



## Self Assessment of The Risk of Covid-19 Transmission using The Inarisk Personal Application



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### Abstract

One way to break the chain of spread of Covid-19 is through the InaRISK application. Knowledge of nursing students about this application is still low. BNPB entered Covid-19 into the InaRISK application at April 2020. Its function is to find out how the state of the area around us, whether it is included in the yellow, red or green zone. In addition, the community can conduct an independent assessment regarding the need or not to conduct a rapid test through the InaRISK application. The purpose of this activity was to provide counseling about InaRISK Personal application and measure the risk of Covid-19 of students. The method used by giving counselling about InaRISK Personal application through lectures to 36 students at Faculty of Health Sciences. The results of the self-assessment showed based on the statement of potential for infection outside the home, most participants (88.9%) touched objects/money that were also touched by other people. Based on the statement of potential for infection in the house, most participants (86.1%) did not install hand sanitizer in front of the entrance, to clean their hands before holding the handle (handle at the house entrance). Based on the statement of endurance (immunity) all participants (100%) were under 60 years old and almost all participants (94.4%) did not have diseases: heart/diabetes/chronic respiratory disorders. The risk of participants being exposed to Covid-19 were based on the InaRISK Personal application, almost half of participants (44.4%) were in the low-risk category. Based on the measurement results, it could be concluded that the potential risk of Covid-19 transmission using the InaRISK Personal self-assessment on students had a low risk of 44.4%. The campus is expected to hold counseling programs or health promotions on a regular basis to provide information so that it can increase student knowledge.

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## INTRODUCTION

Coronavirus Disease 2019 or better known as COVID-19 is a new type of Corona virus named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) (Gorbalenya et al., 2020). This virus was first identified in the city of Wuhan, China, at the end of 2019 (Evans, 2020) which attacks the human respiratory system, both children and adults.

This virus can be transmitted easily through droplets (splashes) that come out when talking, sneezing, and coughing from people infected with the COVID-19 virus. In addition, this virus can also be transmitted through close contact with positive confirmation of COVID-19, such as direct physical touch; shaking hands, holding hands, etc. (Singhal, 2020).

Symptoms of health problems that usually appear when infected with this virus include the common cold, cough, runny nose, fever above 37.50C to symptoms of severe complications such as shortness of breath and pneumonia that can cause death which is usually accompanied by congenital chronic diseases such as cardiovascular and diabetes (Huang et al., 2020). Other signs of vital organs are generally stable, but blood tests usually show a relatively low white blood cell count (leukopenia and lymphocytopenia). In addition to the visible symptoms of health problems, some cases often show no symptoms or better known as People Without Symptoms/OTG (Zimmermann & Curtis, 2020).

The number of suspected cases, probable cases, close contacts, and positive confirmed cases of COVID-19 throughout Indonesia is increasing, including the West Java region, especially Bandung Regency. Data taken from the COVID-19 Information & Coordination Center (2020) of the West Java government and the Republic of Indonesia's COVID-19 Handling Task Force (2020), there were 18,638 new cases confirmed positive for COVID-19 with 7,343 (4.3%) people. confirmed dead. West Java province ranks second with the highest increase in cases of 137.8% (707 vs. 1,681) compared to DKI Jakarta province which ranks first with the highest increase in cases of 36.9% (4,067 vs. 5,568). Especially for Bandung Regency itself, based on data obtained from the COVID-19 Information & Coordination Center of the Bandung Regency Task Force (2020), the number of people who were confirmed positive for COVID-19 until the end of August 2020 reached more than 400 people. Bojongsong Village contributed to quite a large number of confirmed positive cases, reaching 30% of the total positive cases in Bandung Regency in August 2020. Thus, from the data it can be seen that the chain of spread of the COVID-19 virus is still not

completely broken, as can be seen from the increase in the number of positive cases. COVID-19 especially in Bandung Regency and West Java Province in general. In addition, in mid-June 2020, based on Bandung Regent Regulation Number 43 of 2020, the "Adaptation of New Habits" policy in the form of the implementation of Micro-Scale Social Restrictions (PSBM) after the implementation of Large-Scale Social Restrictions (PSBB) set by the Regional Government and the Government Center. For this reason, additional socialization and education are needed to the public about how to prevent the COVID-19 virus and the IMR policy (Irawan et al., 2020; Prayitno et al., 2020; Wikantiyoso et al., 2020).

