

## RESEARCH ARTICLE

## Community Perception in Preventing Cases of COVID-19 in Bogor City in 2020

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### Abstract

The COVID-19 outbreak of a coronavirus that causes illness shocked the world. Health precautions must be implemented to limit the number of COVID-19 cases or prevent transmission. This study aims to ascertain the public's perception of the COVID-19 case in the community. This report is one of the findings of a survey of the association between comorbidities and preventative behavior in COVID-19 cases, specifically public perceptions of COVID-19 cases in Bogor city. This study took place from March through the end of September 2020. Data were obtained through in-depth interviews utilizing a guideline developed based on the parameters of a qualitative study. The prior recommendations were validated, and the data was represented using transcripts and a data matrix to aid in the descriptive data analysis. According to a study on public views of COVID-19, individuals realize the risks they face if they do not adhere to the government's health protocols. According to quantitative data, the proper use of masks when outside the home is only 18.0%, the correct use of hand sanitizers is 26.2%, the correct use of soap is 80.3%, the proper use of hand sanitizers is 90.2%, and the correct coughing and sneezing behavior is 60.7%. In general, research data findings have not been encouraging for COVID-19 prevention; therefore, you will be prone to COVID-19 infection if you disregard health regulations, particularly by correctly wearing masks. As a result, in general, the findings of public perception have not been able to diminish the number of COVID-19 instances.

**Keywords:** COVID-19, health protocols, prevention behavior, perception

### Introduction

In late 2019, a new illness known as coronavirus disease 2019 (COVID-19) appeared in China. This deadly illness targets the respiratory system. COVID-19 has a rapid transmission rate and can infect multiple continents at once. Similar incubation periods (average 4–5 days) and symptoms (pneumonia) but distinct host reservoirs characterize this virus, which is related to severe acute respiratory syndrome (SARS) and Middle East respiratory disease (MERS) viruses. While civets transmit SARS to humans, humped camels are responsible for MERS transmission, and bats are responsible for transmitting COVID-19.<sup>1,2</sup>

Mild, moderate, or severe symptoms can induce COVID-19 infection. The main clinical symptoms are fever, cough, pain, and dizziness. In severe conditions, patients can experience severe shortness of breath. In connection with these non-specific signs, the focus of reducing the number of COVID-19 cases is the prevention of transmission by implementing the COVID-19 transmission prevention protocol. The responsibility for

preventing transmission is shared between the government and the community.<sup>3</sup> In addition, the spread of this disease has a broad social and economic impact.<sup>4</sup>

To stop the spread of COVID-19 cases, the government issued policies, including restrictions on physical and social contact known as large-scale social restrictions (LSSR) and regulations to accelerate the spread of COVID-19 so that they could be implemented immediately in various regions through the Minister of Health of the Republic of Indonesia. Minister of Health Regulation Number 9 of 2020 contains the LSSR rules. The Minister of Health issued a Minister of Health Regulation about LSSR regulations involving DKI Jakarta on April 10, 2020. Furthermore, the Minister of Health of the Republic of Indonesia published a Ministerial Regulation on LSSR for West Java province. LSSR was issued for Bogor-Depok-Bekasi or Bodebek on April 15, 2020.<sup>5</sup> People must be active and work for their needs to be met and for the economy to continue functioning. In contrast, interacting with others increases the likelihood of COVID-19 transmission. Seeing

Received: 22 August 2022; Revised: 16 July 2022; Accepted: 8 August 2023; Published: 25 August 2023

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this, the government has adopted a new normal, namely, an order to adjust new habits for people to continue living productively by changing their lifestyle so they do not develop COVID-19.<sup>6</sup>

The COVID-19 pandemic has also affected the world of education. The temporary suspension of educational institutions to prevent the global spread of the COVID-19 pandemic, which has prevented millions of students from attending school, is also in effect in Indonesia. Problems arise in the teaching and learning process between students and instructors due to learning at home or through distance education. Both educators and students must be able to adapt rapidly to existing changes. In this situation, Ningsih<sup>7</sup> conducted a study of 95 students from the Education Technology Study Program at Universitas Baturaja in South Sumatra, and the results showed that 93.3% of students preferred to study in class face-to-face (offline) because there were obstacles encountered when learning was done online at home. As many as 32.3% of respondents admitted to wasting their internet quota. Then, 24.2% of respondents indicated that the lecturer's content description needed to be revised. Then, 24.2% of students stated that the internet signal was limited, 16.1% stated that learning interaction was limited, and 3.2% said that online learning media was difficult to follow, knowledge of the topic was not optimal, and engagement was limited. This challenge arises due to the constraints of students who must constantly meet their internet quota during COVID-19.

