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# COVID-19 status and its prevention among Indonesian adults

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## ABSTRACT

**Background**: The world has now impacted by COVID-19. Indonesia is one of the countries predicted to be affected over a longer period. The rapidly screening of COVID-19 status among Indonesians is important to prevent the massive spread of COVID-19.
**Purpose**: The study aimed to investigate the covid status, and its prevention among Indonesians.
**Methods**: A cross-sectional study was performed among Indonesians using a web-based survey that was randomly distributed using social media after a year of the outbreak of COVID-19 in Indonesia. There were 247 respondents enrolled this study. An emerging COVID-19 tool was utilised for data collection. Descriptive statistics and linear regression were applied with the significance value of 0.05.
**Results**: From a total of 247 participants, 89 respondents had a travel history to the red zone area of COVID-19. 33% of them felt good but isolating after COVID-19 exposure. Most of them used facemasks (50.2%) and washing hands (36%) as health prevention during the COVID-19 outbreak.
**Conclusions**: Identification of Covid status is important to prevent COVID-19 exposure.

**Keywords**: COVID-19; covid status; behaviour; COVID-19 prevention; Indonesia

## INTRODUCTION

The World Health Organization (WHO) declared a new virus as Corona Virus Disease (COVID-19) since pneumonia-associated coronavirus was reported in Wuhan, China, in the last 2019. The pandemic of COVID-19 rapidly spread across China and around the world (Huang et al., 2020; Li et al., 2020; Weber et al., 2020). Until the first week of December 2020, 167 countries and territories were affected by COVID-19, resulting in more than 1 million cases with more than 100,000 deaths (WHO, 2020).

Based on the published study, the aetiology of COVID-19 is still unclear, with the common signs and symptoms include fever, dry cough, fatigue, and shortness of breath (Wu et al., 2020; Zu et al., 2020). About 14 days was the incubation period for COVID-19. In extreme cases, COVID-19 can cause rapid

### *Nursing and Healthcare Practices*

- *Identification of COVID-19's status is required to prevent COVID-19 exposure*
- *Doing self-isolation and adequating prevention behaviour are essential.*
- *Seeking medical attention for people with contact history to person tested positive for COVID-19 are recommended.*

progression to organ dysfunction, include shock, acute cardiac and kidney injury, respiratory distress syndrome, pneumonia and even death (Huang et al., 2020; Zu et al., 2020).

Indonesia has recently become one of the countries that have been affected by COVID-19. By March 2, 2020, the first COVID-19 cases were confirmed and directly announced by President Joko Widodo when the two females were infected by a Japanese visitor. The case has increased rapidly to 34 provinces, there have been 1.790 cases confirmed, with 170 deaths within a month. Jakarta, West Java, and Banten were the top three highest cases in Indonesia (897, 223, and 164, respectively) where the three provinces are close together. Now there are 72.015 cases with 16.945 death after a year of the outbreak of COVID-19 in Indonesia (Kementerian Kesehatan Republik Indonesia, 2020). The study aimed to investigate the covid status and it's prevention among Indonesian adults.

## METHOD

### Design , Samples, and Settings

A cross-sectional web-based study was performed among Indonesian adults during the outbreak of COVID-19 in Indonesia. The sample was randomly selected by simple randomization technique. The inclusion criteria of this study was Indonesian adults aged from 18 years. About 247 respondents completed the survey and were included in the study.

### Instruments and Data Collection

An emerging COVID-19 tool was developed using emerging respiratory viruses (COVID-19) materials that were provided by the World Health Organization course (WHO, 2020). The instrument content consisted of a 10-item check list including travelling history to the red zone of COVID-19, the affected symptoms of COVID-19, self-isolation steps and its prevention. The tool was distributed randomly to Indonesians using social media, it required 3 minutes to complete. Informed consent was given before conducting the study.

### Data Analysis

All collected data were analyzed using IBM SPSS statistics V22.0 for windows. Descriptive statistics were applied to calculate the frequencies and proportions of each database. The linear regression test was also used to investigate the association among variables.

### Ethical Consideration

Ethical approval from the research ethics committee was obtained before conducting the study with number 070/256/B.Kes/2020. The purpose and study information was provided by the researcher. The study was performed following the reporting results of internet e-surveys guidelines. Eligible respondent in this study was voluntary and was not compensated. Informed consent was obtained from each respondent, data were recorded confidentially.

## RESULTS

### Respondent's Characteristics

There was 172 female, and 75 male Indonesians enrolled in the study with a mean age of 27.31 (SD 6.87). Almost all of them were living with family and friends. A total of 17 respondents had an occupational background as a health professional (e.g., Doctors and Nurses) (Table 1).