Based on this, efforts are needed to suppress the spread of the COVID-19 virus. One of them is by providing education and socialization through the delivery of information on how to start a healthy life so as to avoid the COVID-19 virus (Razi et al., 2020; Sufi Yanto et al., 2020). One of the educational media that can be used to convey information is posters that are informative, animative, and easy to understand (Zukmadini et al., 2020; Arsyad, 2013). The hope is that this activity can serve as a reminder that people should always practice clean living as an effort to prevent the spread of the COVID-19 virus. In addition, during the implementation of this activity, a survey of the community's level of compliance was carried out, especially when outside the house. With this survey, the findings obtained can be used as initial data/information for input for local stakeholders in an effort to avoid the transmission of the COVID-19 virus.

BNPB entered Covid-19 into the InaRISK application at April 2020. Its function is to find out how the state of the area around us, whether it is included in the yellow, red or green zone. In addition, the community can conduct an independent assessment regarding the need or not to conduct a rapid test through the InaRISK application. After conducting an independent assessment, the public will know how the risk of being exposed to Covid-19 is categorized as low, medium, or high. The public will get information about the nearest hospital and the nearest Covid-19 referral hospital and what to do to prevent exposure to Covid-19.

BNPB asks application users to fill in data and questions honestly in order to get the right recommendations. The InaRISK application guarantees that user data is confidential. Community participation to care for themselves, their families and the environment where they live is expected to break the chain of spread of the Covid-19 virus. The InaRISK application can be downloaded via the PlayStore for Android and the AppStore for iOS.

The results of interviews with 10 students at Faculty of Health Sciences, Tribhuwana Tungadewi University Malang, found no students knew about InaRISK Personal application. Based on the analysis of the existing situation and problems, the solution offered is to provide counseling about InaRISK Personal application.

**METHOD**

The counseling activity was carried out at the Faculty of Health Sciences, Tribhuwana Tungadewi University Malang and was carried out in September, 2021 for one month. The

preparation started by licensing to the Dean of the Faculty of Health Sciences, Tribhuwana Tungadewi University Malang. Then, the authors perform a time contract with students of Ners. After that, we gave counseling about a self assessment using InaRISK Personal application. Lastly, we measured self assessment of the potential risk Covid-19 using InaRISK Personal application.

**RESULT**

Characteristics of participants in community service activities.

**Table 1: Distribution of Participants Frequency based on Age and Sex**

| Charateristic      | f         | %            |
|--------------------|-----------|--------------|
| <b>Age (years)</b> |           |              |
| 20-32 (mean 26)    | 36        | 100.0        |
| <b>Sex</b>         |           |              |
| Male               | 2         | 5.5          |
| Female             | 34        | 94.4         |
| <b>Total</b>       | <b>36</b> | <b>100.0</b> |

Based on Table 1, the average participant is 26 years old and most (94.4%) of the participants are female.

