


## Economic Empowerment through Making Hand Sanitizer and Implementing Healthy Lifestyles in Covid-19 Pandemic

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	Abstract	Article Info
	<p>Making product Hand sanitizer and implementing a clean and healthy lifestyle were an effort to break the chain of the spread of Covid-19. The making of hand sanitizer made from alcohol has been recognized as being able to kill viruses. For example Alcohol, H2O2 (Hydrogen Peroxide), Glycerol / Glycerin, and Aquades / Distilled Water. This new normal situation must be balanced with a healthy lifestyle. The aim of this assistance was to conduct training in making hand sanitizer in order to improve the economy and the application of healthy living during the Covid-19 pandemic. The researchers used ABCD (Asset Community Based Development) method, with stages; Discovery, Dream, Design, Define, and Destiny. Through this method, the discovery of assets and potentials leads to the provision of activities in the form of training and mentoring to produce hand sanitizer product. This economic assistance activity has an impact on the availability of hand sanitizer that were quite used by residents, and in marketing using online media which has a significant impact on residents.</p>	<p><i>Article History</i>  <i>Received: January 15, 2021</i>  <i>Revised: April 17, 2021</i>  <i>Accepted: April 21, 2021</i></p> <p><i>Keywords: Economic Empowerment in Covid-19, Making Hand Sanitizer, Healthy Lifestyles in Covid-19</i></p>
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### INTRODUCTION

Currently the world is experiencing a biological threat in the form of a Covid-19 virus pandemic that is attacking globally, Including in Indonesia which has a very significant impact on Covid-19 (Ilyasa, et al., 2020; Rahimah, et al., 2020). The easy spread of this virus has made it according to information circulating that this virus originates from the city of Wuhan, China. A researchers who first discovered the Disease Coronavirus identified that the corona virus in 2012 and managed to identify the corona virus that caused MERS it was very dangerous (Su, et al., 2020; Hua, J., & Shaw, 2020). Then this virus appeared again in 2019 and became more virulent, which was named 2019 Novel Coronavirus, then on 11 February 2020 WHO announces coronavirus disease (COVID-19) as the new name for Novel Coronavirus. Covid-19 is caused by the servere Aculate Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) virus (Collin, et al., 2020; Castells, et al., 2020; Galvez, et al., 2021). The health ministry revealed that covid-19 is a large family of types of viruses that can cause mild to severe illness, such as flu, to serious diseases such as MERS and SARS and transmission from human to human, to human to human.

Covid-19 transmission can occur through droplets. A droplet is a liquid or saliva that comes from the nose and mouth through cleaning or coughing, even speaking. The droplets that come out then stick to objects or limbs. It is important for us to be careful and always maintain the cleanliness of both the environment and the body (Hossain, 2021; Yuniti, et al., 2020). Therefore, to avoid and prevent transmission of the virus due to droplets, it is better to always apply a healthy lifestyle that has been recommended by the Covid Task Force, namely washing hands, wearing masks, and doing social distancing. However, if you have to leave the house to do an important activity, you must apply physical distancing and use an alcohol-based antiseptic.

Cleaning of hands using antiseptic agents has been known since the early 19th century. The development of today's society, especially those who live in urban areas, requires humans with a variety of activities to move quickly and use time as efficiently as possible. The demands of such an age require humans to maintain their health in order to avoid disease in a way that cannot inhibit movement and does not reduce time efficiency. The use of antiseptics as hand sanitizer has been used since the early 19th century (Jing, et al., 2020; Tod, et al., 2010). The development of today's society, especially those who live in urban areas, requires humans with their various activities to keep moving fast and being able to use time as efficiently as possible. The demands of this age require humans to maintain their health and cleanliness in order to avoid disease in a way that does not hinder movement and does not reduce time efficiency.

The use of antiseptics is not only in gel form, but also in liquid form, which is now known as Hand Sanitizer, which is a way of life among the economic community. Various Hand Sanitizer products have begun to be found in supermarkets where their use is quite simple, only by using drops or spraying on the hands, then flattening them on the surface of the hands. However, it usually contains a lot of synthetic chemicals which are expensive and often cause problems on the hands such as dry skin, and decreased elasticity of the skin. Therefore it is important to seek antiseptic from natural materials are relatively cheap, safe, effective, and easy to obtain, but one example is Glycerol, H<sub>2</sub>O<sub>2</sub>, and distilled

In this condition, keep a healthy lifestyle is the best option because efforts to break the chain of spread of the corona virus. Making Hand Sanitizers in the form of hygienic liquid packaging from chemicals is not difficult and does not require expensive costs with the materials and equipment needed are very simple, so they are easy to produce and have economic value. This assistance needs to be carried out in the community to help increase awareness and the economy by holding training in making homemade hand sanitizers while still using WHO standards and providing socialization on the importance of implementing a healthy lifestyle (PHBS) to the Toto Katon village community. The aim of this assistance is to conduct training in making hand sanitizer in order to improve the economy and the application of healthy living during the Covid-19 pandemic.

