

Education on The Use of Herbal Medicines for The Prevention and Treatment of Covid-19

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ABSTRACT

To date, the Coronavirus disease-19 (Covid-19) pandemic is still occurs and there has not been found a satisfactory specific treatment to treat Covid-19. Some medicinal plants are known to increase body endurance and are useful for maintaining health during a pandemic. This community service activity aims to provide education in an effort to increase public knowledge about the use of herbal medicines for the prevention and treatment of Covid-19. The method used is a webinar with three presentation materials that are myths and facts about the use of herbal medicines for Covid-19, is it safe to consume herbal medicines and classification of herbal medicines based on scientific evidence. In this activity, participants were also given a questionnaire to determine the knowledge of the webinar participants about herbal medicine. The results of the questionnaire showed that most of the webinar participants consumed herbal medicines (84%) with the aim of maintaining health. Meanwhile, the most widely consumed type of herbal medicine was jamu (42.8%) and the most widely used medicinal plant was ginger (50.36%). Most of the participants in the webinar (60%) believe in the safety of herbal medicines. In conclusion, public knowledge about the use of herbal medicines and their safety needs to be improved.

Key words: Education, herbal, covid-19

INTRODUCTION

In December 2019, the city of Wuhan became the epicenter of a highly virulent pneumonia disease with no known cause. Chinese scientists have succeeded in isolating severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from the pneumonia patient in January 2020. The World Health Organization (WHO) announced a pandemic on January 30, 2020 and later named SAR-CoV-2 as coronavirus disease 2019 (Covid-19) (Salvi and Patankar, 2020).

Traditional health service is one of the various activities in health efforts based on Law No. 36 of 2009 concerning Health. The Ministry of Health has established a formulary for Indonesian traditional medicinal ingredients (FROTI) through the Decree of the Minister of Health No. HK.01.07/Menkes/187/2017. The use of the ingredients in FROTI is directed to maintain health and help reduce complaints suffered (Kemenkes, 2020).

In order to empower and encourage the active role of the community in efforts to develop traditional health, it is necessary to direct the community to carry out health care independently and correctly through the use of medicinal plants as traditional medicines in the form of herbal medicine, standardized herbal medicine (OHT) and phytopharmaceuticals. The use of these traditional medicines is an effort for health maintenance, disease prevention and health care, including during the Public Health Emergency or the Covid-19 National Disaster (Kemenkes, 2020).

At the beginning of this corona virus entering Indonesia, there was a lot of information circulating in the community that empon-empon could cure Covid-19. Several studies have shown that the combination therapy of herbal medicine with modern medicine shows a significant effect and supports the potential role of herbal medicine in treating Covid-19. However clinical trials with good methods are needed to further validate the effectiveness and side effects of herbal medicines in the treatment of Covid-19 (Ang et al., 2020).

In addition, the public also believes that herbal medicines are safe for consumption, even though this statement is not entirely true. Hence socialization and education are needed regarding the use of herbal medicines for the prevention and treatment of Covid-19. This

community service activity aims to provide education on the use of herbal medicines for the prevention and treatment of Covid-19.

METHOD

Community service was carried out in the form of a webinar that presented three speakers, each of whom presented material on myths and facts about herbal medicines for the prevention and treatment of Covid-19, the safety of using herbal medicines, and the classification of herbal medicines based on scientific evidence. During the webinar, participants filled out a questionnaire containing a survey about the habit of consuming herbal medicines through a google form.

The questionnaire consists of 13 questions, that are the identity of the webinar participants (name, age, gender, and occupation), habits of consuming herbal medicines (frequency, how to take herbal medicines, types of herbs used, purpose of taking herbal medicines and categories of herbs consumed), and questions about sources of information about herbal medicines and the safety of herbal medicines. The data obtained are presented descriptively in percentages.

RESULTS

An educational webinar on the use of herbs for the prevention and treatment of Covid-19 for residents of the Universitas Jenderal Achmad Yani (Unjani) campus was held on October 30, 2021. Initially the webinar was intended for residents of the Unjani campus but was later expanded to the general public. The webinar was attended by 72 participants from various backgrounds (Figure 1). During the webinar, participants filled out a questionnaire containing a survey about the habit of consuming herbal medicines. There were 50 participants who filled out the questionnaire, most of whom were female (76%) with the highest age range being 40-50 years (20%). Most of the participants occupation in the webinar are lecturers (48%). The characteristics of the webinar participants presented in Table 1.

