



The Effect Of Education And Training Of Toga Processing On The Level Of Community Knowledge About The Processing Of Toga Into Traditional Medicine

^KDevi Ristian Octavia¹, Khusnul Khotimah², Dewi Indah Ayu Ardiyanti Fistalia³, Emilia Rahmawati⁴, Djati Wulan Kusumo⁵

^{1,2,3,4,5}Departemen Pharmacy, Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Lamongan
Email Penulis Korespondensi (^K): devioctavia1987@gmail.com

ABSTRACT

Since the outbreak of Covid-19, the popularity of herbal medicines has increased. The use of TOGA is strongly influenced by public knowledge and how to use each herbal medicines for various different diseases. The use of traditional medicine must also consider the appropriate dose/dose and processing method so that the therapeutic objectives are achieved. However, not many people know how to make good traditional medicines, starting from the parts of medicinal plants that are taken to the processing stage. This study aims to see the effect of education on increasing public knowledge of the management of TOGA as a traditional medicine. The study was conducted using a one group pre-post test design. The population of this study was the community in Pajangan village who were members of a group of 36 herbal medicine entrepreneurs. The sample was taken using the consecutive sampling method. toga processing training for 3 weeks. In the fourth week, the gown processing questionnaire was again distributed to the respondents as posttest data. The effect of TOGA processing education on TOGA processing knowledge was analyzed using paired samples t-test. The results showed that education and training on TOGA processing had an impact on people's knowledge about TOGA management. The increase in knowledge measured shows that most of the respondents' knowledge has increased, from low knowledge to high knowledge. with a significance value of 0.003 which means that there is an effect of education and training in increasing public knowledge about traditional medicine processing.

Keywords: Herbal Medicines; TOGA; Traditional medicine; Simplisia

Article history :

Received: 12 Mei 2021

Received in revised form: 19 Juni 2021

Accepted: 15 Juli 2021

Available online: 1 Desember 2021



Licensed by [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

INTRODUCTION

Family medicinal plants (TOGA) are plants that are cultivated by the family (home) which have medicinal properties ¹. Since the outbreak of Covid-19, the popularity of medicinal plants has increased. It is believed that a strong immune system will prevent yourself from contracting the virus outbreak. People believe that using traditional medicines such as herbs from ginger rhizome, turmeric, temulawak or kencur can increase the body's immunity. Family Medicinal Plants (TOGA) are commodities that are sought after by the public after the outbreak of Covid-19. These plants are believed to be efficacious in increasing the body's resistance or immunity as an antidote to Covid-19 ². A study suggests traditional medicinal plants as a possible new therapeutic approach. Active compounds from natural medicinal plants are known to inactivate viruses ³.

The use of TOGA is strongly influenced by public knowledge and how to use each medicinal plant for different diseases ⁴. Public knowledge about family medicinal plants is an ancestral heritage. Traditional herbs have been used since ancient times as the prevention and treatment of various diseases by using medicinal plants available in the surrounding environment. Indonesian people have long used plants as treatment and for health maintenance which have been passed down from generation to generation ⁵. The increasing use of herbs in the world which is increasing is in fact inversely proportional to public awareness to make their own herbal-based medicines. Aulena et., al (2021) reported that most people do not know about medicinal plants, the benefits of medicinal plants for public and health and how to plant and care for medicinal plants. Whereas medicinal plants can be very beneficial for the surrounding community, such as; for public health and economic development. Based on the initial survey that was conducted in Pajangan village, Lamongan district, it was found that the community did not understand the correct way of processing TOGA.

Generally, the use of traditional medicine is considered safer than the use of modern medicine. This is because traditional medicine has relatively fewer side effects than modern medicine. However, it is still necessary to use traditional medicines to minimize their side effects, namely: correctness of drugs, correct dosage, timeliness of use, accuracy of use, not abuse, and accuracy of drug selection for certain diseases ⁷. Rational use of drugs is very important as an effort to achieve a better quality of life and community welfare. The irrational use of drugs has a great potential in the incidence of medication errors, causing the patient's burden to increase, increasing budget expenditures, as well as side effects and the interaction of drug use increases the risk ⁸. Another impact of drug mismanagement will be seen in the environment. Environmental pollution due to indiscriminate disposal of drugs will cause the balance of the ecosystem to be disturbed which in the end also causes losses to the community ⁹. The use of medicinal plants is not as simple as people think so far. Everything must be learned and requires its own experience. The use of traditional medicine must also consider the appropriate dose/dose and processing method so that the therapeutic objectives are achieved. However, not many people know

how to make good traditional medicines, starting from the parts of medicinal plants that are taken to the processing stage ¹⁰.

