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The influence of health education using herbal e-catalog media and conventional education community knowledge and interest in the use of TOGA as a tradisonal medicine for self-medication

Devi Ristian Octavia*, Primanitha Ria Utami

* Department of Pharmacy, Health Science Faculty, Universitas Muhammadiyah Lamongan, Lamongan, Indonesia

Correspondence: devioctavia1987@gmail.com

ABSTRAK

Latar Belakang: *Penggunaan obat yang tidak tepat dalam praktik swamedikasi akan menimbulkan masalah terkait obat karena terbatasnya pengetahuan tentang obat dan penggunaannya. Tanaman obat keluarga (TOGA) dapat menjadi alternatif obat tradisional untuk praktik swamedikasi yang lebih aman.*
Tujuan: *Menganalisis pengaruh pendidikan kesehatan menggunakan media e-katalog herbal dalam meningkatkan pengetahuan dan minat masyarakat mengenai penggunaan tanaman obat keluarga (herbal) untuk praktik swamedikasi yang rasional.*
Metode: *Desain penelitian ini adalah Quasi Eksperimental dengan desain control group pretest-posttest design. Pengukuran pengetahuan dilakukan dua kali, yaitu sebelum intervensi dan tiga minggu setelah intervensi. Intervensi dilakukan sebanyak 3 kali dengan jarak waktu satu minggu. Teknik pengambilan sampel secara purposive sampling. Instrumen yang digunakan dalam penelitian adalah kuesioner yang telah di validasi. Analisis data untuk melihat perbedaan skor pengetahuan dan minat masyarakat menggunakan herbal untuk swamedikasi pada kelompok perlakuan dan kelompok kontrol dianalisis dengan uji Wilcoxon. Untuk melihat pengaruh penggunaan media e-katalog Herbal dilakukan analisis dengan uji Mann-Whitney.*
Hasil: *Terdapat perbedaan yang signifikan hasil pretest dan posttest pada kelompok kontrol dan kelompok intervensi dengan nilai (p-value = 0,000), namun tidak terdapat perbedaan pengetahuan tentang penggunaan herbal untuk swamedikasi pada kedua kelompok (p-value = 0,664).*
Kesimpulan: *Tenaga kesehatan perlu memberikan edukasi kepada masyarakat agar pengetahuan masyarakat tentang penggunaan obat tradisional dalam praktik swamedikasi dapat memberikan hasil terapi yang diharapkan.*

KATA KUNCI*: e-catalog herbal; pengobatan tradisional; swamedikasi; TOGA*

ABSTRACT

Background: *Inappropriate use of medicines in self-medication practice will cause drug-related problems due to limited knowledge about drugs and their use. Family medicinal plants (TOGA) can be an alternative to traditional medicine for safer self-medication practices.*

Objectives: *This research aims to analyze the influence of health education using herbal e-catalogue media in increasing public knowledge and interest regarding the use of family medicinal plants (herbs) for rational self-medication practices.*

Methods: *The design of this research is Quasi Experimental with a pretest-posttest control group design. Knowledge measurements were carried out twice, namely before the intervention and three weeks after the intervention. The intervention was carried out 3 times with an interval of one week. The sampling technique is purposive sampling. The instrument used in the research was a validated questionnaire. Data analysis to see differences in scores of people's knowledge and interest in using herbs for self-medication in the treatment group and control group was analyzed using the Wilcoxon test. To see the effect of using the Herbal e-catalog media, analysis was carried out using the Mann-Whitney test.*

Results: *The research results showed that there was a significant difference in the pretest and posttest results in the control group and intervention group with a value (p value = 0.000), but there was no difference in knowledge about the use of herbs for self-medication in the two groups (p value = 0.664).*

Conclusions: *Health workers need to provide education to the public so that public knowledge about the use of traditional medicine in self-medication practices can provide the expected therapeutic results.*

KEYWORD*:* *e-catalog herbal; traditional medication; self-medication; TOGA*

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INTRODUCTION

Self-medication is the selection and use of medication for complaints of minor illnesses, where the condition or symptom is recognized or diagnosed independently (1). Family medicinal plants (TOGA) are plants produced by family (home) cultivation that have medicinal properties (2). raditional medicine is a concoction made from various types of plant parts which have the property of curing various diseases and have been used for generations since ancient times. Traditional medicine is widely used by people in self-medication practices (3).