**Table 2: Distribution of Participants Frequency based on Statement of Potential for Infecting Outside the Home**

| No.          | Statement   | Criteria | f         | %            |
|--------------|---|----------|-----------|--------------|
| 1            | I go out of the house   | Yes      | 31        | 86.1         |
|              |   | No       | 5         | 13.9         |
| 2            | I use public transportation: online, angkot, bus, taxi, train   | Yes      | 22        | 61.1         |
|              |   | No       | 14        | 38.9         |
| 3            | I don't wear a mask when I gather with other people   | Yes      | 11        | 30.6         |
|              |   | No       | 25        | 69.4         |
| 4            | I shake hands with other people   | Yes      | 16        | 44.4         |
|              |   | No       | 20        | 55.6         |
| 5            | I don't clean my hands with hand sanitizer/wet tissue before holding the steering wheel of a car/motorcycle | Yes      | 14        | 38.9         |
|              |   | No       | 22        | 61.1         |
| 6            | I touched objects/money that other people also touched  | Yes      | 32        | 88.9         |
|              |   | No       | 4         | 11.1         |
| 7            | I don't keep a distance of 1.5 meters from other people when: shopping, working, studying, worshiping       | Yes      | 22        | 61.1         |
|              |   | No       | 14        | 38.9         |
| 8            | I eat out of the house (restaurant)   | Yes      | 19        | 52.8         |
|              |   | No       | 17        | 47.2         |
| 9            | I don't drink warm & wash my hands with soap when I arrive at my destination                                | Yes      | 11        | 30.6         |
|              |   | No       | 25        | 69.4         |
| 10           | I am in the village area where the patient is infected  | Yes      | 12        | 33.3         |
|              |   | No       | 24        | 66.7         |
| <b>Total</b> |   |          | <b>36</b> | <b>100.0</b> |

Table 2 shows that based on the statement of potential for infection outside the home, most

(88.9%) participants touched objects/money that were also touched by other people.

**Table 3: Frequency Distribution of Participants based on the Statement of Potential for Infecting the House**

| No.   | Statement  | Criteria | f  | %     |
|-------|--|----------|----|-------|
| 1     | I don't put hand sanitizer in front of the entrance, to clean my hands before holding the handle (handle for the house entrance) | Yes      | 31 | 86.1  |
|       |  | No       | 5  | 13.9  |
| 2     | I don't wash my hands with soap after arriving home  | Yes      | 22 | 61.1  |
|       |  | No       | 14 | 38.9  |
| 3     | I don't provide: wet/antiseptic tissue, masks, antiseptic soap for the family at home  | Yes      | 11 | 30.6  |
|       |  | No       | 25 | 69.4  |
| 4     | I don't immediately soak used clothes & pants outside the house into hot water/soap  | Yes      | 20 | 55.6  |
|       |  | No       | 16 | 44.4  |
| 5     | I don't wash my hair immediately after I get home  | Yes      | 16 | 44.4  |
|       |  | No       | 20 | 55.6  |
| 6     | I do not socialize this personal risk assessment check list to my family at home   | Yes      | 17 | 47.2  |
|       |  | No       | 19 | 52.8  |
| Total |  |          | 36 | 100.0 |

Table 3 shows that based on the statement of potential for infection in the house, most (86.1%) participants did not install hand sanitizer in front

of the entrance, to clean their hands before holding the handle (handle at the house entrance).

**Table 4: Distribution of Participants Frequency based on the Statement of Body Endurance (Immunity)**

| No.   | Statement   | Criteria | f  | %     |
|-------|---|----------|----|-------|
| 1     | I am not exposed to the sun for at least 15 minutes everyday  | Yes      | 31 | 86.1  |
|       |   | No       | 5  | 13.9  |
| 2     | I don't walk/exercise at least 30 minutes every day           | Yes      | 22 | 61.1  |
|       |   | No       | 14 | 38.9  |
| 3     | I don't take vitamins C & E, and lack of sleep                | Yes      | 11 | 30.6  |
|       |   | No       | 25 | 69.4  |
| 4     | I am over 60 years old  | Yes      | 0  | 0.0   |
|       |   | No       | 36 | 100.0 |
| 5     | I have a disease: heart/diabetes/chronic respiratory problems | Yes      | 2  | 5.6   |
|       |   | No       | 34 | 94.4  |
| Total |   |          | 36 | 100.0 |

Table 4 shows that based on the statement of endurance (immunity) all (100%) participants are under 60 years old and almost all (94.4%)

participants do not have diseases: heart/diabetes/chronic respiratory disorders.

**Table 5: Potential Risks of Participants Exposure to Covid-19 Based on the InaRISK Personal Application**

|          | f  | %     |
|----------|----|-------|
| High     | 7  | 19.4  |
| Moderate | 13 | 36.1  |
| Low      | 16 | 44.4  |
|          | 36 | 100.0 |

Table 5 shows the risk of participants being exposed to Covid-19 based on the InaRISK Personal application, almost half (44.4%) of participants is in the low-risk category.