Education and training aims to improve skills, knowledge and attitudes of the community in using medicinal plants appropriately and rationally ¹¹. Knowledge of rational drug use can be obtained from education or exposure from pharmacists. The community should be active to dig up as much information as possible to pharmacy staff so that drug therapy can run as expected ⁸. This study aims to see the effect of education on increasing public knowledge of the management of TOGA as a traditional medicine.

METHOD

The study was conducted with a one group pre-post test design. The research was conducted in Pajangan village, Lamongan Regency. The population of this study is the community in Pajangan village who are members of the herbal medicine group of 39. The sample was taken by consecutive sampling method where the sampling determination was based on all subjects who came and met the inclusion criteria and were included in the sample. The inclusion criteria in this study are: People who live in Pajangan village, have processed TOGA as traditional medicine, are present when the program is implemented, from August to September 2021, are willing to be research samples (as evidenced by Informed Consent). There were sixteen respondents who met the inclusion criteria of 39 respondents who were present at the time the research activities were carried out. The exclusion criteria for this study were people who dropped out during the research. The instrument used in this research is a TOGA processing questionnaire. The researcher gave a questionnaire at the opening stage of the FGD as a pretest, then the researcher provided education and training in toga processing for 3 weeks. In the fourth week, the gown processing questionnaire was again distributed to the respondents as posttest data. The effect of TOGA processing education on TOGA processing knowledge was analyzed using paired samples t-test.

RESULTS

Table 1. Respondent Demographics

Karakteristik	Criteria	Frequency	Persentase (%)
Age	26-31 Year old	3	18,75
	32-37 Year old	5	31,2%
	38-43 Year old	2	12,5
	44-49 Year old	2	12,5
	50-55 Year old	4	25
Profession	Work at office	0	0
	Herbal Medicine Trader	100	100

The results presented in table 1 show that almost half of the respondents aged 32-37 years are 31.2% and a small proportion are 38-43 years old.

Table 2. Distribution of Respondents' Knowledge about TOGA

Knowledge	Pre		Post	
	f	%	f	%
Low	8	50	6	37,5
Moderate	6	37,5	3	18,75
High	2	12,5	7	43,75
Total			16	100

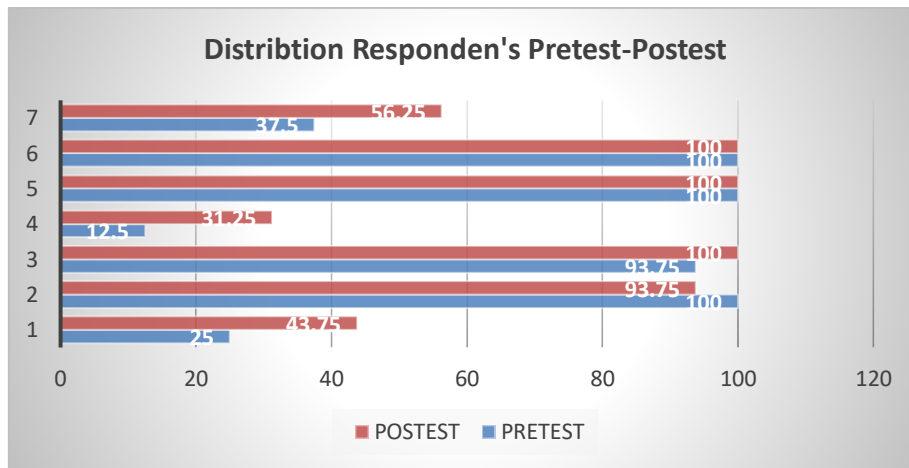


Figure 1. Distribution of Respondents Pretest-Posttest.

DISCUSSION

The research data shows that education and training on TOGA processing have an impact on people's knowledge about TOGA management. The increase in knowledge can be seen from table 2, namely most of the respondents' knowledge increased, from low knowledge to high knowledge. Increased public knowledge is also seen from the mean pre-test (66.75) to the mean value of the post-test (74.93). The pre-test standard deviation (SD) value = 12.5 and post-test SD value = 17.03 with a significance value of 0.003 which means that there is an influence of education and training in increasing public knowledge about traditional medicine processing.

