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# Community Personal Hygiene Knowledge and Attitude to Covid-19 Prevention Behavior

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ABSTRACT

**Background**: The rise of Covid-19 cases has become a global issue. The government has issued guidelines for the public to reduce exposure and spread of disease or infection through personal hygiene. The purpose of this study is to ascertain community knowledge and attitudes toward personal hygiene in preventing Covid-19 in Bengkulu City. **Method:** This research method uses a quantitative approach. This type of research is an observational study with a cross-sectional approach. The sample in this quantitative study was taken using a simple random technique. Based on the calculation of the sample, the minimum sample size is 100 people. Data was collected by distributing questionnaires, univariate and bivariate analyses were performed. **Results:** The results were there was a significant association between personal hygiene knowledge toward Covid-19 prevention behaviors in Bengkulu City (p<0.05; OR= 2.6; CI 95%= 1.137-5.951). Knowledge is the collection of information about the occurrence and prevention of Covid-19, understood and acquired from the learning process throughout life, in which there are significant associations. In Bengkulu City, there was a significant association between people's attitudes toward personal hygiene and the prevention of Covid-19 (p<0.05; OR= 2.658; CI 95%= 1.184-5.969). Attitude is one of the factors that determine a person's actions in maintaining individual and group good in preventing disease. **Conclusion**: The results show that personal hygiene knowledge and attitudes are significantly associated with Covid-19 prevention behaviors.

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## Introduction

Covid-19 began to appear in December 2019 in the city of Wuhan, China. At that time, a mysterious pneumonia case was reported to WHO. This incident increased dramatically from 31 December 2019 to 3 January 2020, with a total of 44 cases. The cause of this disease is known and the genetic code was obtained on January 10, 2020, with a new type of coronavirus called Corona Virus illness (Covid-19). Thus, the WHO Organization declared Covid-19 a big problem on March 12, 2020 [1].

According to WHO data, the latest Covid-19 incident showed 219 million cases and 4.55 million deaths. While, the incidence of this disease has increased in Indonesia from time to time, starting from suspect cases, positive cases, and even death. So, the number of cases of this disease in

Indonesia was 4.22 million cases, 142,115 Covid-19 patients who died, and 4,046,891 recovered Covid-19 patients. There has now been a new variant of the virus that causes Covid-19, first reported to the World Health Organization (WHO) when it was detected in Botswana on November 11 and in South Africa on November 14. On November 26, 2021, WHO also named the new variant as variant B1.1.529 or what we know as Omicron. This variant is classified as a Variant of Concern (VOC). This means that this variant can increase transmission, increase mortality, and even affect the effectiveness of the vaccine. Other variants of the Covid-19 virus include VOCs, such as Alpha and Delta variants. This type of Omicron virus was first discovered in Indonesia on December 16, 2021. Omicron cases continue to grow. In the first case, the Omicron variant infected a janitor at Wisma Atlet Kemayoran in Jakarta. As of December 26, 2021, based on data from the Ministry of Health, there were 11 more patients with Covid-19 who contracted the Omicron variant of the coronavirus. The total cases of the Omicron variant in Indonesia have reached 30 cases [2].

In Bengkulu Province, the number of Covid-19 cases was 23,043 cases and 401 patients died from Covid-19 and 22,590 recovered Covid-19 patients. In Bengkulu City Covid-19 data there are 11,795 positive people for Covid-19, there were 9,301 get-well patients and 414 people pass away. The highest spread of the Covid-19 infectious disease in Bengkulu City was in Gading Cempaka District with a total of 86 cases, 46 recoveries, and three deaths. Meanwhile, the lowest number of cases was in the Sungai Seru district at 21. Although the latest type of Covid-19 variant has not been detected in Bengkulu. However, given the severity and speed of transmission of the omicron variant of the disease, it is important to use health protocols and personal hygiene when dealing with Covid-19. Hygiene applications are closely related to how dangerous diseases arise and can be transmitted through food, people or places, or objects. Improper personal hygiene makes the body more susceptible to various diseases such as scabies, infectious diseases, gastrointestinal diseases, and even the loss of function of certain parts of the body such as the skin [3]. Good personal hygiene is one of the most effective ways to protect yourself and others from diseases like Covid-19. The spread of Covid-19 disease can be prevented by following health protocols in everyday life. Use a mask, keep your distance, avoid crowds, and wash your hands regularly. This is a very important method of personal hygiene and self-defense. If communities can follow health protocols to maintain personal hygiene and self-protection, they can reduce the spread of coronavirus in their communities [4].

