

# Indonesians' readiness in facing long-term COVID-19 pandemic

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## ABSTRACT

**Introduction:** Long-term COVID-19 pandemic which has existed in Indonesia since 2020 not only poses a risk to public health but also to their social conditions. Indonesia, as a country with strong social fabric within its people, has a high sense of social responsibilities in facing the pandemic. The aim of this study is to describe Indonesians' readiness in facing long-term COVID-19 pandemic.

**Methods:** This descriptive study used a cross-sectional design with a sample of 305 residents of five cities in Indonesia. They were chosen not randomized by distributing a survey invitation via WhatsApp group with the background of the general public, and health cadres. We waited until the response received reached the targeted number of respondents. The data were collected using Google Forms, and were analyzed by using a descriptive method (percentage, P-value, and odds ratio) by SPSS statistical software version 25.

**Results:** The readiness in facing the pandemic fell into two categories: the high readiness level (77.1%) and the low readiness level (22.9%). Gender and age do not affect the level of readiness, while the level of education and employment status influenced the level of readiness.

**Conclusions:** The majority of Indonesians have high readiness level. Public participation can decrease COVID-19 transmission rate.

**Keywords:** COVID-19; Indonesian; pandemic; readiness

## Introduction

Coronavirus Disease 2019 (COVID-19) is a new strain that has never been identified before in humans (Tarantola, 2020). Based on the scientific facts available during the formulation of the research, COVID-19 can be transmitted human-to-human through droplets of cough or sneeze and is not airborne. Persons with the most risk of contracting this disease are those coming into close contact with COVID-19 patients, including those treating them (Heymann, 2020; Song and Lu, 2020). Standard recommendations in preventing the transmission of the virus include washing hands regularly with soap and running clear water, applying coughing and sneezing etiquette, avoiding direct contact with livestock and wild animals, and avoiding close contact with anyone exhibiting respiratory disease symptoms such as coughing and sneezing (WHO, 2020a; 2020c).

The public needs to be ready with the new habits like maintaining distance, washing hands, wearing masks, and not gathering. On the other hand, Indonesians have a habit of gathering and socializing with family, and friends, and this has the potential for transmission of COVID-19. Another problem is not meeting with family, and friends (Pasteruk, 2020). Not socializing in a short time doesn't cause problems, but not being able to meet for a long time will cause boredom (Hwang et al., 2020). A long-lasting pandemic can make people tired of wearing masks because it's uncomfortable and costs money (Claresta, Christian and Sa'id, 2021). We need to see Indonesian readiness to solve the problem, and carry out health protocols for a long time. Readiness is defined as a point of maturity to accept and practice the health protocol behavior that has been set in life.

The case of COVID-19 has spread throughout the world, numbering 237 countries based on WHO data in

March 2022. The incidence of COVID-19 based on WHO data on March 17, 2022 showed 462,758,117 confirmed cases with a mortality rate of 6,056,725 deaths. The WHO also reported data on confirmed cases of COVID-19 in South-East Asia of 56,626,996 (WHO, 2022). Data from the Indonesian Ministry of Health reported that, as of March 17, 2022, there were 5,939,082 Indonesians confirmed COVID-19 with 153,212 deaths. Based on WHO data in February 2022, Indonesia was placed 27 of 237 countries with the most COVID-19 cases (Kementerian Kesehatan Republik Indonesia, 2022). Jansen et al. (2021) stated that there is a faster transmission in the Omicron variant, making the potential for COVID transmission increase when public awareness is low.

Indonesia's position was included in countries with a high number of COVID-19 cases, in line with data monitoring health protocol compliance in July 2021. Task force COVID-19 reported that 27.03% people did not obey wearing masks, and disobedience to keep a distance was 28.38%. It is not only the responsibility of the government, but also community contribution to increase public participation of the importance for obeying health protocols (Satgas, 2021).

