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RESEARCH ARTICLE

Identification of herbal products used by families in the campus of Darussalam Gontor University

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Abstract

Background: The development and the use of herbal medicinal products is increasing in Indonesia. **Aim:** To identify the safety of herbal medicine product used by families of Darussalam Gontor University (UNIDA) Gontor. **Method:** This research was conducted to identify herbal products that are used based on features, functions, and benefits. The method used was Rapid Assessment Procedure (RAP) with a qualitative approach. **Results:** The results showed there were 100 products used by 72 respondents. The level of product safety used based on raw materials was 96% and the efficacy claimed was 76%. The most type of product used was *jamu* (Indonesian indigenous traditional medicine) (94.7%). The range of understanding level of of respondents based on features and benefits was between good and very good. **Conclusion:** The use of herbal products by respondents can be viewed from the aspect of product safety levels based on raw materials (96%) and efficacy claims (76%). This was still classified as safe.

Introduction

Health development in Indonesia aims to increase awareness, willingness, and ability to live a healthy life for everyone to realise the highest degree of public health. The health effort can be carried out in the form of activities with promotive, preventive, curative, and rehabilitative approaches that are carried out continuously. As in Law No. 36, article number 48 of 2009 about health states that there are 17 health efforts, one of which is a traditional health service.

Herbal medicine can be used as a complementary therapy in health care facilities and is used by the community as a preventive, promotive, curative, rehabilitative, and palliative effort (Aditama, 2014). This is supported by the World Health Organisation (WHO), which recommends the use of herbal medicines to maintain health, prevent, and treat diseases, especially in chronic diseases and degenerative metabolic cancer (WHO, 2013).

The development of traditional health services using herbs today is increasing rapidly, in 2009 as much as 15.04%, in 2010 as much as 31.7%, in 2012 as much as 41.7%, and the latest data in 2018 as much as 44.3% (Kemenkes RI, 2018). Herbal medicines circulating in Indonesia are safe to consume with a record that has been registered in The Indonesian National Agency for Drug and Food Control, Republic of Indonesia (BPOM). However, herbal medicines that have been used for generations do not need clinical trials because they have been used for three generations or over 180 years (Parwata, 2016), such as *Tolak Angin* and *Diapet* (Utami, 2018).

Herbal medicine should not contain medicinal chemicals (*Bahan Kimia Obat*/BKO) because it can endanger health and could be fatal. Nowadays, many herbal medicines are clinically still not supported by strong and consistent evidence (Kamaluddin, 2016). The result shows that the use of herbal medicines among the families of University of Darussalam

(UNIDA) Gontor lecturers has been increasing rapidly in recent years.

So, the purpose of this study was to determine the level of safety of herbal products used by the family of UNIDA Gontor by identifying herbal related products based on features, functions, and benefits. This study also aimed to describe the use of herbal products in the categories of *Jamu* (Indonesian indigenous traditional medicine), standardised herbal medicine (*Obat Herbal Terstandard*/OHT), and phytopharmaca (*fitofarmaka*).

Theoretical review

Herbal medicines are raw materials or preparations derived from plants that have therapeutic effects or other effects that are beneficial to human health. BPOM classifies traditional medicine into three classes, namely *jamu*, standardised herbal medicine, and phytopharmaca, based on its scientific evidence.

Herbal products are unique in that there are features, functions, and benefits (Kotler & Keller, 2009). The feature is a characteristic of a product that is designed to enhance the function and consumer interest in the product (Arifin & Saidani, 2012). The function is a benefit obtained by consumers after using a product, that is, the suitability of the function listed in the product packaging (Juwandi, 2004). The benefit is the value obtained by consumers in using the product that has a high benefit ratio compared to the side effects caused (Rambat, 2001).

According to Government Regulation No. 69 of 1999 article 2 (1), every person who manufactures or imports packaged food in the territory of Indonesia must include a label inside and/or outside the food packaging. Also, based on Minister of Health Regulation No. 246 of 1990, article 1 (9) states that herbal products labels must include information in the form of 1) product name; 2) composition; 3) net weight; 4) name and address of the business actor; 5) expiry date; 6) rules of use; 7) date of manufacture; 8) side effects; 9) the symbol of *jamu*; 10) the dosage of use: 11) efficacy: 12) usefulness; 13) contraindication (if any); 14) registration number; 15) production code number; 16) specific ingredient information (if any), and alcohol content (if any).