The COVID-19 epidemic has also had an impact on economic conditions. According to Permatasari et al.'s<sup>8</sup> research, many people complained about financial concerns. People who run home-based enterprises and traders see a considerable drop in sales income/turnover compared to before the epidemic. On the other hand, it is difficult for people to find work; many who have worked have been laid off and have yet to be called back. The rising number of COVID-19 cases in the area highlights the need for research or studies focused on gauging public awareness of the pandemic.<sup>9</sup> Preliminary data According to the quantitative data from this study showed that 18.0% correctly used a mask outside the home, 80.3% washed their hands with soap, 26.2% used hand sanitizers, 90.2% maintained a physical distance, and 60.7% implemented good coughing and sneezing etiquette. The preventive behavior seen in this study was implemented in response

to the suggestion, yet some continue to disregard it, affecting the addition of COVID-19 incidents.<sup>10</sup>

This study aims to ascertain the public's perception of the COVID-19 case in the community.

## Methods

The research is being conducted in Bogor. The Ministry of Health Republic of Indonesia conducted a study on the association between comorbidities and COVID-19 preventative behavior in Bogor in 2020, which included all research participants. This study took place from March through the end of September 2020. The research design was qualitative, with the Rapid Assessment Procedures (RAP) approach used to gather detailed information about public attitudes and community behavior towards the COVID-19 pandemic, particularly COVID-19 preventative behavior. Which was compiled using a structured questionnaire with variables such as the patient's name, age, and eight open questions about health conditions, behavior for seeking health facilities, preventive behavior two weeks before treatment, during treatment, and after treatment, efforts to prevent illness experienced, and contact history with COVID-19 patients. RAP is a quick approach for researchers to confirm quantitative data quality by taking 5 to 10% of the complete quantitative sample. Purposive sampling was used to select informants from the research site. There were 12 research samples, six verified cases of COVID-19, and six non-COVID-19 responses. Qualitative data is collected through direct talks on mobile phones, including voice calls and video calls using the WhatsApp function, as well as standard voice calls; all calls are recorded after getting consent from the respondent.

Data processing and analysis were performed manually by compiling data from interviews, field notes, and other materials. In this study, content analysis techniques were employed to analyze the answer matrix from the informants. This study activity has gained ethical approval from the Health Research Ethics Committee, National Institute of Health Research and Development, Ministry of Health Republic of Indonesia, No. LB.02.01/2/KE.505/2020.

## Results

According to the characteristics of the 12 informants interviewed in-depth, they ranged in

age from 29 to 82 years old, were predominantly male (9 men), and held occupations (5 male and two female). Data collected from in-depth interviews with participants about their health conditions indicates that the community enjoys generally good health, with little or no significant health complaints. However, one of the informants stated that a family member had died due to COVID-19. Some informants said that most participants frequently receive routine health assessments because they had several types of previous COVID-19 illnesses that required them to control their healthcare facilities, such as diabetes, herpes, cholesterol, and gout. Still, there were a small number of informants who rarely checked into health facilities.

Signs and symptoms of COVID-19 obtained from participants in the two weeks before hospitalization related to general health conditions revealed that the participants experienced fever, not feeling well, feeling weak, and decreased appetite, even though they felt before the informant was sick (in-patient), still doing activities as usual, such as going to the market, going to the office, and traveling out of town. However, some still claim they only do activities at home

In light of the COVID-19 incidents causing public concern, hospital in-patients must receive improved care and treatment. It is consistent with most informants' statements that treatment can be adequately performed, such as IV administration, the availability of oral medications, injections, and the friendly services provided by health personnel by handing masks to patients. However, one source continued to react as follows:

*"Not all medical services are performed, such as laboratory examinations, x-rays, physiotherapy, and others, which the administration should monitor based on the patient's health condition."*

In-depth interviews revealed that nurses generally wear personal protective equipment (PPE) appropriately and correctly, are very professional, and are responsible when the community is asked about the quality of service at the hospital when the informants are being treated. However, there are still differing viewpoints among the informants, who state;

*"Because the informant rarely visited the hospital, he could not provide information or*

*assess the hospital's service quality because informants only do their treatment by purchasing medicine from a stall or drug store and consuming traditional medicine by drinking herbal medicine, etc."*

Furthermore, maintaining personal hygiene and following healthy living habits are critical to retaining cleanliness. The informant stated that he improved his hygiene by washing his hands frequently, eating nutritious food, engaging in modest exercise activities such as walking, running, and taking vitamins or herbal medicines to boost his immunity. Some informants stated that when they leave the house, even in their private automobiles, they still follow health measures such as donning masks to avoid infection with the COVID-19 virus.

