THE INFLUENCE OF HEALTH EDUCATION ABOUT COVID-19 ON POSBINDU PARTICIPANTS' KNOWLEDGE LEVELS AT PUSKESMAS GESI

THE INFLUENCE OF HEALTH EDUCATION ABOUT COVID-19 ON *POSBINDU* PARTICIPANTS' KNOWLEDGE LEVELS AT PUSKESMAS GESI

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ABSTRACT

Background: Coronavirus (COVID-19) is an infectious disease caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV2) virus. This disease is transmitted from human to human, where most of (COVID-19) infected people experience mild to moderate respiratory disease and recover without requiring special care. Health education is a form of independent nursing action to help clients, either individuals, groups, or communities. In overcoming health problems through this learning activity, the nurse takes a role as an educator. Through public health education, participants could get information and knowledge about the Coronavirus and prevent the infection. Health education is a top priority and is one of the effective nursing interventions to improve knowledge level and public awareness about the importance of correct understanding regarding COVID-19.

Objectives: The researcher was aimed to analyze knowledge level differences of *Posbindu* (Integrated guided care) participants in Puskesmas (Community Health Center) Gesi regarding COVID-19 disease before and after the implementation of health education.

Methodology: It was a queasy experimental quantitative research with a one-group pretest-posttest control design. There were 40 participants with ages ranged from 15 to 50 years old.

Findings and Discussions: The *Posbindu* participants' knowledge level about Covid-19 before being given health education was categorized as poor. Meanwhile, *Posbindu* participants' knowledge level about Covid-19 before being given health education was categorized as average. The Paired Sample T-Test showed that the sig. (2-tailed) value was $0.02 < 0.05$, then Ho was rejected, and Ha was accepted. Therefore, it could be concluded that there are differences in *Posbindu* participants' knowledge level before and after given the health education about Covid-19 in Puskesmas Gesi.

Conclusion and Suggestions: The health education given in Puskesmas Gesi affects *Posbindu* participants' knowledge level about Covid-19. It is hoped that public health center puts more consent to regularly increase the community's knowledge about COVID-19.

Keywords: Covid-19, Knowledge Level, Health Education

INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV2). This disease is transmitted by a person to another person with most of the infected (COVID-19) will experience mild to moderate respiratory disease and recover without special treatment.

Coronavirus disease 2019 (COVID-19) pandemic is now a global problem. There are some problems caused by the pandemic such as economy, education, social, and more particular is a health problem. Based on data by WHO, on 18 May 2020, the confirmed COVID-19 cases was 4,589,526 with 310,391 deaths. United States is the most COVID-19 confirmed country with 2,018,467 cases. (World Health Organization, 2020). On the other hand, Indonesia, on 18 May 2020, recorded 18,010 total cases with 1,191 deaths and 4,324 cases(1)

The increasing case was also found in Central Java. Data which were taken on 13 September 2020 mentioned that Central Java recorded the increasing case at 52.7%. According to Sragen District Health Office, data taken from https://www.sragenkab.go.id on Saturday 21 November 2020, there were 372 suspects and 1,199 confirmed cases. The increase of the case prevalence is mainly caused by some factors such as the unawareness in implementing the health protocol and the lack of received information or knowledge about COVID-19.

The symptoms of COVID-19 in older people with some health problems such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer might be worse. One of the best ways to prevent and halt the disease infection is by implementing health education about COVID-19. (2)(3)(4)It includes the basic knowledge about COVIC-19, such as the definition, signs, symptoms, transmission, prevention, and also the management.

Health education is also an independent nursing intervention that could be designed to improve the competence and knowledge in health care. Health education could also help individuals,

groups, or communities to cope with their health problems assisted by a nurse as the educator nurse.

Health education is also a persuasive effort so that the community willingly maintains and improves their health level. Through health education, the community could get information and knowledge about Coronavirus and prevent infection (5)(1)(2) and prevent stigma(6)(7). Collectivism community should develop empathic values and responsibility for the fellow in this Covid-19 pandemic case (8)(9).

Based on the background above, the researcher would like to go further with the influence of health education about COVID-19 on *Posbindu* participants' knowledge levels at Puskesmas Gesi.

