

## RESEARCH ARTICLE

# Perception of Pharmacists as Agents of Change About the Use of Traditional Medicines by Indonesian Society

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**Abstract:** Pharmacists, as one of the professional health workers, have a big responsibility related to the use of traditional medicines, especially pharmacists in the community who deal directly with consumers, starting from choosing to use, ensuring the safety of use, and providing education about traditional medicines. This study aims to explore the perception of pharmacists as agents of change (AoC) and whether they are ready to take an active role in Indonesian society in the use of traditional medicines. Exploratory observation is used to deepen knowledge and seek new ideas about a particular phenomenon with non-participatory observation steps. The results of this study show that many people still use traditional medicine because of the suggestions and beliefs of the community from generation to generation. Pharmacists have been able to play an active role as a source of information on conventional medicines in the community. The conclusion is that people have used a lot of traditional medicine for curing disease or trying to increase stamina, even with information on the efficacy and dosage of use according to hereditary information.

**Keywords:** Pharmacist Perception, Traditional Medicine

## INTRODUCTION

Health, as one of the most basic human needs, plays an important strategic role in efforts to improve human welfare.<sup>1</sup> The soaring prices of synthetic drugs and their side effects on health have increased the public's use of traditional medicines.<sup>2</sup> WHO (World Health Organization) recommends the use of traditional medicine

in the maintenance of public health.<sup>3</sup> Traditional medicine is an ingredient or ingredients in the form of plant material, animal material, mineral material, preparation of extracts (galenic) or a mixture of these materials.<sup>4</sup> Currently, the Indonesian government encourages people to consume traditional medicine.<sup>5</sup> Traditional medicines have been used widely throughout the world and about 80% of the population in some countries uses

1

traditional medicine as a form of health protection.<sup>6</sup> Traditional herbal medicine is herbal medicine that meets the criteria for the definition of traditional medicine.<sup>7</sup>

The Indonesian people, from generation to generation, have known and also used plants that are used as medicine to overcome health problems.<sup>8</sup> Indonesia is rich in a wealth of traditions, both written and hereditary, that are conveyed orally.<sup>9</sup> Indonesia is a tropical area known as a source of raw materials for medicine.<sup>10</sup> Every individual communicates with each other to meet their life needs, both primary, secondary, and tertiary.<sup>11</sup> Indonesia is a country with abundant natural resources.<sup>12</sup> The use of natural ingredients, both as medicine and for other purposes, tends to increase, especially with the issue of going back to nature and a prolonged crisis that has resulted in a decline in people's purchasing power.<sup>13</sup> The lifestyle of returning to nature is a current trend, so people return to take advantage of various types of natural life.<sup>14</sup>

The Indonesian government is making an effort to use traditional medicine through government regulations No. 103 of 2014 concerning<sup>15</sup> "Traditional Health Services" mandates that traditional medicines should be used in synergy with conventional medicines in community health service facilities. The Ministry of Health, through the declaration of the development and promotion of traditional medicines, has encouraged and promoted the use of Indonesian traditional medicines by the community and developed them in the world of health. Traditional medicine is a form of local wisdom because it affects the behavior of people's lives in interacting with the environment in an area. Local

wisdom about the use of traditional medicine is taught and passed down from generation to generation. Traditional medicine is local wisdom to be able to improve the health of local communities. If the community is able to take advantage of traditional medicine, the community's access to treatment when experiencing health problems will be easier because it is adjusted to the ability of the region or locality to deal with health problems. The perception and behavior of using local wisdom of traditional medicine by the community is a decision that is determined by one of the sources of information obtained by friends or family members.<sup>16</sup>

Pharmacists, as one of the health professionals, have a big responsibility related to the use of traditional medicines, especially pharmacists in the community who deal directly with consumers, namely starting from the selection for use, ensuring the safety of use, and providing education about traditional medicines.<sup>16</sup> Through Government Regulation Number 51 of 2009, it is mandated that pharmacists carry out pharmaceutical work, one of which is pharmaceutical services, including providing information on pharmaceutical preparations, which can be in the form of drugs, traditional medicines, and cosmetics.<sup>17</sup>

In relation to the existence of traditional medicine to improve the health status of the community, it is necessary to make efforts to utilize the resources that exist in Indonesia in health services, including traditional health, which is one of the various activities in health efforts based on Law Number 36 of 2009 concerning Health. Indonesian people have been using traditional Indonesian medicinal ingredients

for health care, disease prevention, and health care since ancient times. These traditional Indonesian medicinal ingredients can come from plants, animals, and minerals, but generally those used are from plants.<sup>19</sup>

Efforts to seek treatment can be interpreted as an attitude or action taken by a person in a sick condition to either seek or choose professional treatment. The behavior of those using treatment in the community varies greatly based on the number and type of health service facilities available. The community has more diverse choices in seeking treatment if there are many health service facilities available in the area, including traditional medicine places.<sup>18</sup>

This study aims to explore the perception of pharmacists as agents of change (AoC) and whether they are ready to take an active role in Indonesian society in the use of traditional medicines. Their perspectives are used to provide an overview of Indonesian pharmacists' experiences and expectations in a new role providing information services on the use of traditional medicines to improve public health.

