care unit in a private hospital.

The inclusion criteria in this study were nurses who worked in the Covid-19 care unit at a private hospital and were willing to become respondents. The exclusion criteria in this study were nurses who worked in the Covid-19 care unit but were not cooperative in following this study and nurses who worked in the Covid-19 care unit in a private hospital but refused to be respondents. The minimum use of samples in this study was rounded to 116 people. The sample size in this study refers to nurses who meet the inclusion criteria. then the research was conducted at a private hospital, Implementation Time: September 2020 - December 2020.

Methods of data collection using a questionnaire that is made by the researcher which refers to the concepts and theories described in the literature review and the results of previous research, the questionnaire consists of name (initials), age, gender, and latest education, indicators of knowledge, attitudes, and actions regarding the behavior of nurses in maintaining healthy management. Delivering online education in the form of exposure through zoominars.

After providing online education on knowledge about staying healthy self-management has been completed, the researchers conducted a reassessment of the nurses who worked in the Covid-19 care unit by filling out a questionnaire (post test). The collected data was then copied and entered into the Master Table / SPSS. The test used in this study is the Dependent T-Test because the data is normally distributed.

## 3. RESULTS AND DISCUSSION

Variable	Mean	SD	Min	Max
Age	32,05	7,365	22	55

Table 1. Distribution of Respondents by Age of Nurses (n = 116)

Based on table 1 above, it is obtained that the mean (mean) of the respondents' ages is 32.05 with a standard deviation of 7.365. The youngest age was 22 years and the oldest age of the respondents was 55 years.

This research is in line with the journal Fadli et al. (2020) explained that the average number of nurses who work in handling Covid-19 is more than 30 years old (39.1%). Everyone actually has the potential to be infected with the Corona Virus but certain groups of people have a higher risk level of being exposed to the Corona Virus which can lead to death. Based on the 2020 Covid-19 Handling Task Force Expert TEAM, there are five groups vulnerable to Covid-19. The first is the elderly, the second has low immunity, has comorbidities who are overweight, and the last is a group of pregnant women.

Researchers can conclude that the hospital is currently handling Covid-19 recruiting nurses who are <30 years old because it can reduce the risk of being exposed to Covid-19 transmission so that it can break the chain of Covid-19 spread.

No	Characteristic	Frequency	Percentage (%)
1	Gender		
	Male	19	16,4
	Female	97	83,6
2	Education		
	D3	68	58,6
	S1	14	12,1
	Ners	33	28,4
	S2	1	0,9

Table 2. Distribution of Respondents by Gender, and Nurse Education (n = 116)

Based on table 2 above, it can be seen that 19 respondents (16.4%) were male and 97 respondents (83.6%) were female. The results of this study indicate that most of the respondents in this study were women.

Nurses, when viewed from their profession as health workers, do not differ in gender roles between women and men, but in practice, when carrying out health tasks, many women who work as nurses in Indonesia are still domiciled. This causes the large percentage of female nurses who work in the hospital.

Based on the respondent's latest education, it is known that 68 respondents (58.6%) have a D3 education, 14 respondents (12.1%) have a Bachelor's degree in Nursing, 33 respondents (28.4%) have a Ners professional education, and 1 respondent (0.9%) ) educated in Master of Nursing. The results of this study indicate that most of the respondents in this study had the latest D3 Nursing education.

Based on the assumptions of researchers, the diploma level education program aims to prepare personnel who can determine expertise and skills in their fields, ready to work in their fields, so that many hospitals recruit employees with D3 education levels.

Variable	Mean	SD	Min	Max
<b>Knowledge</b>				
Pre	5,78	1,377	3	8
Post	7,22	0,747	6	8

Table 3. Distribution of Respondents Based on the Average Pre and Post Test Knowledge Value of Management Education Stay Healthy for Nurses Working in the Covid-19 Care Unit (n = 116)

Table 3 shows the results that the majority of nurses prior to education had a mean value (5.78) after education had a mean value (7.22), it can be concluded that there was an increase in the mean average value before and after education counseling.