## METHOD

The steps for the extension activities were carried out by researchers and several students at Totokaton Village, Punggur District. This assistance involved stakeholders and local residents such as the head of the RT, Mrs. PKK, the youth organization in Totokaton village, Irian village. The making of hand sanitizers made from alcohol has been recognized as being able to kill the virus. For example Alcohol, H<sub>2</sub>O<sub>2</sub> (*Hydrogen Peroxide*), Glycerol / Glycerin, and Aquades / Distilled Water. Steps: Explain the uses and advantages, as well as the disadvantages of a hand

sanitizer. The researchers explain how to make a hand sanitizer with WHO standard ingredients. And explain the benefits of making hand sanitizer homemade. Describe the ingredients used and their benefits. The basic ingredients of hand sanitizer are Alcohol 70%, Glycerol, H<sub>2</sub>O<sub>2</sub>, Aquades. The empowerment method used is in the form of asset-based development, namely *Asset Based Community Development (ABCD)* in the form of an approach and a series of strategies to identify and mobilize community assets for change. With several stages, namely as follows:

#### *Discovery (finding)*

At this stage, it is *discovery* done through interview and observation techniques. Interviews were conducted with several stakeholders in exploring existing assets in assisted locations, either from human resources assets or infrastructure. Observations were made by analyzing directly at location. Hence, in this stage it will be easy to identify the facts of the assets that are in the assisted location.

#### *Dream (dream)*

At this stage, think creatively and collectively see the future as a dream that might come true, and the mentoring team provides direction to think about what is highly valued in relation to what is most desirable. And trying to be sure with extraordinary assets will make it easier to provide assistance and socialization by the community.

#### *Design (designing)*

The process of designing is a process of mapping the dreams of the community. This planning stage aims to increase understanding in making hand sanitizers and the importance of a healthy lifestyle. Either the PKM team or researchers and community parties jointly design activities that will be carried out to equalize perceptions. So that the programs implemented and the potential that exist in the community can be developed together optimally.

#### *Define (determine)*

At this stage, *the Focus Group Discussion (FGD)*. FGD is a focused discussion of a group to discuss a particular problem, in an informal and relaxed atmosphere. In this FGD, several resource persons are invited to

#### *Destiny do(do).*

The final step is to carry out the activities that have been agreed upon to fulfill the dreams of the community in utilizing assets.

## **RESULTS AND DISCUSSION**

The extension activity for making Hand Sanitizers was carried out with the aim of providing understanding and knowledge of the community in Totokaton Village, Punggur District, especially youth or youth organizations in Totokaton Village, Irian 2 hamlet, which was published using social media youtube. This activity is also expected to improve skills through counseling on making Hand Sanitizers from natural ingredients which are relatively cheaper, safer, more effective, and easy to obtain.

A clean and healthy lifestyle can be defined as all efforts to maintain, protect, and improve the health of the body, soul, both for the public and for individuals with the aim of providing the basics for the continuation of a healthy life, as well as improving health in humanity. Indonesia is one of the countries with a growing hygiene problem. Making Hand Sanitizer is one of the alternatives in maintaining a healthy life. Hand Sanitizer is a health product that can instantly inhibit growth and kill germs without using water. Besides, this product can be used anytime and anywhere. Various types of microorganisms such as viruses

and bacteria stick to the hands every day due to physical contact with the environment which can cause various diseases such as the current pandemic, namely the covid-19 virus, which is a very dangerous virus that will kill humans if it is not helped or prevented by self-awareness when leaving the house, such as wearing a mask, maintaining a distance of 1 meter and using a hand sanitizer.

This hand sanitizer was made on February 16, 2021 at the Biology Lab, IAIN Metro campus. This activity was carried out to see the importance of using hand sanitizers in life during the current pandemic to break the chain of the spread of Covid-19 in people's lives. Although knowledge about pharmaceutical products has been known by some people, the application of this basic knowledge has not been implemented at all. The training, which is carried out online through YouTube, is expected to provide knowledge about the application of a clean and healthy lifestyle and solutions for making preparations, especially for youth youths in Totokaton village, Irian hamlet for personal health with easy-to-find materials and easy-to-get equipment and affordable prices. quite affordable.