From 2020 Central Statistics Agency data, the percentage of the Indonesian population who underwent self-medication (self-treatment) due to health complaints experienced in 2019 was 62.74%. Based on 2018 Basic Health Research data, shows that 48% of the Indonesian population uses traditional medicines in the form of ready-made concoctions, 31.8% of homemade concoctions, and 24.6% of family medicinal plants. According to data from the Trade Assessment and Development Agency (2017), of the approximately 30,000 species of medicinal plants in Indonesia, 13,000 types of plants are used for medicinal needs and their use is more towards herbal medicine (4). The use of TOGA is greatly influenced by public knowledge and how to use each medicinal plant for various diseases (5).

WHO recommends the use of traditional medicines including herbs in maintaining public health, and preventing and treating disease, especially for chronic diseases, degenerative diseases, and cancer. WHO also supports efforts to increase the safety and efficacy of traditional medicines (6). Herbal medicine has been used in foreign countries (7). Medicinal plants have been widely used in both developing and developed countries, for example, plants are considered the basic ingredients for traditional Chinese medicine and also many other Chinese ethnicities. Meanwhile, in Africa, the use of herbal medicine is

a fundamental component of traditional health care. Research in Sri Lanka reveals that the use of herbal medicine is still popular in society (8). In general, traditional medicine is relatively safer than modern medicine, because conventional medicine has fewer side effects than modern medicine (9).

Tusi Wardani & Muhlis, (2020) revealed that 81.6% of respondents had used complementary treatment with traditional medicine. 83.3% of them felt that there were no drug side effects when using traditional medicine. The use of herbal plants, which are relatively safe, is not necessarily followed by people's behavior in practicing self-medication. Another research revealed that when sick, only 23% of respondents used traditional medicine as treatment therapy. This data is not much different from the results of the BPS survey which reported that only 20.99% of people treated themselves with traditional medicine (10). The success of using these herbal plants is greatly influenced by public knowledge regarding the benefits of each type of plant that has medicinal properties, especially herbal plants that have been studied empirically (11).

Oktaviani et al., (2021) reported research conducted in Surabaya that 62.67% of respondents had a moderate level of knowledge regarding knowledge and selection of traditional medicine. Most respondents chose relatives or friends as sources of information in choosing traditional medicine and only 17 asked health workers. When receiving modern drug therapy, 36 respondents stopped using traditional drugs, while 18 respondents used both without consulting a health professional. Similar results were also revealed another study that 65% of the respondents they studied had sufficient knowledge about traditional medicine (10-12).

Inappropriate use of drugs in self-medication practices will cause drug-related problems due to limited knowledge about drugs and their use (13). In general, the use of traditional medicines is considered safer than modern chemical medicines. The use of traditional medicine must still pay attention to the correctness of the medicine, accuracy of dosage, accuracy of time of use, accuracy of method of use, and accuracy of drug selection according to indications for certain diseases (14). Improper use of herbal medicines can cause adverse drug reactions (ADR). ADR which can occur as a result of incorrect use of herbal medicines includes itching, low back pain, nausea, sleepiness, and chest pounding (15).

Therefore, it is necessary to educate the public so that public knowledge about the use of traditional medicine in self-medication practices can provide the expected therapeutic outcomes. This research aimed to analyze the influence of the Herbal e-catalog in increasing public knowledge and interest in using Toga for self-medication.

MATERIALS AND METHODS

The research design used is Quasi-Experimental with a Control group Pretest-Posttest Design approach. This research was carried out in 2 research stages. In Stage 1, community knowledge and interest were identified before intervention was given, and Stage 2 was the intervention and control stage of community knowledge and interest in the use of herbal as a traditional medicine for self-medication. Measurements were carried out twice, namely before the intervention was given and three weeks after the intervention was given. The intervention was carried out 3 times with a distance of one week, in 1 week there was 1 meeting with each meeting lasting approximately 60 minutes. The population used is the entire community in the control group and intervention group in Kembangbahu villages, Lamongan district. There will be a total of 71 participants, who will be divided into a control group (n=30) and an intervention group (n=41).