Method

Research design

The design of this study used the Rapid Assessment Procedure (RAP) method with a qualitative descriptive approach. So, in this study, the authors identified herbal products used by respondents based on features, functions, and benefits.

Research place and time

This research was conducted at the campus of UNIDA Gontor, both for the families of lecturers who live in UNIDA Gontor Siman, as well as UNIDA Gontor Mantingan. The study started in September 2019 and ended in January 2020.

Research samples

The population in this study are the lecturers of UNIDA Gontor, with a total population of 250 people. The research sample that is used as a respondent uses a purposive sampling technique which is a method for selecting respondents by determining criteria included in the research category (Saryono & Anggraeni, 2010). The sample of respondents to be taken was done using the Slovin formula with an error rate of 10%. The degree of trust in this study is 90%.

$$n = \frac{N}{N\,(d^2) + 1}$$

n: Sample size; N: Large population; d: The degree of accuracy of the alleged magnitude of the sample = 0.1 (10%)

The results obtained based on the Slovin formula are 72 respondents from a total population of 250 people. The sample used in this study were 72 respondents and were homogeneous because the respondents lived in the same environment, so the respondents had the same level of communication and knowledge.

Ways of data collection

In this study, the authors conducted interviews with respondents by contacting respondents who used herbal products and filed a statement of willingness to be the respondent. Interviews were conducted face-to-face by visiting respondents in the office or at home. In this study, the authors brought tools such as pens, notebooks, and recorders to help facilitate data processing. At the end of the interview, respondents were asked to provide samples of the herbal products that were used as research documentation.

Data analysis and processing

The data obtained were analysed using a qualitative descriptive analysis which described the results that had been obtained by the authors during the interview.

The data processing was done using Microsoft Office Word and Microsoft Office Excel.

Stages of data processing are: 1) organising data obtained during interviews; 2) conducting data categorisation of the same type; 3) interpret data obtained to answer research problems and describe phenomena related to research; 4) evaluate interpretations to avoid misinterpretations.

Results and discussion

Overview of research subjects

Seventy-two respondents were included in this study. There were 73.6% of respondents male, and 26.4% of respondents were females. The respondents based on education level were dominated by lecturers who teach second-year undergraduate students (94.4%) than the third year (5.6%).

Licensing of herbal products

Table I shows licensing of 100 herbal products.

Table I: Types of licensing of herbal products

Licensing institution	Number of product
BPOM	25
BPOM & MUI	36
PIRT & MUI	16
PIRT	19

Note: BPOM = The Indonesian National Agency for Drug and Food Control; MUI = Indonesian Council of Religious Scholars; PIRT = Home Industry Food

Based on the features of herbal products, it can be viewed from four aspects. First, the safety of herbal products can be seen on the packaging label based on the raw materials used and claims of efficacy (see Table II).

Table II: Safety levels of herbal products

Licensing Institution	Raw materials		Efficacy claims	
	%	Category	%	Category
BPOM	25%	Secure	23%	Secure
			2%	Not secure
BPOM **&** MUI	36%	Secure	33%	Secure
			3%	Not secure
PIRT **&** MUI	16%	Secure	10%	Secure
			6%	Not secure
PIRT	19%	Secure	10%	Secure
	4%	Not secure	13%	Not secure

Secondly, the types of herbal products based on *jamu*, OHT, and phytopharmaca categories can be seen in Table III).

Table III: Types of herbal products

Category	%
Jamu	94.7%
OHT	5.3%
Phytopharmaca	0%

Third, the completeness of information listed on herbal products can be seen in Table IV. Eighty-three percent of products have completed information standards based on the type of license.

Table IV: Completeness of herbal product information

Licensing institution	%	Category
BPOM	25%	Complete
	0%	Not complete
BPOM **&** MUI	36%	Complete
	0%	Not complete
PIRT **&** MUI	16%	Complete
	0%	Not complete
PIRT	6%	Complete
	17%	Not complete

Fourth, the level of understanding of herbal medicine categories based on *jamu*, OHT, and Phytopharmaca can be seen in Table V.

Table V: Understanding level of herbal product

Respondents	Understanding level
A (1 Respondent)	*Jamu* and OHT
B (1 Respondent)	*Jamu,* OHT, and *fitofarmaka*
70 Respondents	Do not understand

The use of herbal products

The use of herbal products must have to match the benefits felt by consumers with the product claims listed on the packaging (see Table VI).

