



Knowledge and Behavior of The Gandu Village, Sleman Community Against Covid-19

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Abstract

Background: The Covid-19 pandemic caused by infection with the CoV-2 (Severe Acute Respiratory Syndrome Coronavirus-2) virus has become an event that threatens public health throughout the world. The disease caused by the coronavirus is a new type of disease that was discovered in 2019 and has never been identified to infect humans before.

Methods: quantitative research with a cross-sectional design. The sample in this study was 180 respondents selected by the purposive sampling technique. The Knowledge and behavior data from respondents were collected through online and offline questionnaires distributed from August to October 2021. Data analysis used bivariate analysis.

Results: The results showed that the majority of people showed good levels of knowledge about the pandemic Covid-19 (87,7%) and good behaviour (77,2%). Statistic results have shown $p=0,000$ meaning that there is a relationship between knowledge and prevention practices.

Conclusions: Knowledge can influence the behaviour of Indonesian people. Providing valid and well-targeted knowledge has an impact on improving behavior in community prevention efforts against Covid-19 infection.

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INTRODUCTION

The 2019 Coronavirus Disease (Covid-19) pandemic caused by infection with the SARS CoV-2 (Severe Acute Respiratory Syndrome Coronavirus-2) virus has become an event that threatens public health throughout the world. In 2020, WHO (World Health Organization) declared the Covid-19 pandemic as a public health emergency and has become an international concern (Guner, 2020).

Coronaviruses are a large family of viruses that are transmitted zoonocist (between animals and humans) and can cause mild to severe symptoms. Previously, there were at least two types of coronavirus known to cause disease in humans, namely Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV) (Kemenkes RI, 2020). In 2020, WHO announced the official name of this new disease, namely "Covid-19" (Coronavirus Disease 2019) which is listed in the International Classification of Diseases (ICD). SARS-CoV-2 infection in humans causes symptoms of acute respiratory distress such as fever, cough, and shortness of breath. In severe cases, the disease can cause pneumonia, acute respiratory syndrome, kidney failure, and even death. Symptoms of this disease can appear within 2-14 days after exposure to the virus (Kemenkes RI, 2020).

Based on data from the Covid-19 Task Force of the Republic of Indonesia, in 2021 there were 1,443,853 positive cases, 1,272,958 recovered and 39,142 deaths. The Province of the Special Region of Yogyakarta in 2021 has occupied the eleventh position in Indonesia in the number of positive Covid-19 patients, which amounted to 30,117 (2.1%), while Sleman Regency had the highest number of patients being treated at 4,493 people (Covid-19 Task Force). 19, 2021). Based on this data, all relevant parties, both the government and the community, are increasingly urged to take immediate action in carrying out early detection of infections and preventing the spread of Covid-19 to reduce the number of Covid-19 cases.

Linawati's (2020) research result stated that good knowledge and attitudes influenced one's behavior in preventing Covid-19 among students. In line with Putra (2020), where

the knowledge of the community in the Batu Gantung village, Ambon City about Covid-19 was in the high category and community behavior shows a good category, but the community is still considered to have a low potential for exposure to Covid-19 due to some poor understanding, wrong and inappropriate behavior. Thus, periodic education is needed to raise public awareness of complying with health protocols.

To fight the increase in COVID-19 cases, various preventive measures must be implemented, both by the government and the community. Preventive efforts are so far the best practice to reduce the impact of the COVID19 pandemic, given that no treatment is considered effective against the SARS-CoV-2 virus. Currently, there is a vaccine for SARS-CoV-2 available, so it needs to be assisted with the best preventive efforts to do is to avoid exposure to the virus based on Clean and Healthy Living Behavior. To achieve this goal, the main steps that the community wants to take are the use of masks; covering the mouth and nose when sneezing or coughing; washing hands regularly with soap or disinfecting them with a hand sanitiser containing at least 60% alcohol; avoiding contact with infected people; keep your distance from people; and refrain from touching the eyes, nose, and mouth with unwashed hands (Gennaro., 2020). Real knowledge and action from the government and the public regarding Clean and Healthy Living Behavior will always be able to reduce the number of COVID-19 cases so the pandemic period can end quickly.