The sampling technique in this research uses a nonprobability sampling method, namely purposive sampling with inclusion criteria. The sample used in this research was a portion of the community that met the inclusion criteria. The inclusion criteria in this study are: People who are willing to take part in the herbal e-catalogue health education program about the use of herbal as a traditional medicine for self-medication, Aged > 18 years, have a smartphone, Data was collected using a questionnaire on knowledge and interest in using herbal as a traditional medicine for self-medication. Self-medication was tested and validated before data collection. Data analysis was carried out to see the differences in

knowledge scores and community interest in using herbal as a traditional medicine for self-medication in the treatment group and the control group. The Wilcoxon test was carried out. To see the effect of using the Herbal e-catalogue media on interest in using herbs as a traditional medicine for self-medication, a non-parametric Mann-Whitney test was carried out.

RESULTS AND DISCUSSIONS

Research results (**Table 1**) The age of respondents in the control group and intervention group was mostly 36-45 years old, with 29 respondents (40.9%). Judging from education, it can be seen that the highest level of education in the control group and intervention group was that most of the respondents had a high school education, 26 respondents (36.6%). Apart from educational factors, occupational factors also influence a person's level of knowledge. The occupation of respondents in the control group and treatment group was 71 respondents, almost all were housewives, namely 49 respondents (69%).

Table 1. Characteristic of respondents

Characteristics	n = 71	%
Age (Year)		
26-35	19	26.8
36-45	29	40.9
46-55	23	32.3
Education		
Not go to school	2	2.8
Elementary School Graduation	13	18.3
Graduated Junior High School	23	32.3
High School Graduation	26	36.6
Graduated College	7	10
Labor		
Enterpreneur	1	1.4
private employees	6	8.4
Civil servants	3	4.2
Farmer	12	17
Housewife	49	69

Source : Primary Data, 2023

From the results of measuring knowledge before and after being given education about self-medication with herbal (**Table 2**), it can be seen that there was an increase in knowledge in both the control and intervention groups. The results of measuring respondents' knowledge (**Table 2**) show the control group was more responsive when the lecture method was used. Then the results of the research in the intervention group showed that the majority of respondents had a sufficient level of knowledge about the use of TOGA for self-medication, namely (58.5%) of respondents, after education with module media showed an increase that the majority of respondents had a very good increase in their level of knowledge. namely (92.7%).

Table 2. Pretest and Posttest Characteristics of Respondents Based on Community Knowledge in Using Herbal for Self-Medication

Variable	Control				Intervention			
	Pretest		Postest		Pretest		Postest	
	n	%	n	%	n	%	n	%
Good	9	30 %	27	90.1%	4	9.8%	38	92.7%
Enough	10	33.3%	1	3.3%	24	58.5%	2	4.9%
Bad	11	36.7%	2	6.6%	13	31.7%	1	2.4%
Total	30	100%	30	100%	41	100%	41	100%

Source : Primary Data, 2023

Based on **Table 3**., it can be seen that the Pretest and Posttest in the control and intervention groups base Wilcoxon test have significant differences. However, based on the Mann Whitney test, there was no significant difference between the control and intervention groups. The intervention group was still less responsive, but the intervention group was carried out using a media module to educate the public via WhatsApp group 1 day in a row for 20 days so that this could experience a very good increase in knowledge, this is because there are environmental factors that influence the respondent's knowledge. The educational method is an effective method for expanding implementation achievements in the good use of TOGA so that people can apply the knowledge they already know (16). According to Abbas (2021), efforts to increase knowledge through education are very important, because knowledge is an important domain in shaping a person's actions. The results of this study show educational attainment, in Mayang Siska's research (2019) it is stated that the expected post-test score is 75 (17). It can be concluded that there is an increase in public knowledge about the use of family medicinal plants for self-medication

