# Community Assistance In Increasing Knowledge As The Effort To Prevent Covid-19 In Communities With Hypertension

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**Abstract**.
*Hypertension is one of the comorbidities found in COVID-19 patients. The severity of COVID-19 in comorbid hypertension is important to prevent by controlling risk factors and conducting early detection. Community coverage for early detection is still low due to low awareness of the importance of prevention. The purpose of this activity is to increase public knowledge through the provision of counseling regarding the prevention of COVID-19. The target audience for community service activities in this activity is hypertension patients in the working area of the Merdeka Palembang Health Center. The number of targets for this activity is 25 people. The method of implementing this activity is with lectures and discussions. Conduct pretest and posttest to assess knowledge before and before counseling regarding prevention of COVID-19 in people with hypertension. The results of this activity are characteristics of respondents based on age, most of them are in late adulthood (36-45 years) as many as 13 people (52%). Most of them are male many as 15 people (60%), high school education level or equivalent as many as 22 people (88%) and, most of them work as private employees as many as 12 people (48%). The results of the statistical test using the Wilcoxon p-value = 0.000, which show that there are differences in public knowledge before and after counseling regarding the prevention of COVID-19.*

**Keywords:**  *Knowledge, Covid-19 Prevention, Hypertension*

## I.     INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is an infectious disease that has never been previously identified in humans caused by the latest type of coronavirus called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) (Yuliana, 2020). This disease was first detected on December 31, 2019, in Wuhan, the capital of Hubei province, China. This disease is very infectious and spreads rapidly throughout the world, until March 11, the World Health Organization (WHO) declared COVID-19 a pandemic (Burhan, E et al, 2020).Coronaviruses are single-chain positive RNA viruses and are a large family of Coronaviridea viruses that cause illness with mild to severe symptoms. There are 2 transmission routes of COVID-19, namely through direct contact with infected people through droplets, and the second through indirect contact from objects that have been contaminated with the virus (Adityo, et al, 2020). On March 17, 2021, there were 1,437,284 positive confirmed cases of COVID-19 in

Indonesia with 38,915 deaths (WHO, 2021).Based on data from the Palembang City Health Office, COVID19 data Tuesday, June 8, 2021, COVID-19 cases in the city of Palembang, COVID-19 cases are still increasing every day.Confirmation cases increase by 71 cases with a total of 13,444. Suspects increased by 37 cases with a total of 32,583 Probable 157 Close contacts increased by 66 cases with a total of 10,955. Recovered increased by 82 people with a total of 11,964 Deaths increased by 0 people with a total of 588 people and total discarded cases Suspected 21,390 Active cases confirmed 892 cases.

According to the COVID-19 Management Guidelines Edition 3, COVID-19 infection can manifest without symptoms, with mild, moderate, severe, or critical symptoms. The main clinical symptoms that are often found are fever, cough, fatigue, and dyspnea (Kemenkes RI, 2020). In severe cases of COVID-19 it can cause pneumonia, acute respiratory syndrome, kidney failure, and even death (Yang, J et al, 2020). There are about 2% of infected patients experiencing critical conditions generally associated with comorbid conditions accompanying (Singh et al, 2020).Research conducted in China reported that COVID-19 was associated with the three most comorbid factors, namely hypertension (15.8%), cardiocerebrovascular (11.7%), and diabetes mellitus (9.4%) (Paudel SS.A, 2019). A meta-analysis showed that hypertension is the most common cardiovascular comorbid and significantly increases the mortality risk of patients with COVID-19 (Zuin M et al, 2020) Hypertension is one of the most common comorbidities in COVID-19 patients.Hypertension is also common in COVID-19 patients who have ARDS. It is currently unknown whether uncontrolled hypertension is a risk factor for contracting COVID-19, but controlled blood pressure is still considered important to reduce the burden of disease. One theory that has been developed is that SARS-CoV-2 can bind to ACE-2 in the lungs to enter the cell so that the use of angiotensin-converting enzyme inhibitors (ACEI) or angiotensin receptor blockers (ARBs) is still controversial, although until now there is no There is evidence that previous treatment with an ACEI or ARB can increase the risk of developing severe complications from COVID-19 infection (Kemenkes RI, 2020).