## METHOD

This research uses an exploratory observational method to deepen knowledge and seek new ideas about a particular phenomenon with non-participatory observation steps. The level of explanation is descriptive qualitative.<sup>20</sup>

The number of samples was determined by sampling a quota of 40 people who were selected purposively from the five large island regions by considering the variation in sample characteristics as much as possible from the 200 population

of pharmacist's agents of change. AoC from representatives of major islands in Indonesia (Sumatra, Java, Kalimantan, Sulawesi, Bali, Nusa Tenggara Papua) based on discussions in FGDs with the Indonesian Pharmacists Association and the Ministry of Health based on a map of the distribution of AoC pharmacists' locations in Indonesia.

Preparation of structured interview instruments in exploring perceptions with the analysis of the Behavior Change Wheel model, which is used to predict perceptions and responses to the role of pharmacists as agents of change for community empowerment in the use of traditional medicines.

Test content: Research instruments to explore pharmacists' perceptions before being used for data collection must be tested first by two experts in the field of social pharmacy so that the content of the questions is unambiguous and multi-interpreted.

Structured interview procedure training the structured interview procedure is carried out using a predetermined checklist. The interview procedure begins with the introduction of the interviewer, explains the purpose and objectives of the study, guides the respondent to fill out an informed consent for the interview, requests permission to record the interview, from probing to the core interview, and ends with verification of the interviewer's notes.

The interview data will be transcribed verbatim and made into a resume per respondent as raw data for entry into N Vivo.

Reliability tests for resumes with coding were conducted, involving several studies with the aim of accuracy in coding

and code classification with the help of NVivo software.

Data processing by synthesizing the code that has been defined by the thematic analysis method.

The research ethical considerations were obtained from the Faculty of Medicine, Sultan Agung Islamic University, Semarang City (No.063/III/2020/Komisi Bioetik).

## RESULTS

**Table 1. Summary of Respondents' Interview Results**

Question	Pharmacist Perception
Pharmacists' opinions on the use of traditional medicines among Indonesian people	<p>Many people still use traditional medicine because of the suggestions and beliefs of the people from generation to generation about the efficacy and use of traditional herbs. This is in line with the enthusiasm of Back to nature among several Indonesian people.</p> <p>The increasingly widespread use of traditional medicines has the effect of overclaiming efficacy in the form of ingredients and traditional medicinal dosage forms.</p> <p>The problem in the community is that herbal ingredients used for treatment are not properly dosed so that the therapeutic effect is sometimes not as expected, namely the efficacy is longer than conventional drugs, even traditional drugs have toxic effects and adverse side effects on prolonged use if they are not used properly.</p> <p>In chronic disease therapy, traditional medicine is used as a supportive/companion therapy in conventional medicine because it is easier to obtain in remote areas than conventional medicine. Many people use traditional medicines in the form of decoctions/herbs and local ingredients, but some people prefer traditional medicines in dosage forms. People tend to use traditional medicines for</p>

preventive and curative purposes, so sources of information from trusted figures are needed because people are also interested in cultivating traditional medicines for their own consumption even though some people rarely use traditional medicines.

Pharmacists' knowledge of traditional medicine to support the role of agent of change

Pharmacists have been able to play an active role as a source of information on conventional drugs in the community. Although the knowledge to provide information to the public is dominated by conventional medicine, training is needed to add knowledge and skills about the use of traditional medicine, it also requires government support for implementation.

Many pharmacists use traditional medicine only for preventive purposes because practical knowledge for traditional medicine is lacking. Basically, pharmacists understand how to process traditional medicinal plants so that they are consumed as alternative therapies. Pharmacists need to work together across disciplines to teach how to cultivate traditional medicinal plants because health facilities such as Puskesmas provide facilities/programs that support the use of traditional medicines so that it does not happen. Pharmacists themselves rarely use traditional medicine.

Hope to support the role of pharmacists in the use of traditional medicine

In the future, pharmacists must be able to provide information on how to combine traditional medicines with conventional medicines, pharmacists as a source of information for traditional medicines through counseling to the public and become a trusted profession in the use of traditional medicines. Pharmacists are able to develop traditional medicinal preparations and then promote the planting of TOGA (family medicinal plants) in the community. Pharmacists themselves are able to provide examples of consuming, processing and utilizing traditional medicines. Achieving this role

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can be done with applicable training in the use of traditional medicines, and requires Program support from the Organization and the government. This role will be facilitated by a trusted application/information system that is easily accessible and based on scientific references.