The survey results showed that 84% of webinar participants took herbal medicines, although most (30.9%) used them occasionally. Of the eight (16%) participants who did not take herbal medicines, five people reasoned that they did not like it. Almost all webinar participants who consume herbal medicines aim to maintain health (97.6%). Most of the webinar participants bought ready-made herbs (57.2%) and the most herbal category consumed by webinar participants was jamu (42.8%) then standardized herbal medicine (28.6%) (Table 2). Whereas the most consumed types of herbs were turmeric and ginger (Table 3).

Sources of information about herbal medicines were obtained from electronic media (38%), printed media (32%) and from friends or relatives (30%) (Figure 2). As for the safety of herbal medicines, most (60%) of the webinar participants believe in the safety of herbal medicines (Figure 3).

DISCUSSION

The results of a survey regarding the use of herbs in webinar participants were much higher than those of 2010 Basic Health Research (Riskesdas) which showed that the percentage of the Indonesian population who had ever consumed herbal medicine was 59.12% (Minister of Health of the Republic of Indonesia, 2016).

The aim of the webinar participants is to consume herbs mostly to maintain health. This is in accordance with a circular from the Ministry of Health of the Republic of Indonesia regarding the use of traditional medicine for health maintenance, disease prevention and health care (Kemenkes, 2020). Traditional medicine such as Traditional Chinese medicine (TCM) and Ayurvedha is believed to be useful for the treatment of Covid-19 and has been shown to prevent viral infections including influenza, SARS, and H1N1 (Liu et al., 2015; Syamsu et al., 2021). Jamu which is a traditional Indonesian medicine is also expected to have the same potential, but reports of the use of jamu for Covid-19 are very limited (Hartanti et al., 2020).

The jamu formula claimed for the treatment of Covid 19 in Indonesia is Herbavid-19 (Hartanti et al., 2020). However, the use of jamu is not included in the Covid-19 Management Guidelines,

but the guidelines recommend the use of phytopharmaceuticals and Original Indonesian Modern Medicines (OMAI) registered with the Food and Drug Supervisory Agency (BPOM) as supportive treatment for asymptomatic Covid-19 sufferers (Burhan et al., 2020). This is probably due to the lack of scientific evidence for some medicinal plants and herbal medicines consumed by the Indonesian people to protect against viruses. Based on the level of evidence of efficacy, the requirements of the raw materials used, and their utilization, Indonesian herbal medicines are grouped into three groups, namely: jamu, standardized herbal medicines, and phytopharmaceuticals (Yuslianti et al., 2016).

The most widely consumed herbal plants are turmeric and ginger. This result is not much different from data from Riskesdas 2010 which shows that the most consumed types of herbal plants are ginger (50.36%), followed by kencur (48.77%), temulawak (39.65%), meniran (13, 93%) and pace (11.17%) (Menteri Kesehatan Republik Indonesia, 2016). Herbal plants contain phytochemical compounds including flavonoids and many others which are believed to be able to damage components in SARS-CoV-2 so that they are unable to invade their host (Syamsu et al., 2021).

Sources of information about herbal medicines were obtained from electronic media (38%), printed media (32%) and from friends or relatives (30%) (Figure 2). As for the safety of herbal medicines, most of the webinar participants believe in the safety of herbal medicines. Along with the significant increase in the use of herbal medicines worldwide, the safety of herbal medicines has been highlighted. Currently there is a misunderstanding about the safety of herbal medicine. People assume that herbal medicine comes from nature and has no side effects so that it can be consumed in the long term. In fact, herbal medicines are not completely free from possible toxicity or side effects (Zhang et al., 2015). Therefore, to ensure the safety of the use of herbal medicinal products, BPOM has issued regulation number 32 of 2019 concerning the safety and quality requirements of traditional medicines (BPOM RI, 2019). Herbal medicine regulations are needed to standardize and strengthen on a global scale so as to guarantee safe and quality herbal medicines (Ekor, 2014). Through education, it is hoped that it can increase public knowledge, especially about the use of herbal medicines for the treatment and prevention of Covid 19 (Nurdiana, Marlina and Adityasning, 2021).

CONCLUSIONS AND RECOMMENDATIONS

Most of the participants in the webinar consume herbal medicines with the aim of maintaining health. Webinar participants also generally assume that herbal medicines are safe. As a suggestion, it is necessary to educate the wider community about the use of herbal medicines.