### Risk Factors of COVID-19, COVID Status, and Symptoms

About 36% of respondents had a travel history to the red zone area of COVID-19 within the previous week; 2 out of 247 respondents had a contact history with the person who tested positive for COVID-19. Respiratory disorders, including Asthma and Bronchitis, were the most common comorbidities reported by the respondents. Almost all of the respondents were feeling well, however 13.3% of them isolating themself. Over half of respondents had no clinical symptoms of COVID-19

**Table 1.** Characteristics of particpants (n = 247)

| Characteristics | n | % |
|---|---|---|
| Age (27.31±6.87, Min 19, Max 54) | | |
| 18-39 | 236 | 95.5 |
| 40-59 | 11 | 4.5 |
| Gender | | |
| Female | 172 | 69.6 |
| Male | 75 | 30.4 |
| Occupation | | |
| Students | 134 | 54.3 |
| Health professional | 17 | 6.9 |
| Lecturer/ teacher | 42 | 17.0 |
| Others | 54 | 21.8 |
| Living arrangement | | |
| Alone | 29 | 11.7 |
| Family/ friends | 218 | 88.3 |

(59.7%), while other respondents exist. The cough was the most common symptoms (16%) followed by the sore throat and flu. About 9 respondents experienced more than one of clinical symptoms (Table 2).

### Prevention Steps of COVID-19

Most of the respondents only go out for work, groceries and pharmacy (30%), 67.4% working/ studying from home during the outbreak of COVID-19. Using facemask was the most common prevention steps of COVID-19 reported by the respondents followed by washing hand (50.2% and 36%, respectively). However, only 13% of respondents seek medical attention after COVID-19 exposure (Table 3).

### Association between Travel History, Risk Factors, Symptoms, Self-Isolation, and Behaviour with COVID-19 Status

This study found that self-isolation steps, working from home, commorbidities, seeking medical attention, contact history, and behaviour associated were the most significant factors associated with COVID-19 status (r = 0.69) (Table 4).

## DISCUSSION

The present study illustrated that the majority of heart failure patients felt anxious in daily This study described that all of the respondents had a travel history to the red zone area of COVID-19 within March 2020, some of them had underlying diseases including respiratory disorder, heart disease, diabetes, and annual flu. This can be possible factors in respondents' exposure to COVID-19. Chinazzi's (2020) stated that the Domestic and International spread of the COVID-19 outbreak is related to individuals travelling daily. While, Indonesia issued an International travel restriction on January 27, 2020, and a domestic travel restriction for Jakarta on April 10, 2020, as an epicentre province of COVID-19 in Indonesia (Kementerian Kesehatan Republik Indonesia, 2020). Previous studies also found that persons with comorbidities such as hypertension, diabetes, and chronic diseases were highly at risk to get infected by COVID-19 (Dong et al., 2020; Li et al., 2020; Wu et al., 2020; Zhu et al., 2020).

Moreover, half of the respondents were still not sure whether having contact with the person who tested positive for COVID-19, while two respondents who were nurses reported had contact history with the COVID-19 patients. The first nurse was female, had been living with her friend, she felt good and only went out for work using public transportation. She had no medical check-up for COVID-19 status since she took care of patients with COVID-19. The second nurse was male,had been living with his spouse, he had no underlying diseases, but he got sore throat symptom after having contact with the COVID-19 patient and had a medical check-up for COVID-19 status. He only went

**Table 2.** Risk factors of COVID-19, COVID status, and symptoms (n = 247)

| Variables | n | % |
|---|---|---|
| Travel history to the red zone area of COVID-19 | | |
| Yes | 89 | 36 |
| No | 158 | 64 |
| Contact with person positive for COVID-19 | | |
| Yes | 2 | 1 |
| Not sure | 101 | 40.8 |
| None | 144 | 58.2 |
| Comorbidities | | |
| Respiratory disorder | 18 | 7.2 |
| Heart disease | 5 | 2.6 |
| Diabetes | 2 | 1 |
| Annual flu | 13 | 5.2 |
| None | 209 | 84 |
| COVID-19 Status | | |
| Feeling well | 199 | 80.5 |
| Feeling well but isolating after COVID-19 exposure | 33 | 13.3 |
| Feeling unwell but didn't think it's COVID-19 | 13 | 5.2 |
| Feeling better but thinking had positive COVID-19 | 2 | 1 |
| COVID-19 Symptoms | | |
| Fever >38$^{o}$C | 1 | 0.5 |
| Cough | 40 | 16 |
| Sore throat | 18 | 7.2 |
| Flu | 26 | 10.5 |
| Shortness of breath | 5 | 2.6 |
| More than one symptoms | 9 | 3.5 |
| None | 148 | 59.7 |

out for work commute by motorcycle. These two samples have shown that the respondents did medical check-up when the clinical symptoms of COVID-19 exist. This also can be a potential factor of respondent exposure to COVID-19. Inline to the Ministry of Health (Indonesia), which reported that the first cases of COVID-19 in Indonesia had a contact history to Japanese visitors who tested positive for COVID-19 (Kementerian Kesehatan Republik Indonesia, 2020).

