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Optimization of Environmental Cleanliness Through Preventive Measures Against Covid 19 by Self-Spraying in Cikarawang Village

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ABSTRACT

Covid-19 is a virus that attacks the respiratory system and can be transmitted through touch. To reduce the transmission of COVID-19, KKN UIKA Cikarawang Village carried out various environmental optimization activities as well as preventive activities against COVID-19. One of the activities is spraying disinfectants around the village. The method used is licensing to the village for the implementation of disinfectant spraying around the village, the next is to give a warning to residents with posters and then make disinfectants, and the last is the implementation of spraying. The last stage is evaluation, the implementation team conducts discussions with the village head regarding activities that have been carried out to prevent COVID-19 and optimize the environment in Cikarawang village. The results showed the conclusion that the community gave a positive response to this activity and hoped to make disinfectants correctly independently.

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INTRODUCTION

In the context of Higher Education, this community service is outlined in the form of Real Work Lectures (KKN). KKN is carried out by students with a cross-scientific and sectoral approach at certain times and regions in Indonesia. Students of Ibnu Khaldun University conducted community service activities in RW 7 Cikarawang Village, Dramaga District, Bogor Regency, West Java Province. In the 2021 KKN of Ibn Khaldun University, there is a pattern of service or what is called village development. This is due to the Corona Virus Disease 2019 (Covid-19) pandemic.

According to WHO Global data, 224 countries confirmed 225,024,781 died, 4,636,153. In Indonesia, the number of Positive 4,174,216 Recovered 3,942,473 Died 139,415 The latest news is in September 2021. According to data from the Covid-19 Handling Task Force, the highest addition was in West Java with 346 cases, while Covid-19 patients who were declared cured increased by 14,633 people, bringing the number to 3,968,152 people. Bogor City's daily COVID-19 data Wednesday, September 15, 2021, recorded the accumulated number of recovered patients as many as 36,562 cases, an increase of 20,331 cases from the beginning of PPKM, which was 16,231 cases. Data on COVID cases in Cikarawang Village there are 20 positive people, In the latest news in September 15 people were declared cured.

Covid-19 is a virus that attacks the respiratory system and can be transmitted through touch. To reduce the transmission of COVID-19, KKN UIKA Cikarawang Village carried out various control activities. One of the activities is spraying disinfectants around the village. Various efforts made by the government to prevent the spread of the virus include urging the public to remain calm, keep their distance, work from home (WFH), and always maintain the cleanliness of the body and environment. Among them are the habit of washing hands, using hand sanitizers, or cleaning with disinfectant liquids. Previously, people were enthusiastic about making their hand sanitizers because the price rose dramatically. In addition, one of the formulas that can be made independently is a disinfectant. Always maintaining the cleanliness of the environment and especially oneself is one form of preventing the spread and transmission of COVID-19. Several ways can be used to prevent transmission of COVID-19, one of which is not traveling to virus pandemic areas, running PHBS, washing hands after traveling out of the house, and spraying disinfectant liquid on items that are at risk of transmitting the virus.

The use of Disinfectants and Antiseptics can maintain personal and environmental hygiene. Anti-septic contains anilides, chlorhexidine, and alcohol which are substances that can inhibit the development of microorganisms without having to kill these microorganisms in living tissue. Disinfectants are substances that can kill pathogens in the environment. Glutaraldehyde and formaldehyde are substances contained in disinfectants. Previously medical personnel were responsible for the use of these substances in hospitals, but now, even at home, they will often be used. Various research results have been conducted to show that the use of disinfectants and antiseptics can kill viruses effectively. However, distance restrictions between patients and carriers must still be carried out to prevent increased transmission

A disinfectant is a cleaning liquid generally made from hydrogen peroxide, creosote, or alcohol that aims to kill bacteria, viruses, germs, and other harmful microorganisms found on rooms or surfaces of inanimate objects. Disinfectants are usually used to clean the surfaces of objects that are most often touched by many people. For example, door handles, tables, chairs, sink faucets, cabinets, and others. Disinfectants also contain high concentrations of biocides. Therefore, disinfectants are more effective in preventing the emergence of bacteria and microorganisms on the surface of any inanimate object, which mediates exposure to viral infections or harmful bacteria when inhaled or touched by humans. To make our disinfectant at home, we can buy the main disinfectant ingredient which is a household cleaning product. The recommended type of disinfectant is bleach liquid containing sodium hypochlorite or carbolic cleaning fluid containing benzalkonium chloride.

According to dr. Fadli's website (2020), several types of disinfectants are proven effective in killing viruses and bacteria on wood surfaces, floors, walls, iron, glass, and the surrounding environment. In addition, economical prices with variations and raw materials that are quite a lot cause disinfectants to be the main choice for spraying the surrounding environment compared to using hand sanitizers or similar materials. This disinfectant spraying work program is useful in anticipating the spread of the Covid-19 virus. In addition, this activity is expected to provide comfort to the people of Cikarawang village in carrying out outdoor activities.