Indonesians have a successful history in solving problems by involving the community, such as a successful program to prevent dengue fever by establishing larva monitoring (Widyawati, 2019). The country also succeeded in controlling drug dropout in tuberculosis patients using drug monitoring, where support from the supervisor significantly influences the patients' obedience of taking TB drugs (Widani and Sianturi, 2020). These problems were solved by the community. History shows that the role of the community is very important in controlling COVID-19 in Indonesia.

Based on community roles win line with public health condition, community readiness in carrying out, inviting, and monitoring health protocols becomes important. Community readiness depends on individual commitment to change, facilitating change, and implementing change (Edwards et al., 2000; Castañeda et al., 2012). Indonesians are accustomed to the same behavior as their values. For instance, the residents of Sukoharjo, Province Central Java decided to isolate the village as a form of war against the coronavirus, and no one is allowed in or out until the situation return to normal, and each individual follows the rules (Pasteruk, 2020).

Seeing the long-term likelihood of COVID-19 pandemic, as well as compliance with fluctuating health protocols, a study was needed to determine the readiness of Indonesians in dealing with a lengthy COVID-19 pandemic. There was no research that discusses Indonesians' readiness in deal with a long-term COVID-19 pandemic, hence the objective of this research was to investigate Indonesians' readiness in facing a long-term COVID-19 pandemic.

## Materials and Methods

### Study Design

This research used a descriptive study with a cross-sectional design and was carried out in Indonesia between March and June 2021.

### Respondent

All participants (n=305) were Indonesians living in five cities: Surakarta, Surabaya, Jayapura, Denpasar, and Sukoharjo. The data of the research were collected through questionnaire via Google Forms including demographic information (age, sex, level of education, and employment status), and measures of readiness in coping with COVID-19 undertaken.

### Instrument

The measures of readiness were assessed by using the 5-point Likert scale to measure responses for 14 questions. The instrument made by the research team in consultation with linguists, and public health expert was then tested for validity and reliability. Validity and reliability tests were carried out on 20 respondents outside the research sample. Validity test was using Pearson product moment and reliability test using Cronbach's alpha. The results of the r table with 20 respondents and the level of significance is 5%, namely 0.444. A statement is declared valid if r count > r table. The questions 1 through 14 have r count more than r table and it can be concluded that all statements are valid. The results of Cronbach's alpha show a value of 0.786 and are more than the r table (0.444), so it can be concluded that all statements are reliable (Appendix 1).

Table 1 Demographic characteristics and readiness level of the respondents (n = 305)

Variables	Frequency	Percentage
<b>Gender</b>		
Female	266	87.2%
Male	39	12.8%
<b>Age (years)</b>		
17-35	69	22.6%
36-50	157	51.5%
>50	79	25.9%
<b>Education level</b>		
Elementary school	20	6.6%
Junior high school	45	14.8
Senior high school	139	45.6
Diploma Degree	35	11.5
Bachelor's degree	42	13.8
Master's degree	24	7.7
<b>Occupation</b>		
Unemployed	175	57.4%
Civil servants	35	11.5
Traders	19	6.2
Laborers	16	5.2
Students	21	6.9
Others	39	12.8
<b>Readiness Level</b>		
High readiness level	235	77.2%
Low readiness level	70	22.8%

Table 2 Relationship between characteristics of the respondents and readiness level

Variable	Readiness level		OR (95% CI)	P value*
	High (%)	Low(%)		
<b>Gender</b>				
Female	208 (68%)	58 (19%)	1.237	0.591
Male	29 (10%)	10 (3%)		
<b>Age</b>				
17-50 years old	171 (56%)	55 (18%)	0.612	0.150
>50 years old	66 (22%)	13 (4%)		
<b>Level of education</b>				
High	78 (26%)	32 (10%)	1.739	0.000
Low	157 (51%)	38 (12%)		
<b>Employment status</b>				
Employed	71 (23%)	26 (9%)	2.164	0.000
Unemployed	166 (54%)	42 (14%)		

## Data Collection

We distributed survey invitations via WhatsApp to WhatsApp groups with the background of the general public, and health cadres, and waited until the response received reached the targeted number of respondents.