An initial survey conducted by researchers of the Gading Cempaka district community found that the community believes the Covid-19 disease does not exist as an excuse for the government. So, in addition to the problem of maintaining a healthy life and environmental cleanliness, people are no longer following health protocols of personal hygiene such as hand washing and wearing masks, and lack knowledge and general awareness of the application of personal hygiene in their daily lives. Awareness is lacking. Based on the above background, this study aims to ascertain community knowledge and personal hygiene awareness for Covid-19 prevention actions in Bengkulu city.

## Materials and Method

This study used quantitative methods. This study is an observational study with a cross-sectional approach. That is, the subject is observed only once, and the subject's personality or variable is measured at the time of examination. A quantitative study was conducted to determine the relationship between urban sanitation and Covid-19 prevention behaviors in Bengkulu City. The study was conducted in the districts with the most and least Covid-19 cases Gading district with the most Covid-19 cases, there are 3 health centers namely Lingkar Barat Health Centre and Jalan Gedang Health Centre, and Sidomulyo Health Centre 501 pieces. The lowest Covid-19 cases were in Sungai Serut District, with the Sukamerindu Health Center area with a total of 107 cases. The population in this study were all residents in the highest and lowest areas of COVID-19 cases, as many as 15,726 people. The sample in this quantitative study was taken using a random method. Inclusion criteria were people aged at least 20 years and willing to participate in the study as evidenced by informed consent. The exclusion criteria in this study were people aged <20 years and not willing to participate in the study. In collecting the sample, there are many limitations for the

researcher, ranging from time, effort, and funds, so the researcher uses the calculation of the sample size formula for the two-proportion difference hypothesis. Based on the calculation of the sample, the minimum sample size is 100 people. Data was collected by distributing questionnaires. Furthermore, the data that has been collected will be analyzed using univariate and bivariate analysis. This study has passed ethical review no. EC00202277439 by Ethic Committe of Universitas Muhammadiyah Bengkulu.

## Results and Discussion

### Results

Table 1 shows that the frequency distribution of knowledge of personal hygiene in the community of 100 respondents was, 60 people (60%) had good knowledge about personal hygiene for preventing Covid-19, 53 people (53%) disagreed attitude to preventing Covid-19 in Bengkulu City, and 51 people (51%) behaved badly in preventing Covid-19.

**Table 1.** Frequency Distribution of Knowledge, Attitudes, and Behavior of Covid-19 Prevention

| Variables | N | % |
|---|---|---|
| Knowledge | | |
| Low | 40 | 40 |
| High | 60 | 60 |
| Attitudes | | |
| Unagree | 53 | 53 |
| Agree | 47 | 47 |
| Behavior | | |
| Bad | 51 | 51 |
| Good | 49 | 49 |

Table 2 showed that there is a relation between people's personal hygiene knowledge and Covid-19 prevention behavior in Bengkulu City ($p<0.05$; OR= 2.6; CI 95%= 1.137-5.951). The results of the study found that there was a significant relationship between people's personal hygiene attitudes towards Covid-19 prevention behavior ($p<0.05$; OR= 2.658; CI 95%= 1.184-5.969).