The education provided is a form of activity that does not only provide knowledge, but also provides skills through mentoring so that nurses can apply them independently in taking action. This activity is a form of educational activity that is informally expected to influence the knowledge, skills and attitudes / behavior of nurses. According to Hamalik (2010), extension education is an effort that aims to influence people in adapting to their environment, so as to cause changes in themselves to be positive or even better in their environment.

On an ongoing basis, this education is expected to become a living behavior that can be applied in a disciplined manner by nurses so that they can avoid Covid-19. According to Kurniawan (2017), the educational activities provided can be a basis for taking actions such as PHBS to achieve a good degree of health. Efforts to provide knowledge (education) can be an effort to minimize the risk factors for Covid-19 transmission to nurses. In the long term, the knowledge they have acquired can develop into an independent behavior and become a habituation (habit) to be applied in their daily lives.

No	Variable	Frequency	Percentage
1	<b>Attitude</b>		
	Good	59	50,9
	Not Good	57	49,1
2	<b>Action</b>		
	Good	75	64,7
	Not Good	41	35,3

Table 4. Frequency Distribution Based on Respondents' Attitudes and Actions in Performing Self-Management Stay Healthy for Nurses Working in the Covid-19 Care Unit (n = 116)

Table 4 shows the results that nurses who have good attitudes in self-management are still healthy, there are 59 respondents (50.9%) while nurses who have Not Good attitudes are found as many as 57 respondents (49.1%). Having Not Good knowledge will influence a good attitude too, because attitude is a predisposing factor for capturing a positive or negative stimulus (Wawan and Dewi, 2016).

There were 75 respondents (64.7%) who had good actions in self-management, while 41 respondents (35.3%) had not good actions.

Variabel	Group	n	Mean	SD	SE	Mean Difference	P value
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Healthy Self- Management Education on The Knowledge of Nurses	Pre test	116	5,78	1,377	0,128	0,000
						-1,448
	Post test	116	7,22	0,747	0,069	

Table 5. Analysis of the Difference in Average Knowledge of Respondents Before and After Intervention through Self-Management Education to Stay Healthy for Nurses (n = 116)

From the results of the analysis in table 5, it was found that the statistical test for the average pre and post test value of respondents before and after the intervention was obtained the mean value of 5.78 and 7.22, SD 1.377 and 0.747, for the p value of 0.000, because the p value < 0.05 indicates that there is a significant effect between before and after the provision of self-management education interventions to stay healthy.

This research is in line with the research of Safitri et al. (2020) that education using audiovisual media is easy to understand, especially in the current pandemic. Online education is one of the methods used to increase nurses' knowledge, especially about the importance of implementing health protocols and maintaining personal health. Education is carried out online because it takes into account the current pandemic conditions so it is not possible to do it offline.

Extension using online education can have an impact on increasing understanding and changing behavior (Mulyani et al., 2020). Based on the journal Sabarudin, et al (2020), there are several factors that influence the success of online education, namely from individual factors, presentation of video material and leaflets, choice of words used, visualization on leaflet and video media and audio used in video media.

Providing education has the main objective of changing behavior by improving knowledge, attitudes, and behavior so that it can be used to improve or maintain health. In addition, factors that shape a person's behavior, one of which is social communication in the form of information received by the individual, changes in behavior experienced by the individual are influenced by an increase in knowledge about the benefits and ways of changing their behavior (Buana, 2020).

#### 4. CONCLSION

From the results of data analysis with statistical tests it can be concluded that for the mean pre and post test scores of respondents before and after the intervention, the mean values were 5.78 and 7.22, SD 1.377 and 0.747, for the p value 0.000, because p < 0.05 indicates a significant effect between before and after giving self-management education interventions to stay healthy.

The results of this study can be an input for the hospital, related to the level of security and safety of nurses who are caring for Covid-19 patients. Because the safety and security of nurses is an important principle, it is necessary to conduct education so that there will be fewer health

workers who are exposed to Covid-19 as input for the leadership in formulating policies related to nurse safety.

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