Based on the 2018 RISKESDAS, the prevalence of hypertension in Indonesia is very high at 34.1% (Zhou,Y., et al, 2019). According to data compiled from the Task Force for Handling COVID-19 as of October 13, 2020, of the 1.488 COVID-19 cases recorded as having comorbidities with the highest percentage of comorbidities, including hypertension at 50.5%. Of the 1,488 cases known to be 13.2% with comorbid hypertension died (Singh et al, 2020). Therefore, the severity of COVID-19 in comorbid hypertension is important to prevent by controlling risk factors and conducting early detection. However, community coverage for early detection is still low due to low awareness of the importance of prevention (Singh et al, 2020).One of the activities to encourage public awareness of the importance of promotive and preventive efforts is to empower the community as a health promotion strategy at the

primary, secondary and tertiary levels. This community empowerment is included in the Pillars of the Healthy Paradigm which is carried out to realize a Healthy Indonesia. About these efforts, it is necessary to assist the community in increasing knowledge to prevent COVID-19 in hypertension comorbid patients through counseling.

## II.    METHODS

The target audience for community service activities in this activity is hypertension patients in the working area of the Merdeka Palembang Health Center. The number of targets for this activity is 25 people. In this activity, the following activities will be carried out:

1.    Participants will be collected while still implementing health protocols using masks, maintaining distance, and providing hand sanitizer.

2.    Delivery of educational and counseling materials regarding the prevention of the severity of COVID-19 in comorbid hypertension, followed by a question and answer session, discussion. Before delivering the material, participants will be asked to fill out a pretest.

3.    After giving the material and discussion session, participants will be asked to fill out the posttest again.

Conducting pretest and posttest to assess knowledge before and after counseling regarding the prevention of COVID-19 in people with hypertension. Assist people who still have low knowledge about preventing COVID-19.

## III.    RESULT AND DISCUSSION

This community service activity aims to assess knowledge before and after counseling regarding the prevention of COVID-19 in people with hypertension by assisting people who still have low knowledge about preventing COVID-19. This activity is in the form of counseling by delivering educational materials using the lecture method, question, and answer, discussions about knowledge in preventing COVID-19. The results of the activities are as follows:

### Distribution of Respondents by Age

The distribution based on the age of the respondents was divided into early adulthood (267-35 years) as many as 5 people (20%), late adulthood (36-45 years) as many as 13 people (52%), and early elderly age (46-55 years) as many as 7 people (28%). The following is a distribution table by age. The results of the analysis are presented in the following table:

**Table 1.** Distribution of respondents by age

| Age | n | % |
|---|---|---|
| Early adulthood (26-35 years) | 5 | 20,0 |
| Late adulthood (36-45 years) | 13 | 52,0 |
| Early elderly (46-55 years) | 7 | 28,0 |
| Total | 25 | 100,0 |

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**Distribution of Respondents by Gender**

Distribution based on the sex of the respondents found that most of the male sex as many as 15 people (60%) while the female sex as many as 10 people (40%). The results of the analysis are presented in the following table:

**Tabel 2.** Distribution of Respondents by Gender

| Gender | n | % |
|---|---|---|
| Male | 15 | 60.0 |
| Female | 10 | 40.0 |
| Total | 25 | 100.0 |

**Distribution of Respondents by Education**

Distribution based on the education level of the respondents found that respondents with high school education or the equivalent were 22 people (88%) while those with a college education were 3 (12%). The results of the analysis are presented in the following table:

**Tabel 3.** Distribution of Respondents by Education

| Education | n | % |
|---|---|---|
| High school or equivalent | 22 | 88.0 |
| College | 3 | 12.0 |
| Total | 25 | 100.0 |

**Distribution of Respondents by Occupation**

Distribution based on occupation, most of them work as private employees as many as 12 people (48%), household workers as many as 8 people (32%) and self-employed as many as 4 people (16) and 1 person does not work (4%). The results of the analysis are presented in the following table:

**Tabel 4.** Distribution of Respondents by Occupation

| Work | n | % |
|---|---|---|
| Does not work | 1 | 4.0 |
| Housewife | 8 | 32.0 |
| Private employees | 12 | 48.0 |
| Entrepreneur | 4 | 16.0 |
| Total | 25 | 100.0 |

**Community Knowledge Before and After Extension**

The distribution of public knowledge from 25 participants on average knowledge of COVID-19 prevention before being given counseling was obtained at $5.08 \pm 0.81$ with a minimum score of 4 and a maximum of 6, while knowledge after counseling increased to $7.52 \pm 1.12$ with a minimum score of 6 and maximum of 9. The results of the analysis are presented in the following table:

**Tabel 5.** Community Knowledge Before and After Extension

| Knowledge | n | Mean | sd | Min - Max |
|---|---|---|---|---|
| Before | 25 | 5.08 | 0.81 | 4-6 |
| After | 25 | 7.52 | 1.12 | 6-9 |

### Comparison of Knowledge Before and After Extension

Comparison of public knowledge before and after counseling regarding covid-19 prevention before and after being given counseling experienced an increase in knowledge scores. Based on the results of statistical tests using the Wilcoxon test, it was found that p-value = 0.000 with a value of = 0.05 ($p<\alpha$). The results of the analysis are presented in the following table:

**Tabel 6.** Comparison of Knowledge Before and After Extension

| Knowledge | n | Mean | sd | Min-Max | *p value* |
|-----------|-----|------|------|---------|-----------|
| Before | 25 | 5.08 | 0.81 | 4-6 | 0.000 |
| After | 25 | 7.52 | 1.12 | 6-9 | |

Based on the results of the study that participants' knowledge of COVID-19 prevention knowledge increased after being given counseling, many factors influenced respondents' knowledge of COVID-19 prevention. According to Notoatmodjo (2012), the factors that influence knowledge are education, age, occupation, and other external factors. Age affects knowledge, according to Budiman (2013) stating that age affects a person's grasping power and mindset with increasing age, it causes the development of comprehension and mindset so that the knowledge gained also increases. Based on the results of the distribution activities based on the age of the respondents, the latest adults (36-45 years) were 13 people (52%).Based on the education level of the respondents, it was found that the most respondents with high school education or the equivalent were 22 people (88%) while those with a college education were 3 (12%). According to Notoatmodjo (2012), a person's education about health will affect health behavior, this is because the education obtained will gain knowledge and will create disease prevention efforts. A higher a person's level of education will make it easier for him to absorb knowledge, thus his insight will be wider.

Public knowledge about COVID-19 is a very important aspect of the current pandemic.The public needs to know the cause of COVID-19, the characteristics of the virus, signs and symptoms, terms related to COVID-19, the necessary examinations and the transmission process as well as efforts to prevent the disease (Purnamasari, 2020). Someone who has good knowledge regarding healthy behavior tends to behave well (Gladys, 2016). This means that to improve healthy and safe behavior, it is also necessary to increase health knowledge.Knowledge has 6 levels, namely remembering, understanding, applying, analyzing, evaluating, and creating. Describing higher thinking processes at higher levels of knowledge (Mulatsih, 2021). Knowledge is the most important thing that influences in shaping one's actions, where actions will not last long without being based on knowledge (Moudy & Syakurah, 2020). Some things that affect actions include emotional factors in self-control, then intentions carried out by attitudes or norms (Fakhriyah, et al & Wardhina 2020).Based on the results above, it can be concluded that the increase in one's knowledge is not only influenced by education in the form of counseling provided by health workers, the increase in

knowledge is also influenced by the characteristics of a person which includes productive age, high level of education and occupation.

## IV.    CONCLUSION

1.    Characteristics of respondents include distribution based on age, mostly found in late adulthood (36-45 years) as many as 13 people (52%), gender mostly male as many as 15 people (60%), high school education level, or 22 people (88%) and most of them work as private employees as many as 12 people (48%).

2.    There is a difference in public knowledge before and after counseling regarding the prevention of COVID-19. The results of statistical tests using the Wilcoxon test obtained p-value = 0.000 with a value of = 0.05 ($p < \alpha$ ).

## V.    ACKNOWLEDGMENTS

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