**Table 2.** Bivariate Analysis Result of Knowledge and Attitudes to Covid-19 Prevention Behavior

| Variables | Preventive Behavior Covid-19 | | | | P -Value | OR (CI 95%) |
|---|---|---|---|---|---|---|
| | Not Good | | Good | | | |
| | n | % | N | % | | |
| Knowledge | | | | | | |
| Low | 26 | 65 | 14 | 36 | 0.037 | 2.600 (1.137 – 5.951) |
| High | 25 | 41.7 | 36 | 58.7 | | |
| Attitudes | | | | | | |
| Unagree | 33 | 62.3 | 20 | 37.7 | 0.028 | 2.658 (1.184 – 5.969) |
| Agree | 18 | 38.3 | 29 | 61.7 | | |

### Discussion

The coronavirus disease began to be declared a pandemic when it starting Wuhan, China, and has been distributed in several countries, including Indonesia. Indonesia, which has a dense and large population in the Southeast Asia Regional Region, is a determining factor for the highest increase in the incidence of Covid-19 among several other Southeast Asian countries [8]. Through the government system, Indonesia has an administrative procedural process that is useful for regulating society in implementing the obligation to always live healthily and reduce the increase in cases of disease distribution due to Covid-19 based on rules that have been set and recommended by the government. In the future, measures to prevent the spread of the disease are urgently needed by increasing the knowledge and behavior of the community's personal hygiene towards preventing the Covod-19 disease which is a problem and a form of the current global challenge [9].

The results of the study found that there was a significant relationship between people's personal hygiene knowledge and “Covid-19 prevention behavior in Bengkulu” City. Previous research

in Indonesia in 2020 stated that 99% of public knowledge is good about social distancing in preventing Covid-19 [5]. Another study conducted on 34 respondents found 19 highly knowledgeable people, 12 people who behaved well, and 7 people who behaved badly in prevention. Then the respondents who had low knowledge were 15 people, namely, 7 people who had good behavior and 8 people who had bad behavior in preventing Covid-19, There is an influence between people's understanding and self-protection actions against Covid-19 [6].

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Knowledge is a collection of information that is understood and obtained from the lifelong learning process about the incidence and prevention of Covid-19. Someone's knowledge is very necessary for understanding materials about the incidence and prevention of Covid-19 because it determines attitudes. Someone who has high knowledge may tend to have a better attitude than someone who has low knowledge [10].

Knowledge the results showed that 51.3% of respondents had sufficient knowledge about personal hygiene during the Covid-19 pandemic. A person's knowledge can influence behavior as a basis for action. Knowledge about body parts that are important to maintain personal hygiene during the Covid-19 pandemic was answered correctly by 86% of respondents. Eyes, hands, nose, and mouth are important body parts to maintain personal hygiene the time of the corona epidemic because the extent of the virus easily occurs due to droplets that enter through these body parts [11]. With knowledge of coughing and sneezing etiquette, as many as 80% of respondents chose the answer wrong. Based on the Covid-19 Quick Medical and Public Health Handling Guidelines, the proper etiquette for coughing and sneezing is covering the nose or mouth using the upper arm or tissue, but there are still many respondents who choose to use the palm of their hand. It is not recommended to use the palms to cover the nose or mouth when sneezing and coughing so that the infected hand's surfaces do not touch the eyes, nose, and mouth [11].

Another study shows a significant correlation between the level of knowledge and personal hygiene of primary school students [12]. By itself, at the time of sensing humans, there is a process of attention, perception, and appreciation of the stimulus or object outside the subject. So it can be concluded that knowledge can be measured or observed through what is known about the object. Personal hygiene is an individual's health in maintaining one's health, improving and enhancing the value of health, and preventing disease [13].

Knowledge is not something that already exists and others just have to accept it, but knowledge is a continuous formation by someone who is constantly reorganizing new understandings. A person's knowledge is influenced by various factors, namely the level of education, information, culture, and experience. The research at Malang City Islamic Boarding School in 2020, shows that good knowledge of Covid-19 prevention can influence a person's behavior to prevent Covid-19 infection [14]. A previous study conducted by the Jalan Gedang Health Center research team in 2022 found that knowledge of personal hygiene and environmental health had a significant relationship with action to prevent Covid-19 in the community at the Bengkulu City Health Center [15]. The results of the study are in line with research in Germany and Malaysia in 2020 which stated that the lack of information and understanding as well as attitudes that are not healthy can directly become a factor in the practice of preventing Covid-19 [16]. Another study in Kelurahan Baru Kotawaringin Barat also It is known that 100% of respondents (50 people) have a good level of understanding [17].