Family Medicinal Plants (TOGA) are plants owned by the family and function as traditional medicines. These plants are safe, inexpensive, and easy to obtain. Pertiwi et al., (2021) The increase in public knowledge is expected to increase awareness of the COVID-19 pandemic. Low public knowledge is positively correlated with concern. Education and training can increase public knowledge about TOGA. The results of the research that have been carried out are also in line with the results of research reported by Choironi et al., (2019) there was an increase in knowledge of 41.75% after being given education and training.

Family Medicinal Plants (TOGA) are commodities that are sought after by the public after the outbreak of Covid-19. These plants are believed to be efficacious in increasing the body's resistance or immunity as an antidote to Covid-19². The demand for traditional health care is increasing¹⁴. With the change in treatment trends, it is very important to measure the knowledge of the community in managing TOGA in the practice of maintaining daily health. The wrong use of traditional medicine is when people have expectations that traditional medicine can heal, so their use increases¹⁵. In fact, the use of herbal medicines is not necessarily safe. The quality of herbal medicines that are not good can cause various effects for users. The causes of the low quality of herbal medicines that are often encountered are the addition of synthetic medicinal ingredients, the use of toxic plant species, inappropriate doses, interactions with conventional medicines, and contamination of herbal medicines by harmful compounds, such as metabolites of microorganisms¹⁶. The use of medicinal plants is not as simple as people think so far. Everything must be learned and requires its own experience. The use of traditional medicine must also consider the appropriate dosage/dose and processing method so that the therapeutic goals are achieved¹⁰. Education to the public on how to properly use traditional medicines based on an evidence-based scientific approach is very necessary. Educational needs related to evidence base and training can improve skills, knowledge and attitudes of the community in using medicinal plants appropriately and rationally¹³.

In this study, the public was given education about how to properly process TOGA to make it a safe herb for consumption. There are 7 statements given to respondents about the management of TOGA, where the correct answer is given a score of 1 and the wrong answer is given a score of 0, with the details of the statement as follows; Making simplicia is not able to defend medicinal plants from damage; Making simplicia is able to make the storage of medicinal plants longer; Wet sorting of medicinal plants to reduce post-harvest waste; Washing medicinal plants should use stagnant water; Chopping in the manufacture of simplicia will facilitate drying; Simplicia drying can use direct sunlight; Simplicia packaging does not affect bacterial contamination. The distribution of respondents' answers can be seen in Figure 2.

In this study, researchers emphasized that traditional medicine processors were processed into simplicia before consumption in accordance with the rules of good traditional medicine manufacturing (CPOTB). The application of post-harvest technology has the potential to increase the selling value of TOGA as a simplicia for medicinal raw materials and other processed products such as fresh herbs or health drinks¹. Ainurofiq et al., (2012) reported Various research and developments that utilize technological advances are also carried out as an effort to improve product quality and safety which is expected to further increase confidence in the benefits of these traditional medicines. The development of traditional medicines is also supported by the Regulation of the Minister of Health of the Republic of Indonesia, concerning phytopharmaceuticals, which means that there is a need for quality control of simplicia that will be used for medicinal raw materials or galenic preparations.

CONCLUSION

Education and training on TOGA processing have an impact on people's knowledge about TOGA management. The increase in knowledge measured shows that most of the respondents' knowledge has increased, from low knowledge to high knowledge. Increased public knowledge is also seen from the mean pre-test (66.75) to the mean value of the post-test (74.93). The pre-test standard deviation (SD) value = 12.5 and post-test SD value = 17.03 with a significance value of 0.003 which means that there is an influence of education and training in increasing public knowledge about traditional medicine processing.

THANK YOU NOTE

Thank you to the Pajangan village herbal medicine group for being willing to be partners in this research. We also express our deepest gratitude to the Ministry of Education and Culture for providing funding support for PHP2D activities so that this article can be completed properly.