## Data Analysis

The results show that Indonesians' readiness in facing the pandemic fell into two categories, namely the high readiness level and the low readiness level. Readiness level was determined by identifying 14 statements ([Appendix 2](#)). The statement consists of readiness in identifying guests after the trip, quarantine for people with a high risk of COVID-19, checking the health of residents, reducing the frequency of mobility, providing supporting facilities for health protocols, disinfection of public places, health education, participation in surveillance of suspected COVID-19, and sharing food. Each statement will get a value of 1-5. The maximum value for each respondent is 70. The result of the calculation of mean is 53. We measured group readiness levels with a formula, readiness value more than or equal to 53 was referred to as high readiness level, and readiness value less than 53 as low readiness level. The readiness measures collected were then grouped into those that carried the most (high readiness level) and those carried the least (low readiness level). Data analysis was performed by using the SPSS statistical software version 25 by showing percentage, odds ratio (OR), and P-value. The data were presented or summarized as mean, frequency, OR, and percentage.

## Ethical Consideration

The study was approved by the Research Ethics Committee of the Indonesian Ministry of Health. The Ethical Approval was obtained from Health Research Ethics Committee of Poltekkes Kemenkes Surakarta, number LB.02.02/1.1/2424.4/2021 dated on January 31<sup>st</sup>, 2021. Permission to conduct the study was proposed to the Regional Research and Development Design Agency of Central Java Province. The researchers applied research ethics principles of anonymity, beneficence and non-maleficence, autonomy, and justice. An explanation of the background and aim of the study, as well as informed

consent were contained in the Google Form, together with the instrument. Participants were reminded at the beginning of the survey that proceeding and completing the survey indicated voluntary consent to participate in the study. Anonymity and confidentiality were maintained throughout the study.

## Results

A total of 305 people was sampled with 95% response rate of 321 respondents who were recruited. The respondents ranged from 17-63 years of age SD of 34±6.3 years. [Table 1](#) shows demographic data of the respondents. The majority of participants were female (87.2%). A large number of respondents were within the age range of 36-50. Most of respondents (45.6%) graduated from Senior Secondary School, and a large number of respondents (57.4%) were unemployed. The majority of respondents had a high readiness level (77.1%).

Based on the research, it is reported that women (68%) had higher level of readiness in facing COVID-19. Respondents falling into productive age of 17–50 were readier in dealing with the impacts of the pandemic. It is also reported that respondents with higher levels of education were 1.739 times readier than those with lower levels of education, and those who were employed were 2.164 times readier than those who were not ([Table 2](#)).

## Discussions

The research results show that the majority of Indonesians (77.1%) were of high readiness level in facing COVID-19. The factors influencing readiness in facing the pandemic were education level ( $p = 0.000$ ) and employment status ( $p = 0.000$ ), while gender ( $p = 0.591$ ) and age ( $p = 0.150$ ) were not found to be correlated with public readiness level. This result is influenced by several determinants of readiness.

The respondents with higher levels of education had 1.739 times higher readiness level than those with lower levels of education. Education and skills have a strong influence on individual well-being. Education creates many opportunities for individuals and is essential for high economic growth, and strong social cohesion

(Mojtahedi et al., 2021). Education guarantees income, social benefits, healthy neighbors, and healthy behaviors, so that those with higher levels of education are readier to face new diseases. This is in line with findings from Yanti et al. (2020) that show Indonesians have good knowledge, positive attitudes, and good behavior toward social distancing to prevent the transmission of the COVID-19 pandemic in Indonesia. It can be concluded that level of knowledge influences public readiness in facing COVID-19.

The respondents who were employed were 2.164 times readier than those who were unemployed. This is consistent with the findings of Weil (2017), stating that employment influences one's level of readiness in facing problems. Employed people will have better economic state, which enables them to make ends meet. Mojtahedi et al. (2021) said that people who lost their jobs during the pandemic felt depression, anxiety, and stress, so they had difficulty facing COVID-19.