This online training through YouTube social media begins with an explanation of the ingredients used in the manufacture of hand sanitizers, then continues with the manufacturing process and how to mix the ingredients according to the provisions of the WHO. After that, it closes by providing education to the public about how to implement a clean and healthy lifestyle. This is done so that the community does not only understand how to make antiseptics to kill viruses at hand, but also how to implement a clean and healthy lifestyle so that in prevention it can actually be used by the community.

This training begins with counseling about the benefits and contents of hand sanitizers. This is intended so that participants can find out how many benefits of using hand sanitizers and the importance of maintaining a healthy lifestyle, which can even be found in everyday life. The next stage is the manufacture of hand sanitizer products. The ideal sanitizer must have several things such as having the properties of destroying microbes, being active against the vegetative phase of bacteria, molds and yeasts. In addition, sanitizers must also be able to survive or be active even in environments that contain organic materials such as detergents, soap residue, water hardness and pH differences. To meet these standards, several previous studies had been conducted before this activity was carried out. The result is a hand sanitizer that is able to clean properly characterized by microbial testing, is stable, easy to use and non-toxic. The composition of hand sanitizer is lime juice, aloe vera, ethyl alcohol, HPMC and distilled water. Lime contains useful chemical elements such as limonene, linalin acetate, felandren and citral. Lime juice is used in the cosmetic industry as an ingredient for reducing facial pores, cleansing and refreshing.

In the currently situation, there is great hope that the standard of living of the people in Toto Katon village can be improved through this online community training activity, which can later help protect fellow families from the threat of Covid-19, one of which is by using a hand sanitizer every time they do good activities while inside and outside the home where this can prevent the transmission of covid-19. In order for the materials to be affordable by the community, 70% alcohol is used, and distilled water can be obtained from cooled boiled water, so that the water is sterile. How to make a 125 ml dose of handsanitizer.

1. Mix all ingredients, namely 110 ml of 70% alcohol, as much as H2O2, 14ml of Aquades, 3ml of lime juice and Glycerol.

2. Stir the handsanitizer candidate liquid for about 15-20 minutes so that all ingredients are evenly mixed.
3. Pour the handsanitizer into the spray bottle using a funnel so it doesn't spill.
4. Leave it for 65 hours before using the hand sanitizer.

After the series of product manufacturing is complete, participants can immediately experience the products that have been made so that the training will really benefit. In addition, the products that have been made are packaged in a simple form and can be used both at home and on trips by the participants. This is in accordance with the expected output, namely in the form of a product that can be made in a simple way and at a fairly low cost.

At the marketing stage, this activity also optimizes the use of social media such as Instagram, Facebook and Whatassap Business in marketing its products. The training on the use of social media also had an impact on the participation of the beneficiaries, because the beneficiaries had felt new and efficient things. Three weeks of marketing activities were carried out by sharing, posting hand sanitizer products, both sharing through work forces to utilization through advertisements on Facebook or Instagram.

This finding are reinforced by several previous findings, such as Setiawati, S., & Ramdhania, KF (2020) and Nugraha, A. (2020) that community service activities are considered to have positive effects on the people of Sukaraja Village, Tambelang sub-district, Bekasi district, seen from The enthusiasm of the Village community in receiving pamphlets as a source of very useful information for them, namely about how to use existing gadgets to increase knowledge, especially regarding cleanliness, COVID-19, and the production of hand sanitizers and hand soap. Efendi, APP, Sholikah, N ., & Ismawati, R. (2020) explained that mentoring provides business opportunities by making home products, such as hand sanitizers that are beneficial to residents. This innovative product also answers the needs of the community for scarcity and soaring prices for hand sanitizers. As for the shortcomings of this product, it is necessary to carry out a stability test to determine a safe shelf life so that it can still be used as a sanitizer (Noval et al., 2020). But apart from that the products are still needed by the community due to pandemic conditions, plus the scarcity of hand sanitizer products.

## CONCLUSION

This collecting activity has an impact on citizen turnover and understands the importance of maintaining a healthy lifestyle. and healthy is one part of the way to protect and efforts to break the chain of the spread of covid-19 because of that these microorganisms need to be destroyed or inhibited their development by cleaning hands using soap and running water. If clean water is not available and precautions must be taken, a supply of hand sanitizer that contains alcohol can be used to protect against these bacteria known as *hand sanitizers*. Hand sanitizer that has benefits to inhibit growth and is able to kill bacteria. This mentoring activity optimizes social media in marketing its products, so that residents are active in using social media for product selling activities. Hence, people can acquire the skills and greater benefits, it is necessary to the holding of guidance, counseling and training directly and regularly with different products, so it is expected that people have the skills vary and can develop their knowledge to be self-employed with a product that has been developed



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