

Community Service Journal of Indonesia 5 (2) (2023):

Doi: <https://doi.org/10.36720/csji.v5i2.604>

## **COMMUNITY EMPOWERMENT IN THE USE OF HERBAL PLANTS TO IMPROVE THE IMMUNE SYSTEM IN SIMO ANGIN-ANGIN VILLAGE, WONOAYU DISTRICT, SIDOARJO REGENCY**

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**Received:** November, 2<sup>nd</sup>, 2023; **Revised:** December, 12<sup>th</sup>, 2023; **Accepted:** December, 13<sup>th</sup>, 2023

### **ABSTRACT**

Medical plants that have uses or properties in health treatment. Currently, the use of Indonesian herbal plants is only limited to being used as cooking spices and has not been optimally used as medicine to increase the body's endurance. The aim of this community service activity is as an effort to prevent disease by increasing the body's immunity after the Covid-19 pandemic. The method applied in this community service activity is community empowerment in the use of herbal plants to improve the immune system in Simo Angin - Angin village, Wonoayu District through the stages of lectures, demonstrations and collaboration. The target participants were PKK women from Simo Angin-angin Village, Wonoayu District, Sidoarjo Regency, a total of 30 people. The results obtained were counseling and education on the benefits of Indonesian herbal plants using posters and brochures. The results of the community empowerment activities in Simo Angin-angin village are through making herbal plants as drinks in the form of herbal medicine to increase the body's immunity. Participants can understand the potential of herbal plants to be processed into drinks that can be consumed to maintain health after Covid-19. The conclusion is that the PKK women in Simo Angin-angin Village, Wonoayu District, Sidoarjo Regency know how to prevent disease by using Indonesian herbal plants and producing herbal drink concoctions to increase the body's immunity. The next recommendation for community service activities is processing residents' empty land for herbal plants and community empowerment through the production of herbal drinks to commercialization.

## INTRODUCTION

Sidoarjo is a district in East Java Province, Indonesia. Sidoarjo Regency borders Surabaya City and Gresik Regency to the north, Madura Strait to the east, Pasuruan Regency to the south and Mojokerto Regency to the west. Sidoarjo and Gresik are one of the main supports of the city of Surabaya and are included in the Kertosusila Gate area. Data for 2021, the population of Sidoarjo district is 2,033,764 people (Sidoarjo Regency, 2021). Sidoarjo Regency consists of 18 sub-districts, 31 sub-districts and 322 villages (out of a total of 666 sub-districts, 777 sub-districts and 7,724 villages in East Java). Wonoayu District consists of 23 villages, one of which is Simo Angin-angin village. Simo Angin-angin Village is a village with an area of 42 hectares and a population of 4,213 people. Simo Angin Village has an area of 144.28 (hectares).

New normal after the Covid-19 pandemic, people are required to live a clean life by implementing good health protocols, efforts to prevent and control viral infections through maintaining cleanliness are important (Nidianti & Wulan, 2022) and it is necessary to increase the body's resistance to avoid exposure to viruses, bacteria or other diseases. This can be done by consuming supplements or multivitamins made from herbal or non-herbal ingredients which can increase the body's immunity (Krisnawan et al., 2021).

Herbal plants are plants or plants that have uses or properties in health care

(Agustina et al., 2021). Indonesian herbal plants that can be used by the public to increase the human body's immunity at affordable prices and are easy to obtain. Several studies show that the herbs turmeric, ginger, ginger, galangal, lemongrass, cinnamon and cloves can be used to increase the body's immunity (Krisnawan et al., 2021). The public may already know the benefits of herbal plants which can increase the body's immunity, resulting in an increase in consumption of processed herbal drinks such as ginger, turmeric, lemongrass, betel, ginger, cloves, cinnamon which are used as herbal drinks (Krisnawan et al., 2021). However, currently the use of Indonesian herbal plants is only limited to being used as cooking spices and has not been optimally used as medicine to increase the body's endurance (Syahrial et al., 2022).

## OBJECTIVES

### *General Purpose*

The purpose of this community service activity is as an effort to prevent disease by increasing the body's immunity after the Covid-19 pandemic.

