

Educating SMAN 97 Jakarta Teachers About the Consumption of Herbs and Vitamin C During the COVID-19 Pandemic

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Abstract Self-medication, with both herbs and vitamin C, is the community's choice in dealing with the COVID-19 pandemic. Herbs are believed to have many properties that have been tested historically and empirically. Meanwhile, vitamin C has been shown to be clearly able to boost the body's immune system. Teachers, as the vanguard in educating the education of the nation's successors, have a very large role in the progress of the Indonesian nation. Teacher health is essential in shaping a dynamic learning process, especially during the COVID-19 pandemic. The purpose of this Community Service activity is to provide education related to knowledge and understanding of the consumption of herbs and vitamin C to prevent the occurrence of adverse drug reactions, especially in teachers of SMAN 97 Jakarta who self-study herbal herbs and vitamin C during the COVID-19 pandemic. This method of Community Service activities is carried out through interactive webinars online. A pretest and posttest will measure the participant's knowledge before and after counselling. The results obtained in the implementation of community service activities, namely the knowledge and understanding of SMAN 97 Jakarta teachers on the consumption of herbs and vitamin C during the COVID-19 pandemic, increased by an average of 25 points after exposure to the material.

1. INTRODUCTION

Since COVID-19 cases were first reported in Wuhan City in December 2019, COVID-19 cases have continued to increase worldwide rapidly. SARS-CoV-2 was identified as the cause of COVID-19 disease. On the way, SARS-CoV-2 can modulate the immune system of its host cells. The incubation period of SARS-CoV-2 is about 14 days, with symptoms about 4-5 days after infection, although there are also no cases of symptoms. Common symptoms experienced by COVID-19 sufferers include fever, cough, myalgia, fatigue, diarrhea, and coagulopathy (World Health Organization, 2020; Nalamwar & Kosalge, 2021).

About 65 countries have been affected by the COVID-19 pandemic, including Indonesia. Based on the latest October 2021 data from the task force to accelerate the handling of COVID-19, as many as four million people were confirmed COVID-19, with 96.2% declared cured.

The recovery rate is improving due to the role of online information media that is easily accessible to the public so that the public can be educated quickly. Information about herbs and vitamins is one of them. This is supported by the World Health Organization (WHO) and the Ministry of Health's advice to encourage people to consume herbs and vitamins to increase immunity (World Health Organization, 2020). Does the public seek the most information during a pandemic?

Self-research, both with herbs and chemical supplements, is the choice of the public in dealing with the COVID-19 pandemic. In self-management, the community needs integrated guidelines so that there is no medication error due to the limited public knowledge of the drug and its use (Onchonga et al., 2020). The results explained that there was a 24.2% increase in people who self-identified

during the pandemic. Self-sufficiency is done as an adaptation of society in pandemic conditions (Palikhey et al., 2021; Rafiq et al., 2021).

During pandemics, the use of herbs as an enhancer of the immune system increases. This is due to its various properties that have been tested historically and empirically. Traditional herbs derived from plants or called herbs, can come from roots, stems, leaves, flowers, and fruits of Indonesian plants that have the potential as antivirals in inhibiting COVID-19, including red ginger, turmeric, temulawak, green tea, meniran, salam, guava, cloves, and garlic (Widaryanti et al., 2021). In addition, some studies also explain herbs that can improve the immune system, including turmeric, ginger, kencur, cinnamon lemongrass, and cloves (Krisnawan et al., 2021).