The results of the study in Jalan Gedang Public Health Center, 2022 found that there was a significant relationship between people's personal hygiene attitudes towards Covid-19 prevention

behavior. This result was in line with previous research at the boarding school in 2022 which stated that there was a relationship between people's attitudes toward Covid-19 prevention behavior in the community [6]. Attitude is one of the factors that influence a person's behavior in maintaining individual and group health in preventing disease. This attitude itself is also influenced by knowledge, where the higher a person's knowledge, the better that person behaves in taking action. The attitude becomes a form of a person's opinion in assessing an action such as the application of personal hygiene in a person or society in preventing Covid-19 disease.

Attitude is the first visible reflection of a human being when he behaves. Attitude is an adoption of symptoms in society that have an affective dimension, which is a tendency to be able to react or respond (response tendency) in a relatively fixed way to objects, goods, and humans, both good and bad. Attitudes will have an impact on the behavior of every community. With a good attitude, it is hoped that it will lead to good behavior, although not always. Factors that influence attitudes towards the object of attitude are personal experiences that leave a strong impression and the influence of others who are considered important [4].

The result of a person's experience and interaction between humans and the environment is behavior that is applied in the form of knowledge, attitudes, and actions. The behavior appears as a person's response/reaction to a stimulus that comes from outside or from within himself. thus the community will have good practices in keeping the environment clean to be protected from disease if someone has good knowledge and understanding of healthy living [18].

Another study at Universitas Diponegoro in 2021, also stated that there was a significant relationship between attitudes about personal hygiene practices and respondents' personal hygiene practices. This can happen because students' perspectives and assessments of COVID-19 issues, especially in preventing COVID-19, can affect the implementation of personal hygiene practices [19]. In addition, the respondent's good attitude in preventing COVID-19 behavior does not guarantee good COVID-19 prevention behavior. This can be caused because the attitude is still a closed response, so a good attitude is also poured in the form of good behavior in personal hygiene to prevent disease [5]. Results research at Gulingan Village, Mengwi, Bali in 2020, of the 59 people (51.8%) had positive knowledge about Covid-19 as the basic capital to prevent virus infection and human-to-human contact transmission due to droplets and airborne in Mengwi Bali [20].

The study was inconsistent, noting that there was no significant association between attitudes and personal hygiene practices in DKI Province's efforts to prevent Covid-19 in Jakarta [11]. A study in Bangladesh in 2020, also stated that attitudes have a relationship with Covid-19 mitigation efforts in Bangladesh [21]. Researchers assume that this attitude can't directly affect a person's behavior, this depends on a person's stimulus in response to the information obtained to be applied or not in their lives. Research in Turkey in 2020, states that knowledge affects the attitudes and behavior of respondents in preventing Covid-19 in Turkey [22]. Research conducted in Jordan in 2020, stated that more than 80.0% of study participants adopted the strategy of social isolation, regular hand washing, and increasing personal hygiene measures as their first line of defense against the Covid-19 virus in Jordan [23]. This result is also in accordance with a research in Malaysia, 2020 which found that the Malaysian government can reduce people's risky behavior for being exposed to Covid-19 [24].

Other research in Indonesia 2020, shows that the frequency distribution is based on the attitudes of health students to prevent COVID-19 in Indonesia, with the highest percentage of attitudes in the good category of 206 people (43.39%) and the lowest being in the poor attitude category of 78 people (17.56%). Describes the attitude of students in Indonesia in applying the action of washing hands with antiseptic soap, avoiding direct contact with a person, using a mask, type cough, and sneezing according to etiquette [25].