Furthermore, most of the respondents had no clinical symptoms of COVID-19, while some of them experienced fever, cough, sore throat, flu, and shortness of breath. This finding in line to some previous report which stated that fever, coughing and shortness of breath were the most common signs and symptoms of COVID-19 reported by the participants, while come of cases were asymptomatic (Dong et al., 2020; Holshue et al., 2020; Perlman, 2020; Sun et al., 2020).

For self-isolation steps, half of respondents were staying at home, avoiding group of people, and reducing contact with people, while some of them still go out for work, groceries, and pharmacy. Almost all respondents commute by motorcycle and public transportation during normal work, but during the outbreak of COVID-19, they only work or study from home. According to the World Health Organization about emerging respiratory viruses (COVID-19) and self-isolation during the pandemic of COVID-19 can adequately prevent the spreading of the virus. All of these self-isolation steps also implemented in Indonesia since the third week of March 2020.

In addition, there have been six healthy

**Table 3.** Prevention steps of COVID-19 (n = 247)

| Variables | n | % |
|---|---|---|
| Self-isolation | | |
| Not leaving house | 58 | 23.5 |
| Only go out for work/groceries/pharmacy | 74 | 30 |
| Avoiding group of people | 30 | 12.2 |
| Minimal contact with people | 52 | 21 |
| None | 33 | 13.3 |
| Working now | | |
| Not working/ studying | 48 | 12.4 |
| Working/ studying from home | 147 | 67.4 |
| Commute by public transportation | 3 | 1.1 |
| Commute by motorcycle or own car | 44 | 14.6 |
| Commute by walking or bike | 5 | 4.5 |
| Daily behaviour | | |
| Taking multivitamine | 21 | 8.5 |
| Using facemask | 124 | 50.2 |
| Wash hand or using hand sanitizer | 89 | 36 |
| None | 13 | 5.2 |
| Seek medical attention | | |
| Hospital | 10 | 4 |
| Public health centre/ clinic | 20 | 8 |
| BNPB centre | 2 | 1 |
| None | 215 | 87 |

**Table 4.** Contributin factors of travel history, risk factors, symptoms, self-isolation, and behaviour with COVID-19 status (n = 247)

| Variables | *p* | *R* |
|---|---|---|
| Travel history | 0.45 | 0.69 |
| Contact history | 0.78 | |
| Comorbidities | 0.84 | |
| Clinical Symptoms | 0.33 | |
| Self-isolation steps | 0.91 | |
| Daily behaviour | 0.73 | |
| Working now | 0.86 | |
| Medical check-up | 0.81 | |

behaviours implemented by the respondents during the outbreak of COVID-19 including using facemask when go out, doing wash hand or using hand sanitizer, and taking multivitamin and exercise. This finding in line to previous studies which stated that improving personal hygiene, using a facemask, adequate rest can effectively prevent COVID-19 (Ji et al., 2020; Sun et al., 2020). Furthermore, only few respondents were seeking health professionals, while other respondents were not. This might be happening due to most of them had no clinical symptoms of COVID-19 even though they had a travel history to the red zone area of COVID-19. Almost all of the respondents felt good, some of them isolating themself after COVID-19 exposure. Thirteen respondents felt unwell, while two respondents were thinking had positive for COVID-19 but they did not take any medical check-up for

COVID-19 status. According to the Ministry of Health (Indonesia), people have to check their COVID-19 status when they felt unwell and the clinical symptoms appear.

## CONCLUSION

This study found that people still well for their health status after had a travel history to the red zone area of COVID-19, while some of them experienced COVID-19 symptoms including fever, cough, sore throat, flu, and shortness of breath. Doing self-isolation steps like staying at the home, avoiding a group of people, reducing contact with people, and working from home was essential. Adequate prevention behaviour also important during this time; doing personal hygiene (e.g., wash hand or using hand sanitizer), using facemask when to go out, taking multivitamin and exercise, and adequating rest. Seeking medical attention especially for those who had contact history to the person tested positive for COVID-19 with underlying diseases like respiratory disorder, heart diseases, diabetes and other chronic illness was also recommended.

### *Declaration of Interest*

*No conflict of interest*


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### *Data Availability*

*The datasets generated during analyzed the current study are available from the corresponding author on reasonable request.*

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