Vitamin C is the most supplement consumed by people independently during the pandemic (Palikhey et al., 2021; Sadio et al., 2021). The reason for vitamin C consumption, by 91%, is to maintain health (Suryani & Thobari, 2015). Vitamin C can activate the body's immune system so that it can help fight the COVID-19 virus. Among others, about 50 mg/day for children, 90 mg/day for adult men, 75 mg/day for adult women, 10 mg/day for pregnant women, and 45 mg/day for nursing mothers (Kementerian Kesehatan Republik Indonesia, 2019). Excess vitamin C metabolism will be excreted through the kidneys in the form of urine. The results explained that the consumption of vitamin C with a dose of 1000 mg/day in urine contains oxalate crystals higher than the consumption of vitamin C \leq 200 mg/day. Consumption of 2000 mg/day of vitamin C is associated with increased oxalate crystals in the urine or hyperoxaluria (Padayatty & Levine, 2016). Therefore, the consumption of vitamin C as a daily consumption should be an important concern for the public to benefit the body.

Rational use of drugs, by referring to correct and appropriate use, is one of the programs of the Ministry of Health in supporting the achievement of the Millennium Development Goals (MDGs). Practically, the use of drugs is said to be rational if it meets the criteria, among others, the right diagnosis, appropriate indication of disease, right selection of drugs, appropriate dosage, appropriate way of administration, appropriate time of administration, appropriate length of administration, alert side effects, appropriate assessment of patient condition, appropriate information on follow-up and appropriate delivery of drugs. SMAN 97 Jakarta, one of the public schools located on Jalan Brigif 2 Ciganjur, Jagakarsa District, South Jakarta City, has a total of 57 teachers to be able to teach students as many as 961 students in 26 classes. It can be concluded that the ratio of teachers to students who are educated is 16.86, or it can be interpreted that one teacher is responsible for teaching about 16 to 17 students (Tim Dapodikbud, 2021). Various educational demands and learning models during the COVID-19 pandemic become challenges teachers must face, so the consumption of herbs and supplements such as vitamin C becomes important. But the limitations of public knowledge about herbs and vitamin C in terms of processing or consuming independently or through self-

study during the COVID-19 pandemic.

2. METHOD

Participants of this community service activity are teachers of SMAN 97 Jakarta school. This activity was carried out online and attended by their respective participants on Monday, December 13, 2021, for 3 hours, from 09:00 WIB to 12:00 WIB. This activity uses an online interactive extension method through the zoom meeting application. Interactive counseling contains material exposure followed by material Q&A. Evaluation of material knowledge and understanding of herbal and vitamin C consumption during the COVID-19 pandemic is measured through a pretest and posttest.

3. RESULT AND DISCUSSION

3.1 Community service program

Community service activities ran smoothly on Monday, December 13, 2021. The event opened with a speech from the chief executive of Mrs. Febrial Hikmah, S.Si., M.Biomed. and principal of SMAN 97 Jakarta Mrs. Dwi Harmelia, S.Pd., M.Biomed. A total of 46 participants participated in this activity online, both the teacher council and staff of SMAN 97 Jakarta. The presentation of material from the first source by Mrs. Nur Hasanah, S.Si., M.Si. about herbs was then continued with an interactive discussion. The second material presentation was by Mr. Apt. Agung Dewantoro, M.Farm. Vitamin C was followed by an interactive discussion by participants. Participants ask directly or through the zoom comment field.

Providing education in the form of interactive online counselling methods can provide one solution to increase knowledge and understanding of the consumption of herbs and vitamin C during the COVID-19 pandemic (Figure 1). The material presented by the source, among others, the definition, various types of herbal medicinal properties, how to make the herb itself, the right dose of consumption based on the state of consumption, and research that supports the exposure of herbal medicine, of course. While in the explanation of vitamin C, the source explained the definition, properties or characteristics of vitamin C, the processing of vitamin C in the body, side effects if consumed under certain conditions, the right way of storage