## DISCUSSION

BNPB is a government institution that formed the Covid-19 handling team, releasing the InaRisk Personal Application. The Inarisk application is designed to be useful as a self-

assessment tool that can provide information in identifying the risk of contracting Covid-19 through daily habits and behaviors carried out by individuals, families and communities, so that based on the assessment data it can be concluded through analysis of the application. that these individuals, families and communities have a risk of being exposed to Covid-19 with mild, moderate and low categories, and the application will provide recommendations for preventing

exposure to Covid-19 (Inarisk, 2020). In line with the Ministry of Health (2020) that the risk assessment can be carried out periodically, the benefit of which is to identify the development of the disease based on possible problems that occur and their impact, so that they can determine recommendations for how to overcome Covid-19.

The research, which was conducted using the Inarisk application, showed that the risk of transmitting Covid-19 to nursing professional students was the majority with a low-risk category of 16 people (44.4%), meaning that nursing students had a 50% chance of experiencing Covid-19 transmission. Since March 2020, the professional education process has been established using the online method and students have been returned home to their parents, so that the learning process is carried out with parental monitoring.

Parents become more involved in monitoring daily activities in their children's distance learning. Although studying from home, this does not rule out the possibility of students continuing to carry out activities outside the home such as hanging out with friends, hanging out somewhere and having snacks outside who have the risk of being exposed to Covid-19. In addition, the impact that will occur is that family members who carry out activities outside the home do not comply with health protocols after entering the house, so that they can contract Covid-19 at home.

Based on the results of this study, students have a low risk of exposure to Covid-19 and based on the potential for contracting outside the home, it shows that the majority of respondents touch objects/money that other people touch (88.9%) and go out (86.1%). This condition means that the respondents are young people who have activities outside the home, the dominant activity is using public transportation, often gathering or hanging out with friends accompanied by eating outside the home such as shops, stalls and restaurants. Based on the research of Sufiyanto, Yuniarti and Andrijono (2020) that there are 3 patterns that cause the risk of being infected outside the home, namely touching objects touched by other people and going out of the house.

Nursing students already have knowledge of nursing and other health sciences and their understanding is adequate. Based on Alfianur (2020) the results of research conducted that nursing students at the University of Borneo Tarakan have knowledge about Covid-19 in a good category as many as 113 people (83%). In line with this, according to Gannika and Sembiring (2020) that there is a relationship between education level and Covid-19 prevention behavior where a person's higher education shows

better preventive behavior against Covid-19. Based on this, it is important to conduct a risk assessment of student behavior in prevent exposure to Covid-19.

The Task Force for the Acceleration of Handling Covid-19 (2020) revealed that prevention can be done to reduce the spread of Covid-19 by avoiding the use of public transportation, namely public transportation, trains or planes when not necessary and as much as possible not traveling during peak hours. Based on WHO (2020) during the Covid-19 pandemic, it is recommended for the public to use masks and not be in crowds and crowds, maintaining a minimum distance of 1 meter, especially for those who show symptoms of respiratory problems. It is important to wash your hands with an antiseptic solution or running water with soap.

It is important to wash hands regularly with alcohol, soap and water according to WHO recommendations as basic protection. Riedel, Morse, Mietzner & Miller (2019) stated that water is a comprehensive solvent, but washing hands with water alone cannot eliminate Covid-19 because the virus has a hidden lipid bilayer. Therefore, the use of soap is important to support the removal and destruction of oil and grease. The Ministry of Health (2020) explained that the way to prevent the transmission of Covid-19 to individuals is not shaking hands, avoiding touching the eyes, nose and mouth and applying coughing and sneezing etiquette. WHO recommends that it is important to avoid touching your face, nose or mouth area with your hands.

## CONCLUSION

The implementation of community service activities went smoothly according to plan. Students get additional information and knowledge about the InaRISK Personal application. Based on the measurement results, it can be concluded that the potential risk of Covid-19 transmission using the InaRISK Personal self-assessment on students has a low risk of 44.4%.

## SUGGESTION

The campus is expected to hold counseling programs or health promotions on a regular basis to provide information so that it can increase student knowledge.

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