Gandu Sub Village is located in Sendangtirto Village, Berbah Sub District, Sleman Regency which consists of 3 Hamlets/ RW with a total of 8 Neighbourhood/RT. Gandu Sub Village has a fairly dense population and various levels of work. The population of Gandu Sub Village is approximately 1398 people with details of 113 children, 1073 adults and 212 elderly people. Based on initial observations, the number of residents exposed to Covid-19 is approximately 62 cases with an age range divided into toddlers aged 2-5 years and ages 20-60 years. The results of other observations, there are still some residents who do not fully understand the health protocols, such as

when leaving the house there are still residents who have not used masks properly and some residents are still crowding. Based on these data, educational information is needed for the community, especially for adults where that age is a productive age who has a higher tendency to contact with outsiders. Therefore, this study aims to describe the knowledge and behavior of the community about the COVID-19 pandemic and community behavior during the COVID-19 pandemic, especially in the Gandu Sub Village, Sendangtirto Village, Berbah Sub District, Sleman Regency, so that it can be used as a basis for preparing various programs by the government in the Sub village Gandu so that it is free from the COVID-19 pandemic.

METHOD

This research is quantitative research with a cross-sectional design which takes place in Gandu Sub Village, Sendangtirto Village, Berbah Sub District, Sleman Regency. The independent variable in this study was public knowledge about the Covid-19 pandemic while the dependent variable was community behavior during the Covid-19 pandemic. The sample was collected using a purposive sampling technique which had previously determined the number of samples to be studied. The inclusion criteria for this study were people living in Gandu Sub Village aged 18 years old, people who could read, and people who were willing to become respondents in this study by signing the respondent's consent form. The sample size used is 180 respondents in this study. Research ethics is carried out to ensure the confidentiality of the respondent's identity including personal information. Before conducting the research, the researcher gave informed consent (consent sheet) to the respondents.

The measuring tool used is an online and offline questionnaire. This questionnaire consists of 2 parts, namely a questionnaire about knowledge and a questionnaire about behavior. The knowledge questionnaire component measures the general understanding of Covid-19, modes of transmission, symptoms that occur, risk factors and methods of prevention. Behavioral questionnaires measure people's habits in complying with health protocols such as washing hands, wearing

masks, avoiding crowds, and keeping a distance. The offline questionnaire is intended for people who cannot access the online google form. The knowledge questionnaire consists of 10 statements with correct and incorrect answer choices. The correct answer is given a score of 1 and the wrong answer is given a score of 0. The behavioral questionnaire used consists of 9 statements with the answer choices using a Likert scale. Behavioral questionnaires for positive statements are: Always score 4; Almost Always score 3; Rarely score 2; and Never score 1, while for negative statements the score is the opposite. The questionnaire has been tested for validity and reliability conducted on 30 non-sample respondents. To measure the validity of the research instrument, Pearson's product moment was used, while to measure the reliability of the instrument, Cronbach's alpha reliability coefficient was used. The results of the validity test of the questionnaire obtained an r arithmetic value of 0.368-0.719 > from r table 0.361 and its reliability with Cronbach's Alpha of 0.753.

The level of community knowledge and behavior related to the Covid-19 pandemic uses the total score from the questionnaire. The percentage of individual scores is categorized into 2 categories, namely good and not good, based on the assessment according to Arikunto (2010). Good category if the statement answered correctly >75% and not good >75%.

The test used to analyze the relationship between knowledge and behavior during this pandemic used bivariate analysis using the IBM SPSS Statistic 25 program. The results of the analysis were the p -value compared with the degree of significance $\alpha = 0.05$.

RESULT AND DISCUSSION

The sample obtained in this study was 180 respondents. In this study, data on the sociodemographic characteristics of the respondents were obtained which can be seen in Table 1. The results of the sample acquisition indicate that the majority of respondents were female (60.6%), this is in line with Dawood's research (2017), which states that women tend to have more free time to participate in the study compared to men. The level education of most respondents was Bachelor (33.9%). Where

someone with a higher education level tends to seek more information and find solutions to the problems encountered as well as possible and more easily understand receiving information. (Pratiwi, 2016). Respondents aged between 26 - 55 years (52.8%) where increasing age will affect the mindset in doing something which will also have an impact on increasing knowledge (Aryani, 2016).