This is also following research in China 2020, in the form of good behavior more shown in the results of research due to an increase in cases of events that trigger self-awareness in the community [26]. The majority of participants generally demonstrated moderate knowledge of MERS-CoV, age, educational background, and occupation Low level of concern was the only significant predictor. Also, public awareness of nature, the overall contagiousness, and mortality of the disease are good. However, knowledge of the incubation period, clinical picture, Also, the epidemiology of this disease

requires more government attention. The Ministry of Health was the main source of information [26]. The application of health protocols is very necessary. Research conducted on students at the University of Muhammadiyah Bengkulu in 2021 found that students who did not implement health protocols on campus could increase the spread of COVID-19. In the campus area, it was found that 23.5% of students did not follow the health protocol. The readiness of all parties to enter the new normal needs to be done, so that this condition does not contribute to an increase in cases. The government must provide all facilities and infrastructure such as a place to wash hands and various appeals to use masks and maintain distance [27].

This result was in line with previous research which stated that there was a relationship between people's attitudes toward Covid-19 prevention behavior in the community. One factor that influences a person's behavior in maintaining individual and group health is preventing disease, therefore attitude becomes a supporting factor for a person in behavior to prevent disease outbreaks. This attitude itself is also influenced by knowledge, where the higher a person's knowledge, the better that person behaves in taking an action. The attitude becomes a form of a person's opinion in assessing an action such as the application of personal hygiene in a person or society in preventing Covid-19 disease [6].

The results respondents with knowledge of what is lacking about COVID-19 can happen because not everything is taught in a lecture class. Besides knowledge and information about COVID-19 which is dynamic, and constantly evolving quickly this are possible respondents are late or lack updates in obtaining information, so that updates are required to access information quickly, consistently, and continuously [28]. Attitude is a reaction that is still closed from someone to something stimulus or object. Manifestation of no attitude can be seen directly but can only be interpreted in advance of behavior-closed ones. Real attitude shows the connotation of conformity reactions to certain deep stimuli in everyday life is a reaction emotional to the stimulus social [15].

Health protocols include protecting personal health (personal hygiene). Covid-19 is spread through droplets containing the SARS-CoV-2 virus, which can enter and infect people through the nose, mouth, and eyes. The principle of preventing the spread of Covid-19 to someone is to take various measures, for example: by avoiding crowds [29]. Wear a mouth covering if you must leave the house or interact with someone with an unknown medical condition (who can transmit COVID-19). If using a cloth mask, use a 3-ply cloth mask. Wash your hands regularly with soap and running water or use an alcohol-based hand sanitizer. Avoid touching your eyes, nose, and mouth with dirty hands (which may be contaminated with viruses). Stay at least 1 meter away from others to avoid droplets when people talk, cough, or sneeze, and avoid crowds. Various other administrative and technical measures can be taken when distance cannot be maintained. Control techniques can be in the form of limiting quantities, setting schedules, and so on. Technical works can exist in the form of zoning that, among other things, determines the routes of entry and exit [30]. Support your body's resilience by leading a clean and healthy lifestyle such as, for example, a balanced diet, at least 30 minutes of physical activity per day, adequate rest (at least 7 hours), and avoidance of diabetes, high blood pressure, lung disease, heart disease, kidney disease Risk factors for diseases such as immunocompromised/autoimmune diseases, pregnant women, the elderly, children and those with pre-existing diseases/comorbidities/susceptibility to diseases [1].

## Conclusion

Based on the findings of the researchers, it can be concluded that personal hygiene knowledge and attitudes were related to people's Bengkulu City individual's Covid-19 prevention. It is hoped that the government and educational institutions will always provide education and information regarding good personal hygiene to be applied in efforts to prevent Covid-19 so that people remain aware that preventive measures are important in everyday life in preventing disease transmission, this is due to the Covid-19 case. 19 is still happening, so knowledge, attitudes, and personal hygiene behavior are very important to do to prevent and break the chain of transmission of Covid-19.

## Declaration

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