The background of the problem is that village officials and the community have not understood the mechanism for making disinfectants effectively to prevent the spread of the COVID-19 virus that is currently spreading, around people's homes rarely sterilized with disinfectant liquids, from the local RT and RW governments have not sprayed disinfectants independently.

The purpose of this community service activity is to provide knowledge, especially to local RT and RW government officials and the people of Cikarawang Village to understand the mechanism. Making disinfectants properly and correctly, it is also hoped that the implementation of this disinfectant spraying can help the village literally in anticipating the outbreak of the COVID-19 virus. Therefore, our KKN group always urges local RT and RW officials to spray independently to residents, especially in RW 7 Cikarawang Village.

METHOD

The method used in this KKN consists of 4 stages. First, the group team surveyed Cikarawang Village to coordinate with related village parties, approximately what the village has not done to prevent COVID-19 19 along with environmental optimization so that there is no transmission and a Covid-19-free environment. The second stage is to prepare media such as posters to urge the public how to make disinfectants independently at home accompanied by RT officials and residents then pasted in each resident's house or postkamling facility. The third stage is the KKN group team carrying out independent spraying activities around outside the house in RW 7.

Disinfectant spraying itself has 5 stages, namely: licensing to the village for the implementation of disinfectant spraying around the village, then giving an appeal in the form of posters which are then pasted to residents' homes and public facilities, making disinfectants, the last is the implementation of spraying. The last stage is evaluation, the implementation team discusses with the village head regarding activities that have been

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carried out to prevent COVID-19 and optimize the environment in Cikarawang Village. Local officials gave impressions and suggestions on the implementation of this disinfectant spraying service activity. The purpose of the discussion with local government officials in Cikarawang Village is as a benchmark for the success of community service activities so that later it can be a reference for other similar activities. To increase the potential success of this community service activity, supporting factors are needed. The first supporting factor is the contribution of the village head and Cikarawang villagers in helping to realize the activity program. The second supporting factor is the realization of cooperation between all members of the community service group in carrying out activities ranging from site surveys and coordination with village heads, making media in implementing activities to reporting the results of community service activities.

LITERATUR REVIEW

The literature review in this article uses the keyword Independent Disinfectant Spraying found 1,250 (0.04 sec) articles, for the Bogor region there were 156 article results in 2021 and the author used 5 articles as writing references.

No	Author Name	Research Title	Year	Result
1	Musafira, dkk	Education on Making and Spraying Disinfectants to the Community in Suruang Village, Campalagian District, Polewali Mandar Regency	2020	Thus, in making disinfectants from this floor cleaning liquid, it is recommended that the ratio is not much different between cleaning fluid and water. In the dosage, 10 bottle caps of floor cleaning liquid are diluted with 1 liter of water.
2.	Leni Krisnawati and Alean Kistiani Hegy Suryana 2	Disinfectant spraying as a preventive measure against the transmission of the Codid-19 virus in Genting Hamlet, CepogoBoyolali	2021	The results of the training conducted at the location, it was obtained that the people who attended this activity could understand the brief material we provided and receive well the information/knowledge we provided. In addition, during this service activity, there was a positive response from the community.
3	Physics Ishlahiya Churaez, dkk	Making and Spraying Disinfectants: Covid-19 Edition KKN Activities in Bringin Village, Malang	2020	Disinfectant spraying should be carried out regularly. Spraying is also only done on hard objects, especially on objects that are often touched by many people such as light switches, door handles, or any equipment
4.	Costly Ifada, dkk	Optimization of Disinfectant Spraying Activities and Distribution of Masks as an Effort to Prevent Covid-19 Transmission	2021	Activities to optimize the role of students as one of the elements of society as a form of support for local government efforts in dealing with the Covid-19 pandemic which were carried out next were donations of medical equipment in the form of masks
5	Tantri Chaerunnisa, dkk	Manufacture and spraying of disinfectant liquids to prevent the spread of Covid-19	2020	Disinfectant spraying in Budur Village, Ciwaringin District, Cirebon Regency. Disinfectants are part of the decontamination process which is one of the factors guaranteeing sterilization.

RESULTS AND DISCUSSION

Disinfectant is part of the decontamination process which is one of the factors guaranteeing sterilization. Disinfectants contain glutaraldehyde and formaldehyde. The use of these substances can be used not only in hospitals but at home will often be used to eliminate the virus. This is done by the Real Work Lecture Team of Ibnu Khaldun University Bogor to reduce or eliminate the spread of the virus. UIKA 2021 KKN's dedication to this pandemic is one way to eliminate COVID-19 by spraying disinfectants. This spraying was carried out in Cikarawang Village, Bogor Regency with three hamlets in the village. The spraying activity is carried out through five stages, namely the licensing stage, giving appeals, making disinfectants, procedures for use, and implementing spraying.