Table 3. Knowledge Pretest-Posttest differences with Statistic test

Test Statistics			
		Wilcoxon	**Mann-Whitney**
Control	Asymp. Sig. (2-tailed)	.000	0.664
Intervention	Asymp. Sig. (2-tailed)	.000	

The use of Traditional Medicinal Plants (TOGA) must also pay attention to plant content, plant parts for treatment, usage rules, and correct dosage, so the public is given material regarding the parts of plants used in treatment, the benefits of each plant and how to use TOGA properly and Correct. In the control group, education was delivered through lectures where the material presented was in the form of slide presentations about the types, benefits, and management of family medicinal plants (TOGA). Material related to knowledge was delivered in the form of a presentation using powerpoint, the material presented was listened to well by the community, while in the intervention group education using module media was delivered via WhatsApp group for 20 days. It can be seen that the intervention group is better than the control group with a percentage (92.7%) with the media module supporting factors. The results of this research are in line with research by Erza Genatrika et al (2018) which states that the intervention group was better at gaining knowledge of family medicinal plants.

In the questionnaire regarding the definition of family medicinal plants, the results obtained by the level of knowledge after education in the control group and intervention group experienced a very good increase. Family medicinal plants are efficacious plants that are planted in yards or fields and managed by the family (19). Noni is one of the family's medicinal plants that can increase the body's immunity. Noni also functions to increase the body's immunity and help repair cell damage (20).

Indicators regarding the processing and use of family medicinal plants are contained in questionnaires number 2 and number 3. The results obtained in the control group and intervention group were still lacking. This is because in society people assume that family medicinal plants have no side effects and can be taken without time limits. In general, the use of TOGA is safer than modern medicine, because TOGA has relatively minimal side effects compared to modern medicine (21). The processing of family medicinal plants varies, including boiling, drying, and filtering (22). These results are in line with research by Sofian et al (2013) which states that there is still a lack of knowledge in the community regarding the management of medicinal plants.

The next indicator measured was regarding the benefits of family medicinal plants as stated in questionnaire numbers 5, 6, 7, 8, 9, and 10. The results obtained in the control group and intervention group experienced a good

improvement. The public realizes that the use of TOGA must be considered properly. The use of TOGA can be used as an alternative solution to the first health problem they experience, the benefits and properties of family medicinal plants are the family's choice in choosing safe natural medicines (17). People in Control Grup Village and Intervention Group Village also use TOGA as an alternative treatment for health, for example, lime and ginger plants are the plants most widely used by people in Control Grup Village and Intervention Grup Village.

Based on the research results, it show that the results of the Mann-Whitney test in the control and intervention groups obtained results with a significant value (p value = 0.664), where the value was p > 0.05. According to Doriza et al (2022), if the p-value is <0.05, there is a difference in knowledge. It can be concluded that there was no difference between the control and intervention groups after the education was carried out.

Pretest and posttest results in the control group and intervention group were tested for data analysis using the Wilcoxon test. These results show that the effect of knowledge is as significant as value (p value=0.000). According to Karomah (2020), the p-value <0.05 has an influence on the level of public knowledge regarding the use of TOGA for self-medication. The average increase in knowledge was greater in the intervention group compared to the control group. Knowledge is the result of obtaining information obtained through objects (24). These results are in line with research by Gita et al (2022) which states that there is an influence of education on increasing public knowledge about medicinal plants. The obstacle encountered was that the community was less cooperative with the directions given by the researchers, so they could not all gather together, in fact, the efforts that had been made by the researchers were to coordinate with one of the communities, but it was still quite difficult to give directions as directed. Research that affects the wider community does require good cooperation because the use of TOGA can provide quite extensive benefits for the surrounding community.

CONCLUSIONS AND RECOMMENDATIONS

There is a significant difference in pretest and posttest results in the control group and intervention group with a value (p value = 0.000), but there is no difference in knowledge about herbs for self-medication in the control group and intervention group. after being given education with value (p value = 0.664). Providing health education using herbal e-catalogue media can increase public knowledge and interest regarding the use of TOGA for rational self-medication practices

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