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Factors that influence people's attitudes towards the object of attitude based on include personal experience, the influence of other people who are considered important, cultural influences, mass media, educational institutions, and emotional factors. Attitudes can change and can be formed and the relationship can be studied, so here it is seen how important the experience factor is in the formation of attitudes.

Based on this, it is in accordance with the perception of the respondents that the use of traditional medicine among the Indonesian people is based on the beliefs and experiences of ancestral herbs that have been passed down from generation to generation in their respective regions. Trust is a cognitive component of socio-psychological factors that are rational or irrational. Trust in the community is formed by knowledge, needs and interests.<sup>5</sup> The theory is correct because, based on the perception of pharmacists, people generally still use traditional medicines rationally for preventive or curative purposes because they believe that ancestral herbs can be used to improve health, but there are also uses of traditional medicines that are irrational, so that the dosage is not right and some are overclaimed. If the community's belief is not given a correct and scientific understanding, then the accuracy of the use

of traditional medicine is compromised. If used in the right way, then the side effects of traditional medicine are relatively small, including the truth of the drug to achieve the desired pharmacological effect. The truth of the medicinal ingredients is one of the determinants. In Indonesia, there are various kinds of medicinal plants of various species that are sometimes difficult to distinguish.

Many factors can encourage the increase in the use of traditional medicine, including wanting to have a longer life expectancy. In general, 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. Each species of medicinal plant has different properties, for example, lempuyang. In the market, there are various types of lempuyang that are difficult to distinguish. lempuyang emprit and lempuyang elephant are yellow and have the ability to increase appetite. However, the shape of the lempuyang emprit is relatively small compared to the lempuyang elephant. While the fragrant lempuyang is white, smells good and has slimming properties. The accuracy of the dose as well as factory-made drugs and medicinal plants cannot be consumed carelessly. Medicinal plants also have doses and rules of use that must be obeyed, as well as doctor's prescriptions. The time of use, in addition to the dosage and dosage for consuming medicinal plants, must be appropriate. The time of use must also be right to minimize the side effects that arise. The effect of medicinal plants is strongly influenced by the timeliness of use. The precise way of use, each medicinal plant also cannot be



consumed in a careless way. Not all medicinal plants have an effect and are efficacious when consumed by drinking boiled water. The expectations of the respondents if pharmacists play the role of AoC OT are material strengthening to be able and confident to go into the community and advocacy is needed to stakeholders such as the Indonesian Pharmacists Association Professional Organization (IAI) and the government, namely the Ministry of Health of the Republic of Indonesia. Facilitation by relevant community parties so that pharmacists can more easily educate the wider community. brand the pharmacist profession to get a better position in society. The regulation recognizes the role of pharmacists in empowering communities to utilize traditional medicines. Finally, the value of service and therapy will be better. The responsibility is great, but the community's assessment is also good about the pharmacist's performance. The profession can develop well, and knowledge can be added so that people believe in using traditional medicine. Pharmacists can bring traditional medicines to the community because there are currently no such medicines. Pharmacists also educate the public so that they can manage their own traditional medicines, starting from how to plant them, processing them, and using them properly and safely. The enthusiasm of the community is good, so pharmacists must take this opportunity so that they can direct the community to use traditional medicine. Pharmacists who have to work on traditional medicine to direct and empower the community to better therapy. His knowledge is increasing, people's trust in pharmacists is increasing,

and traditional medicine can be developed even more. more able to guide the public in the use of OT for efficacy and dosage. Provide education about the use of OT related to the dose and efficacy. Explore unexplored herbal plants. Scientific evidence is needed for the use of OT, there is education sustainability, communication science is added so that it can communicate to change the mindset of the community, and references for recommendations. Pharmacists can build relationships with the community to provide the right information and improve knowledge in IEC with the right information so that good results are obtained, and it is easier for people to trust. AoC OT pharmacists can develop and utilize Indonesian cultural plants. Their knowledge will also be published and can synergize with other professions.

## CONCLUSION

Based on the perception of pharmacists as agents of change in Indonesia, people have used a lot of traditional medicine to cure disease or attempt to increase stamina, even though the information on efficacy and dosage of use is in accordance with hereditary information.

## THANK YOU NOTE

We thank the institutions that have helped and supported the writing of this article, namely the Nusaputera College of Pharmacy and Sanata Dharma University Yogyakarta.

