



Introduction and Use of Plants as Medicine for the People at Gampong Limpok, Aceh Besar District

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Abstract: The use of medicinal plants in society has existed since ancient times as a method of traditional medicine. The general public often lacks adequate education and information about the correct and safe use of medicinal plants. This can result in incorrect use and higher health risks. The aim of this research is to carry out more in-depth scientific research, implement strict regulations, provide education to the public, and promote sustainable and responsible practices of using medicinal plants. This research was conducted in July, 2023 in Gampong (Village) Limpok, Aceh Besar District. Research using descriptive qualitative method. Community data collection by interview, observation and documentation methods. The results of the study can be concluded that there are 32 plant species from the inventory that have long been used by the Gampong Limpok community as medicinal plants. Despite the potential benefits, there are also challenges and barriers that can arise in the community use of medicinal plants.

Keywords: Traditional medicine; Use of plants; Village community.

Introduction

Medicinal plants, also known as medicinal plants or herbal plants, refer to plants that have healing or health properties that are used in traditional or natural medicine (Azmin & Rahmawati, 2019). Various cultures around the world have relied on medicinal plants for thousands of years to treat various ailments and health problems (Pranaka et al., 2020).

The use of medicinal plants in society has existed since ancient times as a method of traditional medicine (Panjaitan et al., 2021). Various cultures around the world have developed knowledge about the healing properties of various types of plants (Fadhilah et al., 2023). In many societies, the use of medicinal plants is still being practiced today, both as an alternative and a complement to modern medicine (Khadka et al., 2021).

The use of medicinal plants (phytotherapy) has great potential in medicine and human health (Suhairi et al., 2022). However, there are several main problems that can arise in the use of medicinal plants. Some of them include many medicinal plants that have not received sufficient scientific research to prove their efficacy and safety. Lack of scientific data can hinder the acceptance and use of medicinal plants by the public and medical professionals.

Improper processing of medicinal plants can reduce the quality and efficacy of the final product. Lack of standards in terms of drying, storage and extraction can impact product quality. In some medicinal plant products, the information on the label may not be accurate or well standardized, making it difficult for consumers to understand the correct ingredients and dosage (Anand et al., 2022).

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Many local people have traditional knowledge about the use of medicinal plants to treat various diseases (Hotwani et al., 2014). This research can help validate and maintain that knowledge, which can often be lost with modernization and urbanization. By developing knowledge about medicinal plants and how to use them, local communities can be empowered to care for their own health in a more affordable and sustainable way. This can increase local communities' access to treatment and reduce the burden on the health system.

Medicinal plants can be an economic resource for local communities (Ozkan et al., 2016). Research that understands the market potential for medicinal plant-based products can help local communities develop sustainable economic enterprises. The general public often lacks adequate education and information about the correct and safe use of medicinal plants (Phumthum & Balslev, 2019). This can result in incorrect use and higher health risks.

To overcome this problem, it is important to carry out more in-depth scientific research, implement strict regulations, provide education to the public, and promote sustainable and responsible practices of using medicinal plants (Vitalini et al., 2009). Research on medicinal plants used by local communities has a significant positive impact on various aspects, including health, culture, environment and economy. This is an important research area for promoting the well-being of local communities and the maintenance of natural resources.

Method

This research was conducted in July, 2023 in Gampong (Village) Limpok, Aceh Besar District, geographically located at coordinates 5.562°N 95.373°E (Fradinata et al., 2023). Subjects in this study amounted to 30 people consisting of a group of women.

Research using descriptive qualitative method (Luborsky & Rubinstein, 1995). Research methods regarding medicinal plants used by the community

involve a series of steps and techniques for collecting, analyzing and interpreting data about medicinal plants used by a community group. The main aim of this research is to better understand the traditional uses of medicinal plants and their potential in medicine or public health. The following are the research methods used in this study (Johnson, 1953):

- a. Ethnobotanical Survey:
 - Involves field surveys to identify types of medicinal plants used by local communities.
 - Collect information about how these plants are used, both traditionally and modernly.
 - Understand local knowledge about the use, dosage and side effects of medicinal plants (Luborsky & Rubinstein, 1995).
- b. Interview
 - Conduct interviews with community members who have knowledge of medicinal plants, such as shamans, healers, or parents who have experience in traditional medicine.
 - Ask structured or open questions to obtain information about types of medicinal plants, how to use them, and treatment experiences (Sujarweni, 2014)
- c. Environmental Studies
 - Understand environmental aspects, such as medicinal plant habitat and ecological factors that influence the availability of medicinal plants (Assyakurrohim et al., 2023).