Table 1. Sociodemographic Characteristics of Respondents

Characteristics	Total (%)
Gender	
Male	71 (39,4)
Female	109 (60,6)
Education Level	
Junior High School	27 (15)
Senior High School	39 (21,7)
Associate	42 (23,3)
Bachelor	61 (33,9)
Master	11 (6,1)
Age	
18-25 years old	62 (34,4)
26-55 years old	95 (52,8)
>55 years old	23 (12,8)
Job	
Civil Servant	20 (11,1)
Housewife	40 (22,2)
Entrepreneur	32 (17,8)
Retired	15 (8,3)
Collage Student	21 (11,7)
Private Employees	44 (24,4)
Health Workers	8 (4,4)
Total	180 (100)

Most of the respondents in this study work as private employees (24.4%), this is in line with Dawood's research (2017), which stated that people with better economic status and a comfortable work environment can influence a person in making decisions, gaining experience and good knowledge so that it can be reflected in behavior preventing Covid-19. The majority of respondents in this study did not show a history of disease symptoms that indicated

Covid-19 and were classified as people who had a low risk of being exposed to this virus. This is based on factors, namely there are no people who have direct contact and are in the same room or environment as positive people for Covid-19 in the last 2 weeks have a history of chronic illness, a history of fever (> 38 C) and a history of respiratory symptoms. Respondent history data is presented in Table 2.

Table 2. History of Research Respondents

History	Yes		No	
	f	%	f	%
Direct contact with Covid-19 positive people in the last 2 weeks	0	0	180	100
Being in the same room/environment with COVID-19 positive people with a distance of 1-2m and duration > 15 minutes	9	5	171	95
Has been declared by a doctor have one of the following diseases: diabetes, hypertension, heart disease, stroke, tuberculosis, cancer, or other chronic diseases	43	23,9	137	76,1
Moderate fever (38°C) when the study was carried out or had a fever in the last 2 weeks	18	10	162	90
Have experienced any of the respiratory symptoms such as cough/runny nose/swallowing pain/difficulty breathing in the last week	29	16,1	151	83,9

The results of the public knowledge distribution about the Covid-19 pandemic and its prevention showed the most of the respondents answered correctly (>75%) on each question item given about the Covid-19 pandemic. So it can be said that the Gandu Sub Village community is categorized as having good knowledge regarding the Covid-19 pandemic. According to Law (2020), stated that public knowledge in preventing the spread of Covid-19 is very useful to suppress transmission. By having good knowledge, one can determine and make decisions (Purnamasari, 2020). The results of this study was in line with Yanti's research (2020), where 70% of the people of Sumerta Kelod Village are categorized as having good knowledge. In addition, a similar study in Pekalongan City also gave results that were in line with this study, namely 72% of respondents were categorized as having good knowledge. The results from Simanjourang C's research, (2021) where the majority of respondents have good knowledge produce positive attitudes to realize good behavior as well as from Prihati's research,

(2020) which stated that there is a relationship between knowledge and Covid-19 prevention behavior. The results of the distribution of knowledge and categories of knowledge are presented in Table 3 and Table 4.

From the statement items given in Table 3, there are 4 statement items with incorrect frequency at numbers 1, 2, 8 and 9. Item 1 explains that Covid-19 is a harmless disease and the same as influenza there are 13.9 % of respondents answered incorrectly. It is necessary to know that although the Covid-19 case only requires adequate treatment to restore the situation, its rapid spread requires the public to remain cautious (Kemenkes RI, 2020). In statement item number 2 explaining that the coronavirus can survive for several hours outside the human body, there are 14.4% of respondents answered incorrectly. According to research by Kampf (2020), the coronavirus can survive on the surface of objects for 9 days at room temperature. Simple prevention can be done by using a disinfectant to kill the virus so it doesn't infect other people (Kemenkes RI, 2020).