**REFERENCES**

1. Yamin, M., & Burhanudin, J. (2018). Pengobatan dan Obat Tradisional Suku Sasak di Lombok. *Jurnal Biologi Tropis*, 18(1), 1-12.
2. Kuntorini, E. M. (2018). Botani ekonomi suku Zingiberaceae sebagai obat tradisional oleh masyarakat di Kotamadya Banjarbaru. *Bioscientiae*, 2(1).
3. Dewi, R. S. (2019). Penggunaan Obat Tradisional Oleh Masyarakat di Kelurahan Tuah Karya Kota Pekanbaru. *Jurnal Penelitian Farmasi Indonesia*, 8(1), 41-45.
4. Pratiwi, R., Saputri, F. A., & Nuwarda, R. F. (2018). Tingkat pengetahuan dan penggunaan obat tradisional di masyarakat: studi pendahuluan pada masyarakat di Desa Hegarmanah, Jatinangor, Sumedang. *Dharmakarya*, 7(2), 97-100.
5. Leonita, E., & Muliani, A. (2015). Penggunaan obat tradisional oleh penderita diabetes mellitus dan faktor-faktor yang berhubungan di wilayah kerja Puskesmas Rejosari Pekanbaru Tahun 2015. *Jurnal Kesehatan Komunitas*, 3(1), 47-52
6. Dewi, R. S. (2019). Persepsi Masyarakat Mengenai Obat Tradisional di Kelurahan Simpang Baru Kecamatan Tampan Kota Pekanbaru. *Jurnal Penelitian Farmasi Indonesia*, 8(2), 75-79
7. Oktarlina, R. Z., & Carolia, N. (2018). Hubungan Pengetahuan Keluarga dengan Penggunaan Obat Tradisional di Desa Nunggalrejo Kecamatan Punggur Kabupaten Lampung Tengah. *Jk Unila Jurnal Kedokteran Universitas Lampung*, 2(1), 42-45.
8. Sumayyah, S., & Salsabila, N. (2017). Obat tradisional: antara khasiat dan efek sampingnya. *Majalah Farmasetika*, 2(5), 1-4
9. Parwata, I. M. O. A. (2016). Obat tradisional. *Laboratorium Kimia Organik Fakultas Matematika dan IPA Universitas Udayana. Bali*.
10. Prasanti, D. (2017). Komunikasi terapeutik tenaga medis tentang obat tradisional bagi masyarakat. *Mediator*, 10(1), 53-64.
11. Yassir, M., & Asnah, A. (2019). Pemanfaatan Jenis Tumbuhan Obat Tradisional di Desa Batu Hampan Kabupaten Aceh Tenggara. *BIOTIK: Jurnal Ilmiah Biologi Teknologi dan Kependidikan*, 6(1), 17-34.
12. Sarimole, E., Martosupono, M., Semangun, H., & Mangimbulude, J. C. (2014). Manfaat jarak pagar (*Jatropha curcas*) sebagai obat tradisional. In *Prosiding Seminar Nasional Raja Ampat* (pp. 9-12).
13. Arham, S., Khumaidi, A., & Pitopang, R. (2016). Keanekaragaman jenis tumbuhan obat tradisional dan pemanfaatannya pada suku kulawi di desa mataue kawasan taman nasional lore lindu. *Biocelebes*, 10(2).
14. Ismail, I. (2015). Faktor Yang Mempengaruhi Keputusan Masyarakat Memilih Obat Tradisional Di Gampong Lam

- Ujong. *Idea Nursing Journal*, 6(1), 7-14
15. Widiarti, A., Bachri, A. A., & Husaini, H. (2016). Analisis pengaruh faktor perilaku terhadap pemanfaatan kearifan lokal sebagai obat tradisional oleh masyarakat di Kota Palangka Raya. *Jurnal Berkala Kesehatan*, 2(1), 30-40.
  16. Harnett, Ung COL, J, Hu H. 2017. Community pharmacist's responsibilities with regards to traditional medicine/complementary medicine products: A systematic literature review. *Research in Social and Administrative Pharmacy*.
  17. Peraturan Pemerintah RI. 2014. Peraturan Pemerintah Nomor 103 Tahun 2014 Tentang Pelayanan Kesehatan Tradisional. 2014 p. 1-39
  18. Dewi, T. F., & Nisa, U. 2019. Faktor-faktor yang berhubungan dengan pemanfaatan obat tradisional pada pasien hiperkolesterolemia di rumah riset jamu "Hortus Medicus.". *Indonesian Journal of Clinical Pharmacy*, 8(1), 49-57
  19. Pemerintah RI. 2009 Peraturan Pemerintah Republik Indonesia Nomor 51 Tahun 2009 Tentang *Pekerjaan Kefarmasian*.
  20. Notoatmodjo. 2014. *Metodologi Penelitian Kesehatan*. Jakarta. PT. Rineka Cipta.