### *Special Purpose*

Specific purpose of disease prevention by using Indonesian herbal plants to improve the immune system in Simo Angin-angin village, Wonoayu sub-district, Sidoarjo district

## PLAN OF ACTION

### *Strategy Plan*

1. Partner Location Survey  
Partner location surveys are used to identify partner problems, determine locations for implementing activities and coordinate with Simo Angin-angin village officials (Nidianti et al., 2022).
2. Identify the Problem  
Problem identification is carried out to identify problems that exist in partners based on an analysis of the existing situation.
3. Counseling and education on the benefits of Indonesian herbal plants  
Counseling and education on the benefits of Indonesian herbal plants, and educational material are provided with the help of posters and brochures. The educational material provided is the use of herbal plants as the body's immune system (Ermawati et al., 2022).
4. Community Empowerment in Simo Angin-angin Village Implementation  
Community empowerment through making herbal plants as drinks in the form of herbal medicine to increase body immunity.
5. Evaluation of activities  
Evaluation is carried out to assess the level of knowledge before and after community service activities based on the results of questionnaires (Syarif et al., 2012).

### *Implementation*

The implementation of this community service activity is the community of Simo Angin-angin village, Wonoayu District, Sidoarjo Regency. This Community Service Program is based on Assisted Villages, namely a community development program with the target

location of a village that meets the criteria for a assisted village. Explain that assisted villages are the right and strategic choice for implementing community service in the interests of national development. Therefore, our community service team, D-IV Health Analyst study program, Nahdlatul Ulama University, Surabaya, is implementing a Community Empowerment program in the Use of Herbal Plants to Improve the Immune System in Simo Angin Village, Wonoayu District.

### *Setting*

This community service activity program held at the Simo Angin-angin Village Hall, Wonoayu District, Sidoarjo Regency. The program has been implemented for 2 months.

### *Target*

The target participants were PKK women total is 30 respondents in Simo Angin-angin Village, Wonoayu District, Sidoarjo Regency.

## RESULTS AND DISCUSSION

### *Counseling and Education on the Benefits of Indonesian Herbal Plants*

The community service activity was attended by 20 PKK mothers from Simo Angin-angin village. This community service activity was carried out at the Simo Angin-angin Village Hall, Wonoayu District, Sidoarjo Regency. The results that have been achieved in community service activities are an understanding of the use of herbal plants in improving the immune system in Simo Angin - Angin Village, Wonoayu District, Sidoarjo Regency.

Counseling and education on the benefits of Indonesian herbal plants is

carried out using posters and brochures. The contents of the poster include definitions of herbal plants and types of herbal plants (Figure 1). Herbal plants are plants or plants that have uses or properties in health treatment. Indonesian herbal plants that can be used by the community to increase the human body's immunity improve public health and prevent disease. The body's complex and integrated immune system requires several specific micronutrients, including vitamins A, B6, B12, C, D, E, Folate, Zinc, Iron, Copper, and Selenium. Immunity is a defense system that plays a role in recognizing, destroying and neutralizing foreign objects/abnormal cells that have the potential to be detrimental to the body (Sasmita Reza & Maysarah Binti Bakri, 2022).

## CONCLUSION

Based on the results of community service activities that have been carried out, it can be concluded that the PKK women in Simo Angin-angin Village, Wonoayu District, Sidoarjo Regency know how to prevent disease by using Indonesian herbal plants and producing herbal drink concoctions to increase body immunity.

**Table 1.** Types of Herbal Plants, Definitions and Health Benefits

No	Herbal Plant Names	Definition	Benefit
1	Curcuma	Temulawak (Curcuma zanthorrhiza) is a herbal plant native to Indonesia which is often used to treat various health problems	Strengthens the body's immunity, prevents and treats infections, overcomes digestive disorders, maintains