Table VI: The use of herbal products

Product	%
Supplement	71%
Preventive Form	19%
Help Treat	10%

Benefits

In the aspect of benefits, the use of herbal products is following the information contained in the packaging label. Although some products claim to cure, respondents only use it as a cure or prevent.

Discussion

Lecturers who teach at UNIDA Gontor are dominated by male lecturers. Many of them use herbal products. According to Nur (2004), male respondents tend to use the internet to search for information compared to social media, while female respondents tend to use the internet for social media. The university of UNIDA Gontor was only established in 2014, so that not many lecturers have doctoral degrees, and no one has graduated students at the doctoral level.

Distributing herbal products in Indonesia must have a marketing authorisation (Government Regulation, 2012) and include clear information on the packaging (Government Regulation, 1999). The licensing agency related to the circulation of a product in Indonesia can be through BPOM, MUI, and PIRT licensing is the highest licensing that takes care of drug and food control (BPOM, 2017). Indonesian Council of Religious Scholars (*Majelis Ulama Indonesia*/MUI) is a licensing institution based on the deliberations of Muslim scholars and scholars who determine the halal status of a product by Islamic law (Government Regulation, 2014). Home Industry Food (*Pangan Industri Rumah Tangga*/PIRT) is a licensing scope for district or city service for micro, small, medium enterprises and home industries (Nurwidiana, 2019).

In Table II, 96% of the products are classified as safe based on the raw materials listed on the packaging. This is very important, considering the number of cases related to herbal products that contain BKO and are fatal to health. There are 76% of products classified as safe, based on the claims of efficacy listed on the packaging. Herbal products with BPOM permission claim the product is only as a supplement and helps prevent or treat it, not as a medicine. Whereas the PIRT permit product can only claim as food, not as a supplement or medicine.

Based on the percentage of use of herbal products, respondents use more *jamu*, OHT and no one uses phytopharmaca. The use of herbal medicines by these respondents is in line with the results of Ahmad's study (2012) that most patients who seek treatment at the SJHM clinic prefer *jamu* rather than conventional medicines because of the perception of the efficacy of *jamu,* which was believed to be higher than capsule preparations. Phytopharmaca herbal products are herbal products that can be equalised as synthetic chemical drugs because they have been proven clinically (evidence-based medicine). Completeness of information in the label is important because it can guarantee the safety and authenticity of a product to consumers in using a product.

The level of understanding of respondents related to features and benefits fell in the range of understanding to very understanding. While the functions fell in the range of do not understand to understand. This is based on the ability of respondents to understand the active compounds contained in the product composition and the ability to analyse products that are categorised as insecure or contain BKO.

The use of herbal medicines by respondents based on function is also not in accordance with the complaints of the disease being suffered. Based on Table VI, most of the respondents used herbal medicines for the purpose of being a supplement. The reasons for using herbal medicines for these supplements are in accordance with the results of research by Panyod and the authors (2020), that food and herbal medicines can be used as complementary therapies to prevent infection, strengthen immunity and as antiviral agents.

Herbal products used by many respondents were classified as overclaimed, but the use of these products was limited to the table above. The respondent's answer related to the perceived benefits of making the body healthier, stamina, not easily hurt and tired when on the move. The reasons respondents use herbal medicines are the lack of side effects and even almost not found, minimize the use of chemicals, do not cause dependence effects, and can be used continuously to maintain health. Based on the perceived benefits, respondents will choose to use herbal medicines before using synthetic chemical drugs to help treat or prevent a complaint. The respondent's reason is in accordance with the results of Dewi's research (2019), the most widely used type of traditional medicine is herbal medicine (52.38%) on the grounds that people use traditional medicine because it is made from natural ingredients (37.50%).

For further research, it is necessary to test the levels of active substances in the products used by respondents to find out the level of truth by the packaging labels listed on the product and the need for making manuals or guidelines on how to choose herbal products that are safe, useful and guaranteed. As well as for the government to make a special policy regarding product truth standards with Home Industry Food permit status that can be accessed by the general public.

Conclusion

The use of herbal products by respondents from the aspect of product safety levels (96%) and efficacy claims (76%) are still classified as safe, the truth of information on product packaging labels is 83%, which is considered as truthful and the level of knowledge of respondents is based on categories jamu, OHT, and phytopharma are classified as low. Most of the use of herbal products is based on function as supplements (71%). Meanwhile, based on the benefits of using herbal products, it is safe. The use of herbal products based on the jamu category was 94.7%, OHT was 5.3%, and phytopharmaca was 0%.

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