Regarding seeking treatment before being admitted to the hospital, most informants said they treat and buy medicine for themselves and rarely go to the health service or general practitioner's clinic for a health assessment. If necessary, the informants go to the doctor. According to one source:

*"When I am sick, I am too lazy to go to the hospital; instead, I rely on antibodies and eat a lot." I was consuming sanmol from stalls and herbal medications sent by the office manager at the time."*

Concerning the COVID-19 infection in the community, most informants stated that they had never come into contact with COVID-19 patients. However, there was information from a few informants exposed to the virus at work. According to the informant, COVID-19 can infect persons of all ages, from children to adults. Furthermore, patients with COVID-19 who have comorbidities are more likely to develop the condition. However, among the informants, there are still many who are unconcerned about the environment, as evidenced by their indifferent responses to the COVID-19 outbreak, as mentioned below:

*"I don't care about people who don't wear masks or just ignore them."*

Concerning the public health hazards linked with the current COVID-19 pandemic, a few informants still perform health checks such as blood or rapid/swab tests. One source explained

it this way:

*"I still go to the doctor regularly because I have other diseases, such as diabetes."*

## Discussion

According to the findings of the research paper by Senewe et al.,<sup>10</sup> the behavior of preventing COVID-19. However, some public views still need to be addressed, such as using masks and coughing behavior. Those are apparent in the responses of respondents on COVID-19 prevention. Looking at the percentages, 90.2% of informants maintain physical distance, 60.7% cough and sneeze correctly, and 80.3% wash their hands with soap. Just 18% of informants who used masks outside the house were at an increased risk of contracting COVID-19. This lack of awareness has resulted in coronavirus transmission from one person to another. Furthermore, many people take this infection casually by passing regulatory rules. Again, just 26.2% of respondents prefer to use hand sanitizer properly.

This reflects that COVID-19 prevention has yet to be a primary priority for some district officials. Because informants do their treatment by purchasing pharmaceuticals at stalls or drug stores and taking traditional treatments by drinking herbal medicine, research by visiting health institutions such as hospitals is rarely conducted. The informant stated they must be more active in the hospital or other health facilities if sick. As a result, they attempt to treat themselves and purchase medication.

All humans, particularly those in Indonesia, value their health significantly. However, maintaining a consistently healthy and fit life requires effort because numerous circumstances might influence it. According to multiple social media accounts, bodily immunity is crucial in preventing the spread of the COVID-19 virus. If the immune system drops, the virus can easily infiltrate the body and create significant health problems. As a result, if the stress and anxiety caused by the COVID-19 infection persist, it will cause a decline in immunological levels. As a result, the spread of COVID-19 disease will skyrocket.<sup>11</sup>

Because the COVID-19 pandemic is becoming increasingly severe, the government has declared a public health emergency and issued three regulations as a form of public health protection, namely: 1) financial policy and financial stability

for dealing with the COVID-19 pandemic; 2) declaration of a public health emergency, and 3) LSSR. At the same time, LSSR restricts some activities of residents in an area suspected of being infected with a disease or contaminated to prevent the disease or contamination from spreading. On the one hand, some people advocate installing the LSSR since it can disrupt the transmission chain. This strategy is consistent with WHO recommendations for physical and social distance.<sup>12,13</sup> Finally, the government elected not to impose a regional quarantine policy, instead opting for the large-scale social restriction (LSSR) strategy, as stated in Government Regulation 21 of 2020.<sup>14</sup>

Regarding the issues above, which are tied to people's behavior, people are still unaware of their daily actions related to COVID-19 transmission. COVID-19 could still be in our surroundings. According to Kalangie,<sup>15</sup> the characteristics of human conduct that affect health can be divided into two categories: 1) behavior that helps the health of individuals or social groups and 2) behavior that affects health. Based on the findings of this investigation, the general population explained behavioral practices that were not recognized as COVID-19 transmission routes, such as sipping coffee with colleagues at work. This virus begins to show symptoms in five to seven days, after which an assessment with the same friends who have already been infected with COVID-19 is performed. This could be interpreted as purposeful behavior.

