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Knowledge and Perception of Herbal Medicine Competencies Among First Year Medical Students

Ni Nyoman Mestri Agustini[1,2], Made Kurnia Widiastuti Giri[3]

[1]Student of Pascasarjana, Universitas Udayana
[2]Departement of Neurology, Faculty of Medicine, Universitas Pendidikan Ganesha
[2]Public Health Departement, Faculty of Medicine, Universitas Pendidikan Ganesha
*Email korespondensi: agustini.24020@student.unud.ac.id

Abstract

Based on the data of Riset Kesehatan Dasar by Ministry of Health in 2018, result from the use of herbal plants, the proportion is 24.6% compared to the use of conventional drugs, which is 60%. The goverment program to improve the use of traditional medicine modalities is in line with the achievements of the profile of graduates from the Medical Study Program to realize graduates who have an understanding of *health and wellness tourism*. This study is useful for determining the influence of knowledge level on students' perception of herbal medicine competencies of the Ganesha University of Education Medicine Study Program using an observational analytical research design with *a cross sectional* approach conducted on students in the Ganesha Education University of Education Medicine Study Program. The sampling technique will use *simple random sampling* with a sample size of 94 people. Data collection uses questionnaires that have been tested for validity and reliability. Data analysis using the help of SPSS and *Python* 3.10 applications. The results of the study showed that the level of student knowledge had a bad average of 54.89 $\pm$ 17.86 and student perception in the negative category with an average of 26.86 $\pm$ 3.14. *Chi-Square* analysis showed that there was significant correlation between the variable of knowledge level on perception with a value of p=0.0001 < 0.005. The further research recommended through the results of this study is research in the realm of medical education about the competence of *herbal medicine* in the implementation of herbal medicine in the medical education curriculum.

Keywords: Knowledge, Herbal medicine, Perception

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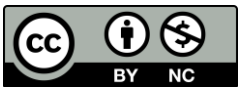

1. Introduction

Indonesia is a tropical country shrouded in abundant biodiversity, one of which is medicinal raw materials. One of the many resources that ancestors have used since ancient times to overcome health problems is to use processed herbs derived from medicinal plants[1]. This custom then became a tradition that has been passed down from generation to generation to the present day, so in its term it is referred to as traditional medicine. One of the processed traditional medicines is "herbal medicine". These preparations or preparations make traditional medicine an interesting treatment and can be further developed[2]. Traditional medicine is a medicinal preparation from medicinal plants/medicinal plants, animals, minerals, a mixture of these ingredients, which according to the experience of the general public can be used to treat diseases[2].

One of the cultural characteristics of developing countries is that traditional elements dominate the daily lives of their people. This state is supported by natural diversity that has accumulated in various types of ecosystems with a long history and has become part of culture. One of these activities is in the form of the use of medicinal plants as treatment by various tribes or community groups in remote areas, to the smallest community unit, namely the family[2].

Students simply refer to students who are at the university level[3]. In the Great Dictionary of the Indonesian Language (KBBI), students are defined as students who study at universities. Therefore, it can be concluded that medical students are students or students who are educated at the university level. Medical students have a responsibility in the medical world because they are the seeds of future doctors in order to realize a better level of public health.

A study conducted by Andriyani & Handayani (2021) showed that 53.7% of 137 respondents in Purwakarta Regency agreed that traditional medicine provides sufficient evidence to cure diseases and 53.7% said that traditional studies are part of medical efforts.[4] Among these percentages, the percentage of people who believe in traditional medicine is 59.3%. Where, the level of trust in traditional medicine of respondents in the medical profession group was 45.9% compared to 61.5% in the non-health group[4].

Research conducted by Septiana et al. (2020) shows that the self-medication of herbal medicines during the COVID-19 pandemic for medical students of the Faculty of Medicine, University of Muhammadiyah Purwokerto is low, because herbal medicines consumed during the pandemic are only for increasing body immunity. Other studies also provide a tendency for doctors to use herbal medicines personally rather than making prescriptions for patients[5]. These data provide an overview of the need for the involvement of medical students in helping to promote herbal medicine among the community to improve public health. This is because philosophically, students have a role in addition to studying knowledge and also contributing their knowledge to society in order to realize a better life in the future.

Based on thus description, the author found an urgency of study with the aim of analyzing the knowledge and perception of herbal medicine competencies in First-Year Medical Students at Ganesha Education University.

2. Methods

The method used in this study is quantitative observational analysis with *a cross-sectional* approach. This study consisted of 94 students in the affordable population who were enrolled in the first-year Medical Study Program. Data collection in this study is compiled by using a questionnaire. A questionnaire is a tool in the form of a list of questions used to collect data regarding knowledge and perceptions from the public[6]. Questionnaire distribution was created by compiling a list of questions related to the research question. The types of questions are closed questions that provide alternative answers to respondents. Respondents will choose the available answers by selecting what is considered appropriate answers. Each question in the questionnaire weighs with the MCQ and Likert scale. This method was carried out by asking respondents to answer several questions through Google Forms.

Based on *a confidence level* of 95% and *a margin of error* of 5% and the results of the calculation were increased by 10% of the total population to prevent *drop out*, the number of existing samples was obtained by 94 people using *Simple Random Sampling*.