Result and Discussion

Types of Medicinal Plants Around the Limpok Community Yard

Based on the results of the inventory that has been carried out, it was found that 32 types of plants are often used by the community as medicine so far. Gampong Limpok, Aceh Besar District, Aceh Province, as one of the villages in Aceh Besar District, has a variety of traditional medicinal plants that have long been used by local people for the treatment of various diseases. The types of medicinal plants can be seen in Table 1.

Table 1. Inventory of medicinal plants in Gampong Limpok, Aceh Besar District

Species Name		Utility
Local Names	Scientific Name	
Sirih	<i>Piper betle</i>	as a mouthwash to maintain oral and dental health
Kunyit	<i>Curcuma longa</i>	to relieve inflammation
Kemuning	<i>Murraya paniculata</i>	to treat digestive problems, such as stomach disorders.
Cengkeh	<i>Syzygium aromaticum</i>	Clove flowers contain essential oils which have antimicrobial and analgesic effects, so they are used to relieve toothache and other oral problems.
Sambiloto	<i>Andrographis paniculata</i>	to support the immune system and reduce fever
Daun Jambu Biji	<i>Psidium guajava</i>	used to control blood sugar levels.
Akar Alang-alang	<i>Imperata cylindrica</i>	to treat urinary tract disorders and bladder infections.

Kulit Batang	<i>Cinnamomum verum</i>	to regulate blood sugar levels.
Kayu Manis		
Daun Beluntas	<i>Pluchea indica</i>	to treat respiratory problems, such as coughs and colds.
Temulawak	<i>Curcuma xanthorrhiza</i>	to support liver and digestive health.
Lidah Buaya	<i>Aloe vera</i>	Aloe vera gel is used to soothe minor burns and skin irritations, as well as for other skin problems.
Daun Pepaya	<i>Carica papaya</i>	efficacy overcoming digestive problems and used as an anthelmintic.
Tongkat Ali	<i>Eurycoma longifolia</i>	to increase male stamina and vitality
Pohon Kapur Barus	<i>Dryobalanops aromatica</i>	has essential oil (camphor oil). This oil is used in aromatherapy and to relieve respiratory problems such as coughs and colds.
Kemangi	<i>Ocimum basilicum</i>	used in cooking and beverages, as well as to relieve digestive disorders
Kencur	<i>Kaempferia galanga</i>	to overcome digestive problems, reduce nausea, and relieve pain.
Brotowali	<i>Tinospora crispa</i>	to treat a variety of health problems, including diabetes and immune system problems.
Gambir	<i>Uncaria gambir</i>	used in traditional medicine as an antiseptic and astringent
Jahe	<i>Zingiber officinale</i>	to relieve digestive problems, nausea, and inflammation
Daun Mint	<i>Mentha spp</i>	to relieve digestive disorders, such as flatulence or nausea.
Lavender	<i>Lavandula spp.</i>	used in aromatherapy to relieve stress and sleep disorders
Lemon Balm	<i>Melissa officinalis</i>	used in teas to relieve stress and anxiety
Lengkuas	<i>Alpinia galanga</i>	used in cooking or potions
Basil	<i>Ocimum basilicum</i>	as a spice in cooking or to make tea
Bawang putih	<i>Allium sativum</i>	to boost the immune system and maintain heart health
Lada hitam	<i>Piper nigrum</i>	improve the absorption of nutrients and drugs in the body. It also has antioxidant properties.
Asam jawa	<i>Tamarindus indica</i>	as a mild laxative and to relieve indigestion
Adas	<i>Foeniculum vulgare</i>	helps relieve bloating and gas in the stomach.
Daun Ketapang	<i>Terminalia catappa</i>	to treat diarrhea and inflammation
Chamomile	<i>Matricaria chamomilla</i>	Helps relieve stress and sleep disturbances
Ginseng	<i>Panax ginseng</i>	helps the body deal with stress and increase energy
Echinacea	<i>Echinacea purpurea</i>	to boost the immune system and help fight infection

The existence of medicinal plants around the yard has a variety of important roles (Michel et al., 2020). Medicinal plants or herbal plants have an important role in human health and well-being (Akter et al., 2021). Around the yard or the surrounding environment, medicinal plants can have various beneficial roles, such as being used in traditional medicine to treat various health problems such as fever, flu, headaches, digestive disorders, and others.

Many people seek alternative natural remedies as they are gentler and less impactful on the body than chemical drugs (Sutaryono et al., 2023; Yusmerianti et al., 2023; Zia-Ul-Haq et al., 2021). Medicinal plants around the yard can be used as an alternative treatment.