METHODOLOGY

It was a queasy experimental quantitative research with a one-group pretest-posttest control design. The result would then be compared between before and after the implementation of health education to find out the influence of health education. The research was conducted from December 2020 to March 2021. The population of the research was 40 respondents with inclusion criteria such as the *Posbindu* participant who is willing to be the research respondents whether it is male or female, age ranged from 15 to 50 years old, and able to communicate well. On the other hand, the exclusion criteria were male or female with a body temperature above 37.3°C, suffer from infectious disease, and was unable to present during the research. Researchers visited respondents at home because of the pandemic with health protocols.

The media used were booklets and flip charts The instrument used for the data collection was a questionnaire with the closed questions so that the respondents were only required to choose the available answer. The questionnaire was about COVID-19, related to the previous research by Ni Putu Emy Darma Yanti (10). Most of this population reported obtaining their information through traditional media sources, such as television and radio, as opposed to social media (11), so Researcher decided health education with booklet and flip charts.

FINDING

The finding of the research is shown in the following table with frequency distribution and narration as follows:

Table 1: Characteristic of Participants at Puskesmas Gesi in December 2020- March 2021 (n = 40)

Respondents' characteristic	n	%
Gender		
Male	7	17.5
Female	33	82.5
Age		
11-25 (young adult)	4	27.5
26-50 (adult)	29	72.5
Education		
Elementary School	15	37.5
Junior High School	13	32.5
Senior High School	9	22.5
University	3	7.5
Occupation		
Civil Servant/Army/Police officer	3	7.5
Housewives	9	22.5
Employee	22	39.55
Student	6	15

Based on the table above, it could be concluded that the respondents' criteria are adult female, elementary school educated, and employees of any private office.

Table 2: *Posbindu* Participants' Knowledge Levels before and after given health education at Puskesmas Gesi In December 2020- March 2021 (n = 40)

Assessment Category	Research Group			
	Before the health education		After the health education	
	n	%	n	%
Good	0	0	2	5
Average	18	45	24	57,5
Poor	22	55	14	40
Total	40	100	40	100

Based on the table above, it could be seen that the assessment of the respondents' knowledge before and after the implementation of health education is significantly different. Before the health education, none of the respondents were categorized as good. Meanwhile, after the implementation of health education, there are two respondents categorized as good. Initially, there are 18 respondents in the average knowledge category, which is later improved to 24 respondents. On the other hand, in the poor category, initially, there are 22 respondents, which were then reduced to 14 respondents.

Table 3: The Influence of health education about COVID-19 on *Posbindu* participants' knowledge levels at Puskesmas Gesi In December 2020- March 2021 (n = 40)

Health Education	Frequency	Mean Rank	SD	R	p-Value
Pre HE	40	14.5	1.968	0.736	0.024
Post HE	40	17.60	2.999		
Total	40				

Based on the output above, the result of Pearson's correlative value is 0.736 > 0.573 and p-value 0.02<0.05. Therefore, there is a correlation between health education and knowledge about COVID-19.

Table 4: *Posbindu* Participants' Knowledge Levels before and after health education based on question item at Puskesmas Gesi In December 2020- March 2021 (n = 40)

| No	Statement	Before		After	
		n	%	n	%
1	COVID-19 is a non-dangerous disease just like the common flu	10	25	36	90
2	Corona Virus could live for some hours outside the human body	8	20	23	57.5
3	Corona Virus could not be transmitted by simply speaking	6	15	7	17.5
4	COVID-19 could only be transmitted by someone with the symptoms	33	82.5	31	77.5
5	A healthy person would not need to wear a mask in public places	27	67.5	39	97.5
6	The symptoms of COVID-19 in older people commonly more severe than in younger people	15	37.5	33	82.5
7	The risk of death from COVID-19 is higher than from chronic diseases	13	32.5	38	95
8	Children are at low risk from COVID-19	11	27.5	30	75
9	New normal means back to the normal habit before the pandemic	26	65	25	62.5
10	Self-isolation is not needed for a person with COVID-19 but does not have symptoms	20	50	37	92.5
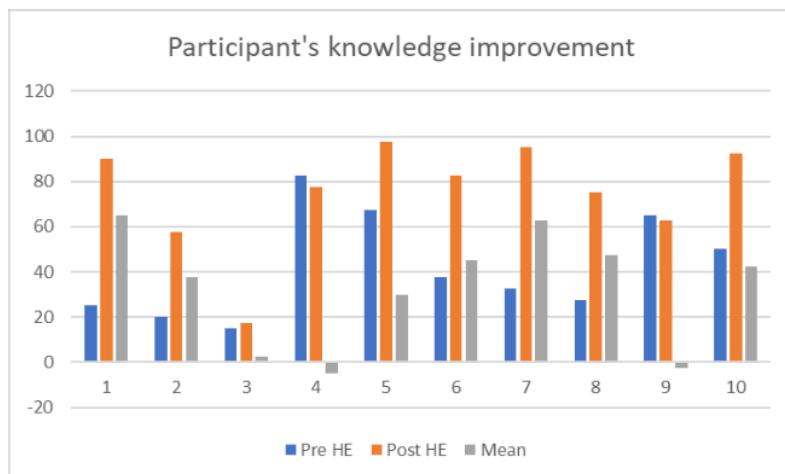
Figure 1: The difference in participants' knowledge level