Variable	Definition	Measuring Instruments	Score	Measure Scale
Knowledge	Knowledge is the result ofe students' knowledge of medical herbs as measured by *the Guttman scale*	Questionnair	True: 1 False: 0	Nominal
Perception	Perception is a student's assumption about medical herbs as measured by the *Likert scale*	Questionnair e	Strongly Agree: 4 Agree:3 Disagreement: 2 strongly disagree: 1	Nominal

The questionnaire for this survey consists of a knowledge level questionnaire and a perception questionnaire on medical herbs.

The knowledge level questionnaire consists of 29 statements. After the validity and reliability test, only 15 questions were used. This questionnaire uses the *Guttman scale* consisting of "yes‟ and "no" answers with "true" answers given a score of 1 and "false" answers given a score of 0. The perception questionnaire consisted of 27 statements. After conducting a validity and reliability test, 10 questions were used. To conduct the validity test, the researcher uses expert judgement. After the instrument is built based on aspects that will be measured according to related theories.

3. Result and Discussion

3.1. Description of the Level of Medical Herbal Knowledge

An overview of the general level of knowledge carried out by students in the Medical Study Program at Universitas Pendidikan Ganesha can be seen in the following table 1.

Table 1 Frequency Distribution of Medical Herbal Knowledge Levels of Students in the Medical Study Program

	N	Minimal	Maximum	Median	Mean	Std. Deviation
Level of Knowledge	94	20	86.67	60	54.89	17.86

Table 2 Category Level of Knowledge Knowledge of medical herbs for students in the Medical Study Program

No	Category Knowledge Level	Score (X)	Frequency (People)		Percentage (%)
			Force		
			2022	2023	
1	Good	70-100	19	2	22.34
2	Poor	0-69	29	44	77.66
	Total			94	100%

Based on the information in the table 2, 21 respondents (22.34%) had a high level of knowledge, while 73 respondents (77.66%) had a low level of knowledge.

3.2. Description of Perception of Medical Herbs

In measuring the perception of medical herbs in this study, a questionnaire consisting of 10 questions was used and validity and reliability tests have been carried out.

Table 3. Distribution of Frequency of Perception of Medical Herbs of Students in the Medical Study Program

	N	Minimal	Maximum	Median	Mean	Std. Deviation	Me	Sdi
Perception	94	0	40	27	26.86	3.14	29	3.67

Based on the data obtained, in general, perception has a minimum value of 0 and a maximum value of 27 with a median of 27 and an average (mean) of 26.86 $\pm$ 3.14.

Table 4. Category: Perception of Medical Herbs for Students in The Medical Study Program

Categories Perception	Score (X)	Frequency (Students)		Percentage (%)
		Year of Student Level Program		
		2022	2023	
Positive	X > 29	7	9	17.02
Negative	X $\leq$ 29	41	37	82.98

Based on the perception category contained in table 4, it was found that out of a total of 94 respondents who had a positive perception of 16 people (17.02%) followed by 78 respondents (82.98%) had a negative perception. The chi-square analysis between of level of knowledge and the perception of herbal medicine indicates that it has a significant relationship with a p-value of 0.000. The respondents who have good level knowledge of herbal medicine have better perception (61.3%) than respondent who has poor level knowledge medicine (0.8%). These results could be due to a lack of knowledge about the efficacy and how the perception of herbal medicine.Information regarding traditional herbal medicine sometimes just be obtained from the surrounding environment, so not all of the information is true and raises doubts[7].

Table 5. Level Knowledge and Perception of Herbal Medicine

Knowledge Category	Perception of Herbal Medicine		Total	P- Value
	Good	Poor		
Good	57 (61.3%)	8 (0.8%)	65 (62.1%)	0,000
Poor	37 (4.7%)	89 (93.7%)	92 (98.4%)	

Knowledge is the main factor to determine a person's behavior. Behavior based on knowledge and awareness has longer sustainability than behavior not based on it. In other words, respondents with poor knowledge will affect their adherence. As is well known, traditional medicine has weak and slow pharmacological effects than chemical drugs. Some respondents assume that traditional medicine can have an immediate effect and tend to stop using it [7]. Knowledge can enhance awareness and enable a person to do something according to their knowledge [8,9]. Kendarti et al. (2009) stated that knowledge is critical in the development person's activities. Respondents with a good level of knowledge will know how to use, information and indication of traditional medicine.[10] Respondents know that traditional medicine has a weak and slow pharmacological effect than chemical drugs, on the other hand, traditional medicine has fewer side effects than chemical drugs. This result is achieved because the level of knowledge will influence their behavior. One of the most important things in behavior development is knowledge. Having specific information also gives strength to act as a consequence of discovering a pattern, such as a pattern of the use traditional medicine. The consumer did not know the risk of traditional medicine and worried about potential interactions or contraindications in certain patients because of their lack of information [11]. Behavior based on knowledge and awareness has longer sustainability than behavior not based on it. In this case, people who have good knowledge will influence their behavior to use drugs [8,9].

Analysis of the coefficient determination aims to determine the proportion of the influence independent on the dependent variable. The results show that there is a contribution to knowledge and perception of herbal medicine (coefficient determination 0.742).

4. Conclusion

Based on the research, we can conclude that most respondents who have good level of knowledge in herbal medicine have a good level of perception, and those who have lack of knowledge in herbal medicine will have a poor level of pereception. To increase public awareness of the use of herbal medicine, we can suggest utilizing technology such as traditional medicine counseling in the community. The results analysis shows that there is a contribution of knowledge and perception of student whom will be the future care provider in community.

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