

## **Hand Hygiene Education and Manufacture of Hand Sanitizer in Miftahul Khoeriyah Madrasah, Bungursari District**

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### **ABSTRACT**

Covid-19 is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). For the first time this virus was discovered in Wuhan, China at the end of December 2019. Because this virus spreads very quickly through droplets released by infected humans, WHO (World Health Organizer) then announced that this disease had become an emergency, requiring infected countries to impose a lock down system to slow the spread of the virus. The Covid-19 virus was first identified in Indonesia in March 2020 and the government imposed activity restrictions and made recommendations for a Health Protocol that must be adhered to to date to prevent its spread. One of the health protocols that must be obeyed is washing hands properly in 6 steps. Hand washing can be done with soap and clean running water, or by using a hand sanitizer. Using a hand sanitizer is easy and practical because you can take it anywhere and it doesn't take a long time, but its availability is limited and the price is quite expensive. Therefore, we want to teach the children and teaching staff at Miftahul Khoeriyah how to make hand sanitizers independently with the basic ingredients of aloe vera, alcohol and essential oil. This activity was carried out on September 5 2021 located at the Miftahul Khoeriyah Madrasah, Bungursari District.

**Keywords:** Covid-19, Hand Hygiene, Hand Sanitizer

### **INTRODUCTION**

Real Work Lecture in Indonesia known as Kuliah Kerja Nyata (KKN) is one of the mandatory activities organized by a formal institution at the higher education level as a condition for graduation. The purpose of KKN activities is as a means of applying the knowledge that has been learned during lectures by serving the community. Students can act as facilitators, educators, and counselors, as well as agents of change in a better direction in activities that are being carried out or that are to be carried out in a village.

We carry out the main program with the theme "Smart Village" due to the condition of the people in the Bungursari Village who still do not understand the importance of formal and informal level education, as well as health education that has not been fully implemented.

Health education is a smart village program implemented to provide information related to health. The education provided is teaching how to wash hands in the six steps correctly, providing basic information about Covid-19, providing an understanding of the importance of implementing the 5M health protocol (washing hands, wearing a mask, keeping a distance of 1 meter from people, staying away from crowds, and limiting mobility). , as well as teaching how to make natural hand sanitizer using aloe vera and alcohol as the main ingredients.

Covid-19, which has now become a global pandemic, has forced many people to take preventive measures. This virus was discovered in Wuhan, China for the first time and has infected 90,308 people as of March 2 2020 (Yuliana, 2020). The use of hand sanitizers is more effective and efficient than using soap and water so that many people are interested in using them (Asngad, Bagas, & Nopitasari, 2018).

Soap is a cleanser made by a chemical reaction between potassium or sodium and fatty acids from vegetable oil or animal fat (Putra, D. P. E., Ismanto, S. D., Silvy, 2019).

Hand washing is one of the routine activities that must be done before and after doing something, especially during the Covid-19 pandemic era. Hand washing can be done by using soap and clean running water or hand sanitizer. If you are in a place where it is difficult to access clean water and soap, you may use a hand sanitizer that is either brought by yourself or available on site. According to WHO (2020), a hand sanitizer that effectively kills germs must contain at least 70% alcohol.

The availability of hand sanitizers is still difficult to obtain due to the many needs of each person. Hand sanitizers can be made independently with the formulation of ingredients that comply with standards that can kill germs and bacteria. One of them can use aloe vera and alcohol. There are still many who don't know how to make it, therefore we provide education so that people are able to understand and make their own.

### **RESEARCH METHOD**

The implementation phase is carried out by two methods, namely: 1). The lecture method, by explaining material about Covid-19, its transmission, how to prevent it and efforts that can be made to prevent the spread of this disease. Furthermore, an explanation is given on how to make hand sanitizers, materials, tools and examples of products that can be made; and 2). The practical method, namely teaching how to wash hands properly in six steps and practicing how to make hand sanitizer.

The tools and materials needed in the activities of making hand sanitizers are as follows:

Tools:

1. 3 pump bottles of 450 ml size.
2. Measuring cup.
3. Blender.
4. Knife.
5. Two basins.
6. Handscoon.
7. Filter.

Material:

1. Aloe vera.
2. 1,275 ml or 1.275 l of 70% alcohol
3. Essential oils.

Procedure for making:

1. Prepare the tools and materials needed.
2. Use handscoon.
3. Peel the aloe vera, then cut the aloe vera gel into small pieces.
4. Wash with clean water aloe vera.
5. After washing, put about 600 grams of aloe vera in the blender.
6. Blend the aloe vera until the texture becomes smooth.

7. Once in the blender, do the filtering. Take aloe vera which has a liquid texture.
8. Put the aloe vera that has been filtered into a measuring cup up to 225 ml.
9. Then mix with 1,275 ml of 70% alcohol.
10. Mix 4 to 6 drops of essential oil, stir until evenly distributed.
11. Put the hand sanitizer solution into the pump, each 450 ml.

After the process of making the hand sanitizer is complete, the three pump bottles that have been filled are handed over to the teaching staff to be stored in certain places so that they can be used properly by the students.

## RESULT AND DISCUSSION

The activity of making hand sanitizers and teaching the six steps to wash hands properly is one of the activity programs launched to increase knowledge and increase the habit of washing hands six steps before and after doing activities such as eating, holding your face, after doing activities outside, after interacting with people, etc.

This activity was attended by all 40 students of Madrasah Miftahul Khoeriyah and 4 teaching staff. The activity began with introductions, apperception of children's knowledge about health protocols and how to wash hands. Then we explained the importance of washing hands properly in the six steps and demonstrated while singing. The enthusiasm of the children was seen during the activity. After that, we demonstrated how to make hand sanitizer independently using natural ingredients, namely aloe vera and alcohol. The activity location was at the Miftahul Khoeriyah Madrasah which was attended by religious school children and teaching staff.



Figure 1 process for making hand sanitizer



Figure 2 Distribution of hand sanitizers



Figure 3 Distribution of hand sanitizers



Figure 4 Distribution of hand sanitizers to teacher and headmaster

## CONCLUSION AND SUGGESTION

Based on the results and discussion of the activities that have been carried out, it can be concluded that:

1. Through this activity, students and teaching staff of Madrasah Miftahul Khoeriyah can understand how to wash their hands properly in the six steps.
2. Students and teaching staff can understand the importance of washing hands with soap and clean running water or using a hand sanitizer.
3. All participants are able to understand how to make hand sanitizer naturally with the basic ingredients of aloe vera and alcohol.

It is hoped that the health education activities that have been provided can be useful and well implemented by the children, teaching staff, and the knowledge that has been conveyed can be disseminated to all people in the Bungursari Village, so that the smart village program that we have chosen can run well even though the KKN activities end .

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