Some medicinal plants are also used as additives in cooking to provide additional aroma, taste and nutritional value (Monika et al., 2022). Some medicinal plants have natural insecticidal or repellent properties, which can help in controlling plant pests around the yard.

Plants are also a source of inspiration for the development of new medicines. Researchers study plants and the compounds they contain to discover potential new medicines that can be used to treat diseases that do not yet have effective treatments. (Yelianti et al., 2023). Plants have many roles in

traditional and modern medicine. It is important to maintain the sustainability of medicinal plants because many of them are threatened with extinction due to over-exploitation. Conservation and cultivation efforts of medicinal plants are important to ensure their availability in the future (Hamzah et al., 2023; Wulandari & Yuniarti, 2023).

Village communities usually mix medicinal plants traditionally to treat various diseases. They can combine several types of medicinal plants that have certain properties to make herbal concoctions. For example, leaves, roots, or bark of plants such as soursop leaves, tea leaves, or turmeric are often used to make herbal concoctions to treat health problems such as fever, cough, or stomach ache (Kurang, 2023; Valentino et al., 2022).

Several medicinal plants in Sumatra are also processed into herbal drinks. For example, pandan leaf tea, ginger, or basil leaves can be used to relieve digestive problems, relieve stress, or increase the body's endurance. Some medicinal plants are also used topically, such as compresses with papaya leaves to treat minor burns, or using coconut oil to relieve muscle and joint pain (Hakim et al., 2020; Hapid, 2023).

Challenges and Obstacles to the Use of Medicinal Plants for the Community

The use of medicinal plants or herbs in traditional medicine has become an integral part of many cultures around the world (Srivastava et al., 2019). Despite the potential benefits, there are also challenges and barriers that can arise in the community use of medicinal plants (Yildiz & Yavuz, 2021). Many medicinal plants have not gone through rigorous clinical trials to prove their safety and effectiveness. This could pose a risk of uncontrolled use and could have a negative impact on public health (Ozioma & Chinwe, 2019). Lack of strict regulation and supervision of the production and distribution of herbal products can lead to contamination problems or poor quality (Sen et al., 2011). This could mean that herbal products sold in the market may not contain the ingredients they should be or may be contaminated with hazardous materials (Suwardi et al., 2020).

Some medicinal herbs can interact with prescription or over-the-counter medications that a person is currently taking. Such interactions may affect the effectiveness of the drug or cause unwanted side effects (Pushpakom et al., 2019). Not all people have a proper understanding of the use of medicinal plants. This can result in incorrect use or ineffective treatment. In addition, there are myths or unfounded claims about the wonders of herbal medicine, which can mislead people (Mitchell et al., 2021). Excessive or unsustainable use of certain medicinal plants can lead to the extinction of these species in the wild. This could threaten environmental sustainability and the availability of medicinal plants in the future (Eickhoff et al., 2012).

Some people may rely too much on herbal remedies and ignore medical treatments that may be more suitable for certain medical conditions. This can result in delays in diagnosis and effective treatment (Jarada et al., 2020). In herbal medicine, the correct dosage is often unclear. Using the wrong dosage can cause side effects or even poison. Inadequate regulation or lack of formal certification for herbal medicine practitioners can make it difficult for the community to assess the qualifications and competence of these service providers (Tambuyzer et al., 2020). Responses to herbal remedies can vary greatly from individual to individual. What works for one person may not work for another with a similar condition. Along with globalization, many traditional medicinal plants have been traded internationally. This can lead to problems of poaching, expropriation of traditional knowledge, and changes in the use of medicinal plants in their original cultural contexts (Binch et al., 2021).

In recognizing these challenges, it is important to promote a balanced and wise approach to the use of medicinal plants. This involves proper education of the public about the benefits and risks, as well as further

scientific research to identify potentially safe and effective herbal medicines.

Conclusion

The results of the study can be concluded that there are 32 plant species from the inventory that have long been used by the Gampong Limpok community as medicinal plants. Despite the potential benefits, there are also challenges and barriers that can arise in the community use of medicinal plants.

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Author Contributions

Abdullah: responsible for overall research, drafting and submitting articles; Yuri Gagarin: collected field data; Zulfikar: analyzing medicinal plant inventory data; Cut Nurmaliah: revised writing and validated field finding data; Muhammad Rusdi: create research maps according to location coordinates; Durrah Hayati: Proofreading draft articles; Ulfa Hansri Ar Rasyid: collecting literacy; Devi Syafranti: collecting literacy.

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Conflicts of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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