According to our research, 18.0% of people use masks appropriately before leaving home. This tiny statistic suggests that health behavior in the current case reduction technique needs to be revised. A mask is required for all activities, including grocery shopping, meeting loved ones, participating in events, and attending religious services. Data on the efficacy of health protocol monitoring in ensuring mask-wearing compliance show that the 1.4 million people under observation exhibit high adherence. While 1.4 million may appear tiny compared to Indonesia's total population, it is critical to improve this amount to strengthen public health protocol adherence and ensure the safe continuation of community activities during COVID-19 transmission.<sup>16</sup>

Since the COVID-19 case, there have been restrictions on educational activities that are particularly harmful to the development of our generation of students and a loss of government

revenue owing to the denial of retribution and income tax. This is unquestionably risky because your safety is not guaranteed, and your health and capacity to operate in society are jeopardized. The next difficulty is a house condition that could be more conducive to school circumstances, particularly if parents need to facilitate the situation at home so that children do not have a comfortable learning environment. As a result, many respondents confessed that it was difficult to concentrate while studying at home, not only because of the improper setting but also because they were frequently disturbed by other family members while studying and performing assignments. Furthermore, children may believe their parents should be more patient when accompanying them to school. Even though parents are the most essential part of the learning process at home.<sup>17</sup>

This can be accomplished by enlisting volunteers, TNI, POLRI, and other community organizations to monitor and enforce health protocol compliance. Then, for all regions in Indonesia, the reduction in the LSSR level has several effects on expanding population movement. To increase community mobility, greater adherence to health procedures, such as wearing masks, adopting social distancing, and constantly practicing excellent hand cleanliness, must be balanced.

Geldsetzer<sup>18</sup> believes public health officials and the media should prioritize COVID-19 communication activities in 2020. This information could provide valuable insights, such as the low case fatality rate, recommended treatment-seeking behavior, the low risk of individuals of East Asian ethnicity living in the United States and the United Kingdom, and the perception that children are less susceptible to fatal diseases than adults. Furthermore, to ensure that individuals focus on the most effective preventive measures, this study suggests that it is essential to inform the public about the comparative effectiveness of general versus frequent surgical masks, wash hands thoroughly, and avoid close contact with sick people. As a result, the generalizability of these findings may be enhanced. Furthermore, sure participants' statements may be chosen randomly to lessen their time investment in receiving the \$1.50 incentive. Participating in the survey is required, and earning \$1.50 as a monetary prize is a reasonable incentive. Third, users can search for answers to several questions online before

replying. To summarize, people in the United States and the United Kingdom appear to have significant misconceptions about COVID-19. Correcting these beliefs should prioritize government awareness campaigns, doctor-patient communication, and media coverage.

Faasse and Newby<sup>19</sup> indicated in 2020 that significant and continuing involvement with health-protective behaviors (i.e., hygiene and social distancing) is necessary to control the COVID-19 pandemic successfully. The online survey, which included 2,174 Australians, was done between March 2 and 9, 2020, during the early phases of the COVID-19 outbreak in Australia. The findings revealed that two-thirds of respondents were at least moderately concerned about the widespread COVID-19 epidemic. Concern about attacks and subsequent media coverage were consistent predictors of increased engagement in health-protective behaviors and higher vaccination intentions. Uncertainty and misconceptions concerning COVID-19, including whether people have natural or pre-existing immunity to the virus, are frequent. There is debate whether specific home remedies (such as vitamins and saline solution) will provide protection and whether the virus is artificial and purposely distributed. Such misunderstandings often generate alarm among members of the public. The findings also emphasize psychological and demographic characteristics associated with reduced involvement in health-protective behaviors, such as male gender, younger age, and lower degrees of concern about the outbreak. These findings suggest possible intervention pathways and targets for promoting health-protective behaviors.

According to Tejamaya et al.,<sup>20</sup> societal perceptions of an early-stage pandemic may have substantial ramifications for disease control and management in the future. This survey has a total of 1,043 participants. Respondent's primary sources of information are social media (85.2%) and Internet news (82.2%). Almost all respondents know that COVID-19 is a viral disease that spreads primarily through saliva droplets (97.1%) and contaminated surfaces (86.5%). COVID-19 is regarded as serious or extremely serious by more than 95% of respondents. However, the respondent's anxiety level is mild, showing that risk tolerance exists in the community. Gender, educational background, and occupation were shown to have statistically significant correlations with perceived risk and patience, while volunteer

participation in control measures was high and comparable. This suggests that the COVID-19 health campaign in Indonesia at the start of the pandemic was successful. The study also identifies areas where health promotion, education, and awareness might be enhanced.