As a consequence of the COVID-19 pandemic, many companies terminated their staff's employments. The rules of social distancing have forced coffee shops to lay off their employees. The implementation of the lockdown has also prevented the tourism, hotel and transportation sectors from allowing employees to work (Al-Fadly, 2020; Botton, Hoffmann and Vera-Cossio, 2020). If this global health crisis is not resolved immediately, the economy will not do well, thereby causing an increase in vulnerability of transmission and rate of death (Viezzer and Biondi, 2021).

The results of the study show that most of the men and women have high readiness. Level of exposure risk, comorbidity, socioeconomic level, and individual experiences influence readiness in facing the pandemic. The WHO recommends that, in making decisions, governments should also consider gender factors in order to ensure public participation and readiness (WHO, 2020b).

Age correlates with level of experience and vulnerability to disease. In this research it was found that those aged 17-50 years, as well as those more than 50 years old, were in high readiness to face COVID-19, although Indonesians had no experience in dealing with diseases similar to COVID-19. Experience in facing diseases similar to COVID-19 provides more readiness. As an example, Taiwanese, as reported by Chiu (2020) were ready to face COVID-19 since they had experience in facing SARS in 2003. The researchers stated that COVID-19 prevention efforts have been conducted earlier in Taiwan, including countering false news spreading fear (Chiu, 2020). Vulnerability to COVID-19 should cause people to be more vigilant, in which the elderly are more vulnerable to the disease (Niu et al., 2020). However, since Indonesians have no prior experience, age did not significantly influence readiness.

Indonesians voluntarily raised funds to make washbasins, distribute face masks, disinfect places of

worship, and help others economically since they have a culture of mutual assistance (*gotong royong*), which has long taken root in the country (Bowen, 1986). The history of three centuries of colonization enables Indonesians to achieve high levels of solidarity. Cooperation, mutual assistance, collective decision-making, and mutual respect are important parts in the national culture (Dewantara, 2017). The limitation of this research is that the sample coverage is not comprehensive as it does not cover all 34 provinces in Indonesia.

## Conclusions

Research findings show that the majority of Indonesians sampled have high readiness level in facing the COVID-19 pandemic. Most males and females in Indonesia, both aged 17-50 years or more than 50 years, who are highly educated and have low education, as well as those who are working or not working have high readiness to face the pandemic. There is, however, a need of improvement in health education in order to improve readiness. We suggest that a wider survey is needed by adding a variable about COVID-19 vaccination. Health protocol compliance must also always be surveyed as a basis for determining government policies.

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## Appendices

### Appendix 1 Validity and reliability readiness level assessment

Statements	Pearson r Count	Cronbach's alpha
Statement 1	0.715	0.786
Statement 2	0.617	
Statement 3	0.694	
Statement 4	0.568	
Statement 5	0.782	
Statement 6	0.600	
Statement 7	0.785	
Statement 8	0.671	
Statement 9	0.598	
Statement 10	0.638	
Statement 11	0.641	
Statement 12	0.723	
Statement 13	0.652	
Statement 14	0.568	

### Appendix 2 Readiness level assessment

Statements	Totally Agree (5)	Agree (4)	Partially Agree (3)	Disagree (2)	Totally Disagree (1)
1) Do you carry out identity checks and ask the city of origin where the migrants come from?					
2) Do you ask visitors to check with the nearest health facility after the trip?					
3) Do you ask visitors to apply self-quarantine measures for 14 days inside their homes after the trip?					
4) Do you ask the arriving person to self-quarantine at the quarantine facility provided by the city government?					
5) Do you check the body temperature and health status of the people who come?					
6) Do you do road closures to reduce the frequency of mobility?					
7) Do you build a sink and provide soap?					
8) Do you distribute masks to the public?					
9) Do you disinfect places of worship and public places?					
10) Do you make health education posters or banners?					
11) Do you suspend meetings and rallies?					
12) Do you raise funds to ease the economic burden of the population?					
13) Do you participate in surveillance activities against suspected COVID-19?					
14) Do you donate food to members of the community affected by COVID-19 who are in need					

\*\*Scoring: Total score: \_\_\_\_\_