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REFERENCES

- Ang, L. et al. (2020), Herbal medicine for the treatment of coronavirus disease 2019 (COVID-19): A systematic review and meta-analysis of randomized controlled trials, *Journal of Clinical Medicine*, 9(5), pp. 1–20. doi: 10.3390/jcm9051583.
- BPOM RI (2019), *Persyaratan Keamanan dan Mutu Tradisional*, BPOM RI, pp. 1–16.
- Burhan, E. et al. (2020) *Pedoman Tatalaksana Covid-19*.
- Ekor, M. (2014), The growing use of herbal medicines: Issues relating to adverse reactions and challenges in monitoring safety, *Frontiers in Neurology*, 4 JAN(January), pp. 1–10. doi: 10.3389/fphar.2013.00177.
- Hartanti, D. et al. (2020), The Potential Roles of Jamu for COVID-19: A Learn from the Traditional Chinese Medicine, *Pharmaceutical Sciences and Research*, 7(4), pp. 12–22. doi: 10.7454/psr.v7i4.1083.
- Kemkes (2020), *Pemanfaatan Obat Tradisional Untuk Pemeliharaan Kesehatan, Pencegahan*

Penyakit, dan Perawatan Kesehatan.

- Liu, L.-S. et al. (2015), The Effects and Mechanism of Yinqiao Powder on Upper Respiratory Tract Infection, *International Journal of Biotechnology for Wellness Industries*, 4(2), pp. 57–60. doi: 10.6000/1927-3037.2015.04.02.2.
- Menteri Kesehatan Republik Indonesia (2016), *Formularium Obat Herbal Asli Indonesia*, Peraturan Menteri Kesehatan Republik Indonesia, pp. 1–225.
- Nurdiana, A., Marlina, R. and Adityasning, W. (2021), Berantas Hoax Seputar Vaksin Covid-19 Melalui Kegiatan Edukasi dan Sosialisasi Vaksin Covid-19', *ABDIMAS: Jurnal Pengabdian Masyarakat*, 4(1), pp. 489–495. doi: 10.35568/abdimas.v4i1.1175.
- Salvi, R. and Patankar, P. (2020), Emerging pharmacotherapies for COVID-19', *Biomedicine & Pharmacotherapy*. Elsevier, 128(May), pp. 1–6. doi: 10.1016/j.biopha.2020.110267.
- Syamsu, R. F. et al. (2021), Herbal yang Berpotensi sebagai Antivirus pada Covid-19, *Molucca Medica*, 1(April), pp. 76–85.
- Yuslianti, E. R. et al. (2016), Standardisasi farmasitikal bahan alam menuju fitofarmaka untuk pengembangan obat tradisional indonesia, *Dentika dental journal*, 19(2), pp. 179–185.
- Zhang, J. et al. (2015), The safety of herbal medicine: From prejudice to evidence, *Evidence-based Complementary and Alternative Medicine*, 2015(April). doi: 10.1155/2015/316706.

APPENDIX

Table 1. Characteristic of webinar participants

Gender	
Male	12 (24%)
Female	38 (76%)
Age (years)	
< 20	4 (8%)
20-30	9 (18%)
30-40	4 (8%)
40-50	20 (40%)
50-60	10 (20%)
>60	3 (6%)
Occupation	
Student	11 (22%)
Lecturer	24 (48%)
Medical doctor/Dentist	5 (10%)
Education staff	1 (2%)
Government employees	3 (6%)
Nurse	1 (2%)
Entrepreneur	3 (6%)
Housewife	2 (4%)