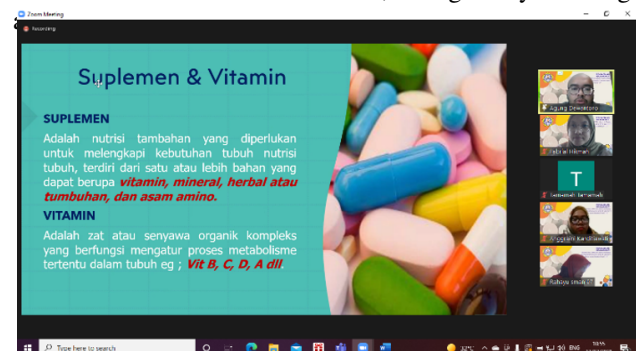


Figure 1 . Exposure of material by the speaker in the activity

3.2 Question-and-answer session

Some of the questions in the zoom comment field that we have summarized, among others: From Questioner 1 to Everyone 09:45 AM "Assalamualaikum Mrs. Nur, I want to ask why people who have COVID-19 still like to limp suddenly. My child was affected by COVID-19 in July 2021. What to do if you have a sudden limp? Please explain. Thanks" From Questioner 2 to Everyone 10:01 AM "Assalamualaikum Mrs. Nur, I want to ask some questions:

1. Drugs that have gone viral are prescribed by some doctors as an anti-inflammatory when someone is exposed to COVID-19. Is there indeed research or just an effort from doctors? For example, azithromycin or a steroid-like drug? Because I used to be prescribed these drugs.
2. I also had time to consume qusthul hindi. Does the herb also have research results to prevent COVID-19 inflammation, especially in the lungs? Thanks in advance."

From Questioner 3 to Everyone 10:28 AM "How effective is the duration of time if we take herbal remedies? Because what I see new types of plants that are able to treat various diseases?" And how to know the composition of herbal remedies and how to process them. From Questioner 4 to Everyone 11:21 AM "Sir, if you are 50 years old and above, whether we need fish oil supplements to maintain a body condition that begins to wear out?" From Questioner 5 to Everyone 11:37 AM "Pack gamat gel supplements capsule shape is good for bones?" Each source selects the best participants based on questions and interactions during the discussion. Both get exciting prizes from the committee. Knowledge and understanding of the participants' herbal and vitamin C consumption were evaluated as one of the benchmarks for the success of the activity. From the data, participants experienced increased knowledge and understanding of herbal and vitamin C consumption after education, with the average quiz score before exposure to 60 to 85 after exposure to the material. The average increase in participants is 25 points. Quiz questions tested include:

1. The term herbal is devoted to traditional medicine derived from plants
2. Herbs have proven effective in curing Covid-19 disease
3. Ginger is a herb that can relieve coughing
4. Herbs such as herbal medicine are safe to consume every day
5. Herbs should not be consumed in conjunction with chemical drugs
6. Take vitamin C supplements to increase endurance
7. Consumption of vitamin C supplements is effective when sick
8. Take vitamin C supplements well before meals

9. Take vitamin C supplements, preferably with a dose of >1000 mg/day
10. Storage of vitamin C supplements is good at room temperature

Participants were also asked to respond to this Community Service activity which resulted in 90% of participants giving excellent grades and 10% of participants rated well. Participants expect this activity to continue with other health themes. Summarize some of the theme suggestions for future activities, including balanced nutrition, healthy lifestyle and food, vaccines, mental health issues, how to mix herbal remedies and composition that is good and appropriate according to the needs of each body, healthy materials students, maintaining health for toddlers in pandemic times, preventing inherited diseases for the next generation, maintaining eye health from radiation gadgets, disease prevention. Lastly, the symbolic handover of gifts, certificates, and mementoes from the committee to SMAN 97 Jakarta (Figure 2).



Figure 2 . Activity certificates

4. CONCLUSION

The implementation of community service activities is running well and smoothly. Knowledge and understanding of SMAN 97 Jakarta teachers on the consumption of herbs and vitamin C during the COVID-19 pandemic increased after exposure to the material.

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CONFLICT OF INTERESTS

This statement is to state that all authors have agreed to the manuscript submitted. We certify that this article is the authors's original work, has not been previously published and is not being consider for publication elsewhere. The author will be fully responsible for the content of the

manuscript from beginning, revision until the final stage of being ready for publication.

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