			liver health and function, controls blood sugar levels, reduces the risk of cancer
2	Turmeric	Turmeric is a plant that has many health benefits, one of which is improving the body's immune system	Prevents heart disease, Relieves itching on the skin, Relieves menstrual disorders, Treats digestive tract disorders, Prevents cancer
3	Aromatic ginger	Kencur is a herbal plant that has a unique aroma and taste. A plant with the Latin name Kaempferia galangal.	Lowers blood pressure, eradicates disease-causing bacteria, relieves pain and inflammation, reduces stress, wards off free radicals, prevents cancer
4	Ginger	Ginger is one of the herbal plants that is often known as a traditional medicine and is most popular as a spice and medicine.	Reduce allergic reactions, reduce weight, relieve menstrual pain, prevent the risk of heart disease
5	Cinnamon	Cinnamon or Cinnamomum verum is a herb that contains antioxidants in the form of	Lose weight, Good for diabetes sufferers, Relieves menstrual cramps,

choline and beta-carotene. Cinnamon has a strong, warm aroma and sweet taste. This herbal plant is also effective in helping maintain health

Reduces inflammation, Increases immunity, Treats chronic wounds



Figure 1. Poster on the Use of Herbal Plants to Improve the Immune System

Apart from providing counseling and education on the benefits of Indonesian herbal plants, our community service team also provides brochures and explains the making of herbal plant concoctions to improve the immune system (Adi Permadi et al., 2022). The brochure provides information regarding the ingredients needed, how to make herbal drinks and how to use them (Figure 2). Brochures were also given to

community service participants to take home and so they could practice at their homes.

During our community service activities we carried out demonstrations on making herbal/jamu drinks. Jamu is a concoction made from plants, minerals, serian (generic) preparations or in the form of a mixture of all these ingredients which have been given from generation to generation and have been used for treatment based on experience and applied with the norms that have prevailed in society (Tito et al. , 2021). Herbal drinks made in community service activities are sinom and rice kencur. Sinom drink is a drink that has quite high levels of antioxidants. The use of the herbal ingredients tamarind turmeric and sinom with high levels of antioxidants can be used to maintain the body's immune system and protect the body from infections and viruses. This is important to increase and maintain body endurance after the Covid-19 pandemic (Windasari et al., 2021). Jamu nasi kencur is a traditional drink that has many health benefits and has a fairly good market. The benefits of kencur rice herbal medicine include increasing endurance, reducing the risk of cancer, helping to overcome acne, helping to increase appetite in children, helping the recovery process of post-natal wounds, maintaining blood sugar levels, maintaining a healthy cardiovascular system, relieving coughs with phlegm and stuffy noses.





Figure 2. Brochure for Making Indonesian Herbal Drinks



Figure 3. Brochure on Types of Herbal Plants That Can Improve the Immune System

### Community Empowerment in Simo Angin-angin Village

The results of the community empowerment activities in Simo Angin-angin village are through making herbal plants as drinks in the form of herbal medicine to increase the body's immunity. Participants can understand the potential of herbal plants to be processed into drinks that can be consumed to maintain health after Covid-19 (Agustina et al., 2021).

Participants in the community service activity, namely PKK women from Simo Angin-angin Village, also tasted herbal medicine sinom and kencur rice products during the community service activity, documenting the activity (Figure 4).



Figure 4. Documentation of Community Empowerment Activities

Based on the results of the questionnaire that was distributed to participants, it can be stated that 100% of participants knew about herbal plants/family medicinal plants (TOGA) (Muflih et al., 2022). 88% of participants knew the benefits of herbal plants/family medicinal plants (TOGA) and 12% of participants did not know the benefits of herbal plants/family medicinal plants (TOGA) (Anwar & Fitriana, 2021). 70% of participants have herbal plants/family medicinal plants (TOGA) in their yard based on the results of interviews and questionnaires that participants use empty land in their yard to plant herbal plants such as turmeric, ginger, moringa etc. and 30% of participants do not have herbal plants/medicinal plants family (TOGA) in the yard (Syahrial et al., 2022). 77% of participants have made herbal/jamu drinks, interview results show that participants make herbal drinks as a solution to increase the body's immunity so that they are not easily exposed to the Covid-19 virus (Suhermin Ingsih et al., 2020) and