Jaber et al.<sup>21</sup> discovered good responses to various questionnaire items among participants. About 55.0% of Jordanian and 56.0% of Iraqi participants self-reported being aware of COVID-19. In comparison, only 72.3% of Jordanian and 73.3% of Iraqi participants self-reported being aware of COVID-19 protective and precautionary measures. Total awareness is calculated as the sum of the consciousness as mentioned above subscales. Regarding developing signs of COVID-19 infection, practically all Jordanian and Iraqi subjects experienced fever (98.0% and 96.3%, respectively). More than 90% of Jordanian and Iraqi participants recognized dyspnea as a typical symptom. Approximately 90% of both groups believe COVID-19 can be transmitted through shaking hands and contact with contaminated surfaces. Furthermore, over 80% of both groups' participants reported that the virus could be transmitted through droplet inhalation. Over 96% of Jordanian and Iraqi participants indicated avoiding crowded locations to reduce the risk of infection. Furthermore, almost 90% of both groups reported significant reductions in shaking hands and kissing. Furthermore, approximately 90% of Jordanian and Iraqi participants reported regularly washing their hands with soap and water. There is currently no cure for COVID-19, according to three-quarters of Jordanian and Iraqi participants. In contrast, 34.8% of Jordanian and 47.3% of Iraqi participants thought vitamin supplementation was a feasible therapy option. Furthermore, nearly 30% of both groups thought paracetamol might be used to treat COVID-19. Geriatric patients were identified as being the most vulnerable to COVID-19-related mortality by around 30% of both groups. Furthermore, more than half of both groups believe the COVID-19 mortality rate is less than 5%. Our findings revealed a statistically significant difference in the Iraqi cohort's mean precautionary score between the two sexes ( $p=0.01$ ). Women were more likely than men to have higher mean conscientiousness assessment scores (mean difference=0.1903; confidence interval=0.07–0.3). Furthermore, statistically significant relationships were found among Jordanian and Iraqi participants

between different age groups and transmission, preventative measures, and treatment ratings (all  $p<0.05$ ). Post-hoc analyses failed to reveal consistent trends across age groups and consciousness subscales. In conclusion, the population level of consciousness was competent but deficient in crucial dimensions such as transmission and treatment awareness. Both populations appear to have comparable attitudes and perception tendencies about the COVID-19 epidemic, resulting in an equivalent culture. To assist the people in dealing with the challenges of the growing pandemic, relevant authorities should devote time and money to raising awareness through official forums and significant social media efforts.

According to Shelat et al.,<sup>22</sup> the susceptibility of family and friends had the most significant impact—nearly twice the own health risk. Respondents who traveled more considerable distances by train were deemed four times more dangerous than those who traveled fewer. When the two models are combined, we will pay for mitigating factors such as reduced overcrowding, enforced mask use, and improved sanitation. As a result, we may utilize forecast models to anticipate behavior under complex pandemic scenarios after evaluating the impact of many variables on route choice behavior.

Alkhalidi et al.<sup>23</sup> noted that most respondents (74%) were worried about the COVID-19 epidemic, and 27% of them reported that it was likely that they would be infected with COVID-19; 16% believed it would be life-threatening or severe. However, just 11% of respondents reported high levels of anxiety. Adoption of hygiene practices and social distancing is lower among older (>65 years) compared to younger (18–24 years) respondents (95% CI=0.01–0.28, OR=0.06; and 95% CI=0.01–0.27, OR=0.06, respectively). Those with the lowest gross household incomes and at least one flu symptom were less able and willing to separate themselves. Significant increases in anxiety levels, perceived effectiveness of social distance, and cleanliness habits were observed in the post-lockdown compared to the lockdown.

## Conclusions

The residents of Bogor city have a negative opinion of the practice of preventing COVID-19 by following the required health regulations. When treated with COVID-19, patients tend to

believe that not all patients undergo medical examinations, that medicating themselves is better than having to go to the hospital or seek treatment, and that does not be fooled or ignorant about the adherence to wearing masks properly, but for sufferers with chronic or comorbid diseases such as DM, etc., routinely carry out periodic controls/examinations at health care facilities. It is vital to enhance socialization by applying 5M, meaning keeping distance, using masks, avoiding crowds, washing hands, and decreasing mobility, to break the cycle of the spread of the pandemic and return to everyday life as quickly as possible. Next, if there is a suspicion of a perceived complaint about the health of the body, go to a health care center.

### Conflict of Interest

None declared.

### Conflict of Interest

We want to thank the Head of the Research and Development Center for Public Health Efforts, the Indonesian Ministry of Health Research and Development Agency, who has allowed us to conduct research related to the COVID-19 case. We would also like to thank the five leaders of the public health center at Bogor city and all parties or members of the research team who have helped a lot in the preparation, implementation of data collection, data analysis and report writing.

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