REFERENCES

1. Anwar K, Fitriana M. Pemberdayaan Masyarakat Dengan Pemanfaatan Tanaman Obat Keluarga (Toga) Dalam Pembuatan Jamu Untuk Meningkatkan Imunitas Tubuh Bagi Masyarakat Desa Sungai Besar Kabupaten Banjar Sebagai Pencegahan Covid-19. 2021;3(1):1-6.
2. Yuziani Y, Rahayu MS. Penyuluhan Pemanfaatan Tanaman Obat Keluarga (Toga) Untuk Meningkatkan Imunitas Tubuh Lansia Menghadapi Pandemi Covid-19 Di Panti Jompo Annur Kota Lhokseumawe. *J Vokasi*. 2021;5(1):25. doi:10.30811/vokasi.v5i1.2067
3. Octavia DR, Nurafifah D, Utami PR. Formulasi dan Uji Hedonik Serbuk Effervescent Ekstrak Kunyit dengan Variasi Asam Sitrat dan Asam Tartat Article history : Public Health Faculty Received in revised form 23 September 2021 Universitas Muslim Indonesia Accepted 10 Oktober 2021 Address : Avai. 2021;4(4):348-357.
4. Gustaman YARF. Sosialisasi Pengetahuan Dan Pemahaman Masyarakat Tentang Tanaman Obat Keluarga (TOGA). *J Kreat Pengabd Kpd Masy*. 2021;4(2):365-372.
5. Saepudin E, Agus Rusmana;, Agung Budiono. Penciptaan Pengetahuan Tentang Tanaman Obat Herbal Dan Tanaman Obat Keluarga. *J Kaji Inf Perpust*. 2016;4(1):95-106.
6. Aulena DN, Samuel N, Gunady AV. STUDI PENGETAHUAN TANAMAN OBAT KELUARGA (TOGA). Published online 2021.
7. Sumayyah S, Nada Salsabila. Obat Tradisional : Antara Khasiat dan Efek Sampingnya. *Maj Farmasetika*. 2017;2(5):2003-2006.
8. Octavia DR, Zakaria MS, Nurafifah D. Tingkat Pengetahuan Masyarakat Tentang Swamedikasi yang Rasional di Lamongan. *Surya*. 2019;11(02):10-16.
9. Octavia DR, Susanti I, Bintang S, et al. Peningkatan Pengetahuan Masyarakat Tentang

- Penggunaan Dan Pengelolaan Obat Yang Rasional Melalui Penyuluhan Dagusibu. *GEMASSIKA*. 2020;4(1):23-39.
10. Elisma E, Rahman H, Lestari U. Ppm Pemberdayaan Masyarakat Dalam Pengolahan Tanaman Obat Sebagai Obat Tradisional Di Desa Mendalo Indah Jambi Luar Kota. *SELAPARANG J Pengabdian Masy Berkemajuan*. 2020;4(1):274. doi:10.31764/jpmb.v4i1.2736
 11. Pratiwi H, Choironi NA, Warsinah W. Pengaruh edukasi apoteker terhadap pengetahuan dan sikap masyarakat terkait teknik penggunaan obat. *Kartika J Ilm Farm*. Published online 2017. doi:10.26874/kjif.v5i2.107
 12. Pertiwi DV, Ahda M, Mustava O, et al. Prosiding Seminar Nasional Hasil Pengabdian kepada Masyarakat Universitas Ahmad Dahlan; e-ISSN: 2686-2964. Published online 2021:121-126.
 13. Choironi NA, Wulandari M, Susilowati SS. Pengaruh edukasi terhadap pemanfaatan dan peningkatan produktivitas tanaman obat keluarga (TOGA) sebagai minuman herbal instan di Desa Ketenger Baturraden. *Kartika J Ilm Farm*. 2019;6(1):1. doi:10.26874/kjif.v6i1.115
 14. Peltzer K, Pengpid S. Traditional health practitioners in Indonesia: Their profile, practice and treatment characteristics. *Complement Med Res*. 2019;26(2):93-100. doi:10.1159/000494457
 15. Sidoretno WM, Oktaviani Rz I. Edukasi Bahaya Bahan Kimia Obat Yang Terdapat Didalam Obat Tradisional. *J Pengabdian Masy Multidisiplin*. 2018;1(2):177-123. doi:10.36341/jpm.v1i2.453
 16. Hartanti D. Kontaminasi Pada Obat Herbal. *Pharmacy*. 2012;09(03):32.
 17. Ainurofiq A, Nestri H, Rakhmawati R. Upaya Peningkatan Ipteks Bagi Masyarakat Dalam Usaha Obat Tradisional. *SEMAR*. Published online 2012:1-13.