23% of participants have never made herbal drinks/ jamu. 41% of participants regularly consume herbal/jamu drinks and 59% of participants do not regularly consume herbal/jamu drinks. Processing herbal plants/family medicinal plants (TOGA) into herbal drinks/jamu involves several steps, including grinding (the ingredients are ground and a little water is added. The fine ingredients are squeezed to ¼ cup. If it is less than ¼ cup, boiled water is added to the dregs and then squeezed. Again). Boiling (the ingredients are cut first and then boiled in water. At the beginning of boiling, use high heat until it boils. When it has boiled, leave the ingredients in the water for 5 minutes. Then the stove heat is reduced and turned off, water that smells and contains impurities should not be used) . Brewing (The raw materials used can be fresh ingredients or dried ingredients. Before mixing, the ingredients are cut into small pieces. Once ready, the ingredients are brewed with hot water. After letting it sit for 5 minutes, the brewed ingredients are filtered) (Faculty of Agriculture , 2020). 65% of participants if they are sick prefer herbal drinks and 35% of participants if they are sick prefer medicinal drinks.

**Table 2.** Results of the Community Empowerment Questionnaire in Simo Angin-angin Village

Characteristics	Category Percenta	
	YES	NO
Knowing about Herbal Plants/Family Medicinal Plants (TOGA)	100%	0%
	YES	NO
Know the benefits of Herbal Plants/Family Medicinal Plants (TOGA) for body health	88%	12%
	YES	NO
Have Herbal Plants/Family Medicinal Plants (TOGA) at home	70%	30%
	YES	NO
Have you ever made herbal/jamu drinks	77%	23%
	YES	NO
Regularly consume herbal drinks/jamu	41%	59%
	YES	NO
If you are sick, you prefer to drink herbal drinks/take medicine	65%	35%
	YES	NO

YES = herbal drink, NO = taking medicine

## REFERENCES

- Adi Permadi, Maryudi, M., Suhendra, S., Zufar, A. F., Padya, S. A., Rahmawati, N., & Sembiring, N. S. (2022). Pembuatan Minuman Herbal/Jamu Untuk Meningkatkan Imunitas Di Masa Pandemi Covid-19. *Jurnal Pengabdian Masyarakat Bumi Raflesia*, 5(2), 909–912. <https://doi.org/10.36085/jpmbr.v5i2.3443>
- Agustina, M., Sarwili, I., Masyaroh, S., Purnamasari, R., & Rijaludin, C. (2021). Pemanfaatan Tanaman Herbal Jahe Menjadi Minuman Jahe untuk Meningkatkan Imunitas Tubuh di Era Pandemi Covid-19. *Pengabdian Masyarakat Saga Komunitas*, 1(1), 8–11.
- Anwar, K., & Fitriana, M. (2021). Pemberdayaan Masyarakat Dengan Pemanfaata Tanaman Obat Keluarga (TOGA) Dalam Pembuatan Jamu Untuk Meningkatkan Imunitas Tubuh Bagi Masyarakat Desa Sungai Besar Kabupaten Banjar Sebagai Pencegahan Covid-19. *Prosiding Seminar Nasional Pengabdian Kepada Masyarakat*, 3(1), 1–6.
- Ermawati, N., Oktaviani, N., & Abab, M. U. (2022). Edukasi Pemanfaatan Tanaman Obat Tradisional Dalam Rangka Self Medication Di Masa Pandemi Covid-19. *ABDI MOESTOPO: Jurnal Pengabdian Pada Masyarakat*, 5(2), 148–156. <https://doi.org/10.32509/abdimoestopo.v5i2.1797>
- Fakultas Pertanian. (2020). Pemanfaatan Tanaman TOGA Sebagai Minuman Herbal Pada Masa Pandemi Covid-19. *Laporan Pengabdian Kepada Masyarakat*.
- Harahap, Atta, & Nasution. (2022). Pemberdayaan masyarakat pesisir dalam pemanfaatan tanaman herbal jahe dan kunyit sebagai fungsional peningkatan imunitas tubuh. *Jurnal Pengabdian Masyarakat*, 5(5), 2338–2344.
- Kabupaten Sidoarjo, B. P. S. (2021). *Kecamatan Wonoayu dalam Angka 2021*.