Based on the table and figure, it could be seen respondent knew the risk of death from COVID-19 is higher than from chronic diseases.

DISCUSSION

Based on the completed research, the research consists of three groups which were respondents with good knowledge, average knowledge, and poor knowledge. Before the implementation of health education, the respondents who were categorized in the average knowledge group were 18 respondents or 45%, and 22 respondents or 55% were categorized in the poor knowledge group. After the implementation of health education, there were two respondents or 2.5% categorized in the good knowledge group, 24 respondents or 57.5% in the average knowledge group, and 14 respondents or 40% in the poor knowledge group. Therefore, it could be concluded that health education makes differences in the respondents' knowledge before and after the implementation of health education. Reliable health information was needed to improve public awareness(12)(13).

It is in line with research done by Jaji (14), which stated that before the implementation of health education about COVID-19 by using leaflets, 56.27 respondents' were categorized as having poor knowledge. Meanwhile, the posttest showed that all of the respondents were

categorized as having good knowledge about the prevention of COVID-19 infection. The education to prevent COVID-19 infection includes: what to do after going out, implementing WHO handwashing technique using soap and water, wearing a mask, physical distancing, also coughing and sneezing etiquette. The statistical analysis found a p-value = 0.001, which means significant differences in respondents' knowledge before and after the implementation of health education by using leaflets. Purnamasari & Raharyani(15) also stated that the leaflet made a difference in improving the knowledge and behavior of street vendors at Temanggung Car Free Day. It was supported by the result of statistical test mentioning the difference of the knowledge level before and after the implementation of health education by using leaflet at Z=1.957, p < 0.05 meanwhile, the difference of the behavior level before and after the implementation of health education by using leaflet was at Z=-2.283, p < 0.05). Besides, the mean/SD value also showed a significant difference. The knowledge level changed from 14.5 to 15.3, and the behavior level changed from 21.7 to 19.57.

The related research was also conveyed by Moudy & Syakurah (16) which stated that there were different variations of Indonesian knowledge level about COVID-19. The knowledge level about COVID-19 in Indonesia ranged from 26.9% - 96.6%. This research underlined the significant correlation between knowledge and behavior (p=0.000) and the correlation between knowledge and individual action (p=0.000). The effort to prevent COVID-19 infection in Indonesia is influenced by the community's knowledge. The specific, valid, and targeted education could improve the community's effort in preventing COVID -19 infection. It was in line with research by Zhong (17) in China and Alsan(18), which found that community knowledge is correlated to the activities related to COVID-19 (OR: 0.75, p<0.001), the improved knowledge could be a protective factor toward the self-esteem in coping with COVID-19. Based on the social-psychological sciences, behavior is significantly correlated to

someone's knowledge level. Someone's behavior on a certain object indicates knowledge about the object.(19)(20).

CONCLUSION

Based on the research finding, it could be concluded that:

The *Posbindu* participants' knowledge level about COVID-19 before the implementation of health knowledge was categorized as poor. However, after the implementation of health education, the knowledge level was improved to the average category. Therefore, it could be concluded that there is a significant difference in the participants' knowledge level before and after the health education at Puskesmas Gesi. For the next researcher, it is recommended to do more comprehensive research about COVID-19 education for the community, including children and older people who are located in a rural area, as the community at the rural area are likely to have less knowledge about COVID-19.

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