Table 3. Distribution of Public Knowledge About the Covid-19 Pandemic

Statements	Correct Answer		Incorect Answer	
	f	%	f	%
COVID-19 is a harmless disease and is just like the common cold	155	86,1	25	13,9
Coronavirus can survive several hours outside the human body	154	85,6	26	14,4
Coronavirus can be transmitted while talking	174	96,7	6	3,3
People can transmit COVID-19 even without symptoms	164	91,1	16	8,9
Healthy people also need to wear masks when leaving the house	174	96,7	6	3,3
Symptoms of COVID-19 in the elderly are generally more severe than at a young age	174	96,7	6	3,3
The risk of death in COVID-19 patients is higher in people with chronic diseases	158	87,8	22	12,2
Children are also a group at risk of being infected with Covid-19	144	80	36	20
New normal means to return to the original habits before the corona outbreak	136	75,7	44	24,4
Self-isolation for people infected with COVID-19 is also necessary for those who do not have symptoms	157	87,2	23	12,8

In statement item number 8 which states that children are also included in the group at risk of being infected with Covid-19, there were 20% of respondents answered incorrectly. According to the American Academic of Paediatrics and the Children's Hospital Association, children are less likely to be infected with the coronavirus at the age of 10-14 years compared to people aged 20 years

and over. So it can be said that children also have a risk of being infected with this virus. In statement item number 9 which states that new normal means returning to its original habits before the emergence of the corona outbreak, there were 24.4% of respondents answered incorrectly. This means that there are still people who have less understanding of the term new normal used. The new normal itself

is a new adjustment period in which people are required to be able to place themselves side by side with this virus with several conditions such as the use of data and knowledge as the basis for decision making, implementing health protocols, and reviewing their implementation (Perencanaan, 2020). So, people should not ignore various health protocols just because of

the term new normal.

The results of this research on community behavior during the COVID-19 pandemic, the majority of respondents answered "always" to each positive statement point (points 1–6) and answered "rarely" to each negative statement point (7–9). The distribution of these behaviors is presented in table 4 below:

Table 4. Distribution of Community Behavior during the Covid-19 Pandemic

Statements	Always		Almost Always		Rarely		Never	
	f	%	f	%	f	%	f	%
I wash my hands with soap or use hand sanitiser after handling objects in public places	138	76,7	35	19,4	7	3,9	0	0
I take a shower and change clothes after coming home from travelling	117	65	34	18,9	28	15,6	1	0,6
I wear a mask when in public places (markets, terminals, prayer places, etc.)	174	96,7	6	3,3	0	0	0	0
I keep a minimum distance of 2 meters from other people when outside the house	49	27,2	87	48,3	43	23,9	1	0,6
I keep my distance from old people	48	26,7	58	32,2	70	38,9	4	2,2
I always wear a mask when I'm out of the house	162	90	16	8,9	2	1,1	0	0
I attended an event that gathered a lot of people	5	2,8	17	9,4	34	18,9	124	68,9
I use public facilities or go to public places (public transportation, malls, markets, tourist attractions)	4	2,2	16	8,9	45	24	115	63,9
I will shake hands if I meet other people	8	4,4	6	3,3	67	37,3	99	55

In statement item number 6 regarding the use of masks when outside the house, not all have done it because there were still people who rarely use masks who enter by 1.1%. The use of masks is very important because they can protect the wearer from particles that carry viruses or diseases and can also limit the spread

of these droplets or particles released by the wearer into the air (Howard et al., 2020). The results of this study explain that the majority of people show a good level of knowledge about the COVID-19 pandemic (87.8%) and good behavior (77.2%). The distribution of knowledge categories is shown in table 5.

Table 5. Relationship between Knowledge and Public Behavior about the Covid-19 Pandemic

Category	Result (%)		p
	Knowledge	Behavior	
Good	158 (87,8)	139 (77,2)	0,000
Not Good	22 (12,2)	41 (22,8)	

Based on the results of statistical tests showed that there is a significant relationship between individual knowledge and behavior to prevent Covid-19 infection ($p = 0.000 < 0.005$). This result is relevant to Syakurah's research (2020), on the same topic in Indonesian society where the result is that there is a relationship between knowledge and action regarding Covid-19 ($p = 0.000 < 0.05$) with the risk of individuals having bad actions of 6.674 times

compared to well knowledgeable individuals. This is by adaptation theory which states that someone who has a good level of knowledge can encourage someone to act well (Silalahi, 2013).

CONCLUSION

The results of the analysis showed that there is an association between knowledge and people's behavior. This shows that knowledge

influences people's behavior to prevent infection or the spread of Covid-19. This study has not examined attitudes and reinforcing factors toward Covid-19 prevention efforts. Researchers suggest that further research can be done with quantitative and qualitative methods.

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