- <https://sidoarjokab.bps.go.id/publication/download.html?nrbvfeve=YzI1OGJkMjU4NmZjYWMyNDU3NzU3MDVj&xzmn=aHR0cHM6Ly9zaWRvYXJqb2thYi5icHMuZ28uaWQvcHVibGljYXRpb24vMjAyMS8wOS8yNC9jMjU4YmQyNTg2ZmNhYzI0NTc3NTcwNWMva2VjYW1hdGFuLXdvbm9heXUtZGFsYW0tYW5na2EtMjAyMS5o>
- Krisnawan, A. H., Alkindi, F. F., Muttaqin, D., & Wahyudi, E. S. (2021). Pemberdayaan masyarakat dalam pemanfaatan tanaman herbal Indonesia sebagai minuman fungsional peningkat imunitas tubuh. *CARADDE: Jurnal Pengabdian Kepada Masyarakat*, 4(1), 163–172. <https://doi.org/10.31960/caradde.v4i1.913>
- Muflih, M., Widaryanti, R., Indrawati, F. L., & Gabryella, N. (2022). Herbal Imunitas. *Seminar Nasional Pengabdian Kepada Masyarakat 2022*, 136–145.
- Nidianti, E., Lukiyono, Y. T., Hidayatih, N., Humairoh, A., & Kombih, M. F. (2022). Pendampingan Penerapan Protokol Kesehatan Untuk Mencegah Penularan Covid-19 Bagi Pelaku Usaha Makanan Minuman di Wilayah Ngagel Rejo Surabaya. *Surya Abdimas*, 6(2), 266–276. <https://doi.org/10.37729/abdimas.v6i2.1545>
- Nidianti, E., & Wulan, W. S. (2022). Distribution of Hand Sanitizers and Disinfectants as Steps to Anticipate Covid-19 Transmission in Sidoarjo, Indonesia. *Indonesian Journal of Cultural and Community Development*, 13(11), 1–12. [https://doi.org/10.1016/s1000-9361\(22\)00214-x](https://doi.org/10.1016/s1000-9361(22)00214-x)
- Sasmita Reza, J., & Maysarah Binti Bakri. (2022). Upaya Pemberdayaan Apotek Hidup Dan Pentingnya Tanaman Obat Dalam Menjaga Imunitas Tubuh Selama Pandemi Covid-19. *Jurnal Riset Dan Pengabdian Masyarakat*, 2(1), 57–66. <https://doi.org/10.22373/jrpm.v2i1.1157>
- Suhermin Ingsih, I., Winaktu, G., Efendi, D., & Wirateruna, S. (2020). Pembuatan Jamu Tradisional Kunyit Asam Sebagai Minuman Peningkat Daya Imunitas Tubuh Pada Masa Pandemi Covid-19. *Prosiding Seminar Nasional Abdimas Ma Chung*, 328–339.
- Syahrial, S., Martadona, I., Leovita, A., & Fauzi, D. (2022). Peningkatan Imunitas Tubuh Di Masa Pandemi Covid-19 Melalui Budidaya Tanaman Herbal Di Lahan Pekarangan Rumah Tangga Di Kelurahan Lolong Belanti Kecamatan Padang Utara Kota Padang. *Menara Pengabdian*, 1(2), 74–81. <https://doi.org/10.31869/jmp.v1i2.3095>
- Syarif, S., Riau, K., Tematik, P., & Ppm, P. (2012). *Millinium Development Gools (MDGS)*. 47–56.
- Tito, S. I., Ma'ruf, M., Roikhana, A., Maghfirah, L., Setiawati, S., Chumairoh, Z., Mufida, N., & Hasanah, D. (2021). Pengolahan Jamu Tradisional sebagai Minuman Peningkat Imunitas Tubuh. *Jurnal Pembelajaran Pemberdayaan Masyarakat (JP2M)*, 2(2), 167. <https://doi.org/10.33474/jp2m.v2i2.13244>
- Windasari, W., Hariyati, N., Haq, M. syahidul, & Mudjito, M. (2021). Sinom Fresh Herbal Drink Minuman Sehat Bagi Masyarakat Terdampak Pandemic Covid 19. *Transformasi Dan Inovasi: Jurnal Pengabdian Masyarakat*, 1(1), 45–50. <https://doi.org/10.26740/jpm.v1n1.p45-50>