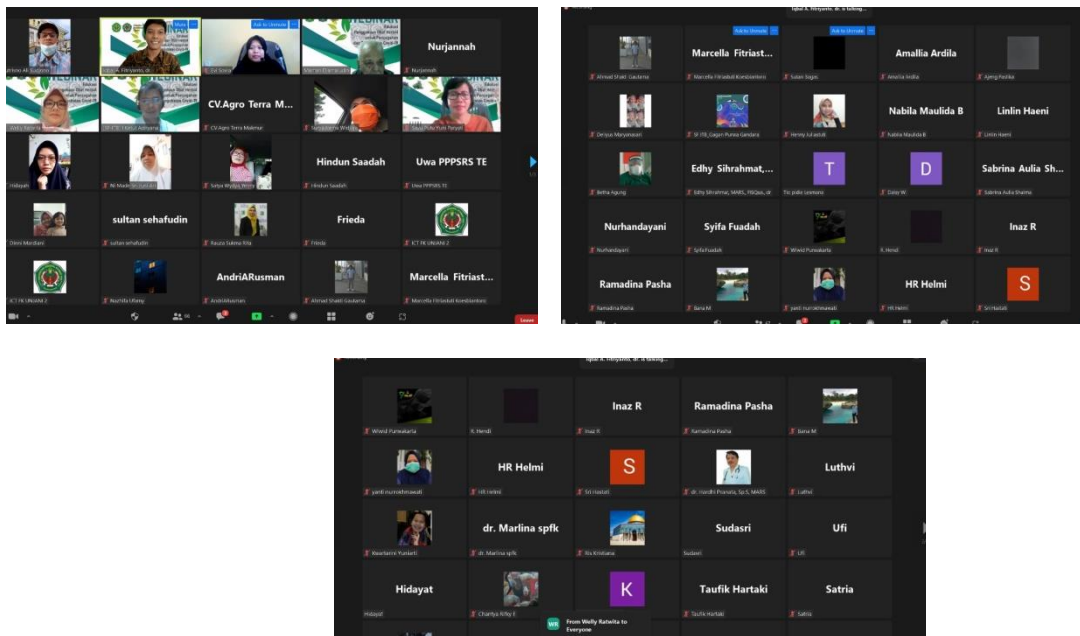


Figure 1. Documentation of webinar activity “Education on the use of herbal medicines for the prevention and treatment of covid-19”

Table 2 The habit of consuming herbs in webinar participants

Do you take herbs?

Yes	42 (84%)
No	8 (16%)
Frequency of consuming herbs	
Once	11 (26,2%)
Seldom	12 (28,6%)
Sometimes	13 (30,9%)
Often	6 (14,3%)
Reason not to take herbs	
Not like	5 (62,5%)
Others	3 (37,5%)
How to take herbs	
Make your own	18 (42,8%)
Buy ready made herbs	24 (57,2%)
The purpose of consuming herbs	
To maintain health	41 (97,6%)
To treat disease	1 (2,4%)
Category of herbs consumed	
Jamu	18 (42,8%)
Standardized herbal medicines	12 (28,6%)
phyto-pharmaceuticals	6 (14,3%)
Do not know	6 (14,3%)

Tabel 3 Herbs consumed by webinar participants

The most consumed herbs	
Turmeric	10
Ginger	8
Telang leaf	1
Phyllanthus niruri	1
Red ginger	1
Herbal mix	1
Jamu	4
Betel leaf	1
Cinnamon	1
Lemon	1
Saffron	1
Bitter	1
Habbatussauda	2
Honey	3
Jamu tetes walburga	1
Black caraway	1
Moringa leaf	2
Gingko biloba	1
Imboost	1
Propolis	1
Bay leaf	2
Tea (green tea, jati tea, liang tea)	3
Rose	1
Tolak angin	1
Tolak linu	1
Curcuma	1

Herb diet	1
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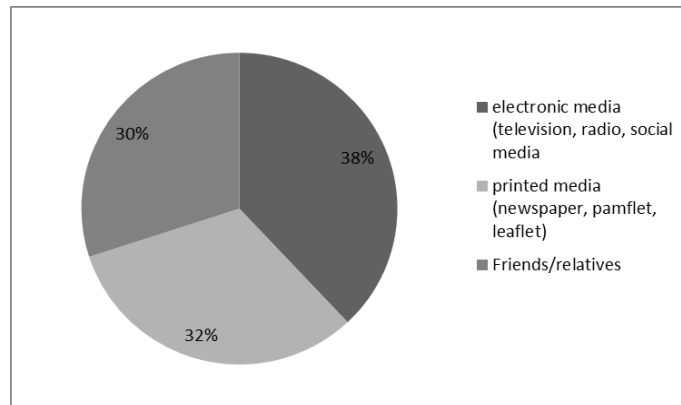


Figure 2. Sources of information about herbal medicines

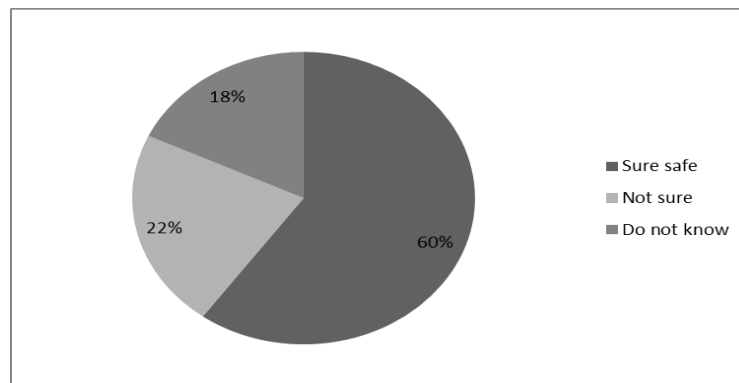


Figure 3. Herbal safety