The activity was carried out on September 21, 2021, the result of the activity was that 20 liters of disinfectant liquid was used to spray the houses of RT 03 RW 07 residents of Cikarawang Village, Dramaga District, Bogor Regency as many as 50 houses. The implementation of disinfectant spraying activities was carried out by the KKN team and accompanied by 2 residents to get around. The spraying started from the house of the chairman of RT 03 RW 07 and then continued to the houses of other residents. The spraying process in residents' homes is carried out on the outside (yard) and around the terrace of the house while spraying for mosques, poskamling, and other public facilities is carried out as a whole to the room. The response from the community is very grateful and has high enthusiasm for these kinds of activities. The implementation of this activity has an impact in that the community can increase public awareness of the COVID-19 pandemic and raise awareness to pay more attention together to pay more attention to cleanliness and sterilization around the house and inside the house.

A. The first stage is licensing

Figure 1. Cikarawang Village Head

Figure 2. Chairman of RW 07

Figure 3. Chairman of RT 02

Figure 4. Chairman of RT 03

The results of permits carried out to local officials, especially in the RW 07 area regarding the disinfectant spraying program independently, received a positive response and were very supportive of this activity. Local RT officials provided loans for manual sprayer tools to carry out disinfectant spraying in residents' homes, especially in RT 03.

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B. The second stage is to give an appeal

Giving an appeal to residents on how to make disinfectants independently by attaching posters to residents' homes in the RT 03 RW 07 area. The poster pasting process was carried out with as many as 20 posters and accompanied by the head of RT 03 and 1 resident, posters were pasted in front of residents' homes and public facilities such as poskamling and mosques.

Figure 5. Pasting Posters

Figure 6.Front of Residents' Houses

Figure 7. Poskamling

Figure 8. Mr. RT 03 and residents

Figure 9. Disinfectant Poster

Figure 10. Front of Residents' Houses

People who do not know about the ingredients for making disinfectant liquids, how to spray, and the dosage. From the results of this activity, the community became more aware and understanding of disinfectant liquids with material provided through poster media posted in front of residents' homes and public facilities. During the activity, the community gave a positive response and was very grateful for the activities and education delivered.

C. The Third Stage of How to Make a Synphenant

1. Material

Picture 11. Wipol 20cc

Picture 12. Bayclin 20cc

Table 1. List of Raw Material Costs, Quantities, and Prices

Types of Raw Materials	Unit	Unit Cost (Rp)	Amount (Rp)
Wipol 20 cc	5	10.000	50.000
Bayclin 20cc	5	10.000	50.000
APD Hazmat White	1	30.000	30.000
Sum			130.000

2. Manufacturing Procedures

1.Put Wipol into the spraying place as much as 20cc (or measured as many as 4 bottle caps)
2.Enter Bayclin 20cc (or measure as many as 2 bottle caps)
3.Then put water as much as 960cc (or add water up to 1liter)
4.Then sprayed or rubbed on the floor or objects. The contact time required is at least 1 minute.

Figure 13.Wipol

Figure 14.Bayclin

Figure 15.Water

Thus, in making disinfectants from this floor cleaning liquid, it is recommended that the ratio is not much different between cleaning fluid and water. In the dosage, 10 bottle caps of floor cleaning liquid are diluted with 1 liter of water.

3. Fourth Stage of Usage Procedures
   a. Use disposable gloves and a mask when cleaning surfaces to avoid direct exposure to viruses or bacteria. Stay away from direct contact with disinfectant fluids with skin and eyes.
   b. If the surface of the object is too dirty, you should clean it by washing or brushing it using detergent soap and hot water first. If the surface of the object appears clean, immediately spray the disinfectant solution.
   c. You can spray the disinfectant solution directly on the surface of a hard object, then wait for 5 minutes. Then, wipe it and let it air dry for a few minutes.

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4. The fifth stage of independent spraying in RW 7

Figure 16. Spraying into people's homes and public facilities

Figure 17.Spraying to the homes of RT 03 RW 07 residents

The results of this activity are research according to Fiza Ishlahiyya Churaez, et al (2020) that disinfectant spraying should be carried out regularly. Spraying is also only done on hard objects, especially on objects that are often touched by many people such as light switches, door handles, or any equipment.

CONCLUSION

From the results of the implementation of service activities, it can be concluded that the community gives a positive response to this activity and hopes to make disinfectants correctly independently. Disinfectant spraying in Cikarawang Village, Dramaga District, Bogor Regency. Disinfectant is part of the decontamination process which is one of the factors guaranteeing sterilization from the Covid 19 virus.

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Author Contributions

The first author conducts activities in the field and compiles articles from beginning to end which include collecting library data, preparing draft manuscripts, and organizing community service activities.

The second author plays a role in directing and designing activities as well as the final alignment of manuscripts and providing corrections in the preparation of articles from beginning to end.

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