

Ethnobotanical Study and Benefits of Malaysian Peranakan Chinese Medicinal Plants

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Article Info

Page Number: 735 – 741

Publication Issue:

Vol. 71 No. 3 (2022)

Abstract

Malaysia's position as a mega-diversity country has encouraged the Peranakan Chinese community to use various types of plants in their medical culture. However, as a result of migration and modernisation, the knowledge of ethnobotany in medicine is becoming less and less practiced among the younger generation due to the difficulty of obtaining reference sources when many older people die without inheriting their traditional knowledge. Thus, this ethnobotany research will cover the knowledge gap by highlighting the concept of the use of various plants that exist around the settlement of the Peranakan Chinese community in the state of Kelantan for medical purposes. The main purpose of this research is to document the various types of plants along with their benefits in helping the treatment of various types of diseases. This research uses a qualitative method of phenomenology. Research data were obtained through interviews and observations involving five informants in selected Peranakan Chinese village. The findings of the research have successfully constructed an indicator of Peranakan Chinese medical methods that use plants as the main source. The use and benefits of each plant are also explained. This documentation is seen as necessary to ensure that the uniqueness of this medical practice is recorded and preserved in an effort to preserve the heritage treasures of the Peranakan Chinese community. Among other things, this research is important in creating alternative methods other than the use of modern medicine.

Keywords: Ethnobotany, Peranakan Chinese, medicinal plants, Chinese medicine.

Article History

Article Received: 12 January 2022

Revised: 25 February 2022

Accepted: 20 April 2022

Publication: 09 June 2022

Introduction:

Botanical science had begun to develop in Peninsular Malaysia during the arrival of the Portuguese in 1511, the Dutch in 1642 and finally the British in the early 19th century (Department of the Environment, 2006). Malaysia is one of the 12 mega-diversity countries in the world and among the richest not only in the Asian region, but also among the tropical regions (Mohamad, 2015). The country is estimated to possess between 60% to 70% of the world's total biodiversity and that diversity can be seen through the flora and fauna that still exist in the country today (Mat Yamin, 2007). Malaysia is estimated to have 12500 species of flowering plants, 1100 species of ferns and most of them cannot be found in any other location in the world (Mat Yamin, 2007). The earliest record of medicinal plants research is through the writing of a book published by Munshi Ismail in 1866 which was translated into English known as "The Medical Book of Malayan Medicine" by Gimlett and Burkill (Tan et al., 2006).

Ethnobotany is the interaction of the local community to the living environment, especially plants as well as a research on the application of native plants in the culture of a race such as medical practice (Purwanto, 1999). Thus, the study of ethnobotany can be used as a medium to document the traditional knowledge of a society that has received many contributions of plants for centuries in various aspects, especially medical practice. Each group of traditional societies has its own traditional medical practices and relies heavily on plants.

The Peranakan Chinese are a Chinese subethnic group that exhibits distinctive cultural characteristics and identities (Tan et al., 2014). The term Peranakan Chinese is often used to refer to the Chinese in Malaysia who have experienced

acculturation with the Malay community and the influence of the local environment. This term was initially used when referring to the Baba and Nyonya Chinese community in the Straits Settlements which consisted of the Chinese communities of Melaka, Penang and Singapore (Abdullah, 2013). The existence of this Chinese sub-ethnic can be traced through the migration of Chinese immigrants to Malaya. The migration of the Chinese has opened up opportunities for regular sociocultural interaction, has contributed to the acculturation of the Chinese by the local population, becoming Peranakan Chinese (Tan et al., 2014). However, Peranakan Chinese in the country still maintain their original identity as ethnic Chinese through the traditional culture inherited from their ancestors (Tan et al., 2017). The uniqueness of nurturing this identity can be highlighted through traditional medical activities that are still practiced by the Peranakan Chinese community.

Today, there is a Peranakan Chinese community who still practice medicinal activities using plants. Malaysia's rich biodiversity has prompted the Peranakan Chinese community to make plants a major resource in their efforts to treat various diseases. Unfortunately, this method is increasingly marginalised by the new generation due to the rapid development of modern medicine around the world causing the younger generation of Peranakan Chinese to increasingly forget the traditional knowledge left by their ancestors (Ab. Karim, 2018). As a result of migration and modernisation, the ethnobotanical knowledge practiced by the elderly Peranakan Chinese is becoming less and less practiced. This ethnobotanical study will cover the knowledge gap by highlighting the concept of the use of various plants that exist around the settlement of the Peranakan Chinese community in the state of Kelantan for medical purposes.

Literature Review:

Ethnobotany in Chinese medicine

The knowledge of ethnobotany in Chinese medicine begins when they start suffering from diseases and each of them strives to find ways to prevent and cure themselves from such diseases (Ab. Karim, 2018). Typically, they will use certain flora, fauna and minerals to treat patients. Any potent ingredient will be the main ingredient. In other words, they rely entirely on the use of natural ingredients without the use of chemicals or machines throughout the period of treatment and health care (Ab. Karim, 2018).

According to McKenzie (1999), natural substances such as plants or herbs are known as phytomedicines which contain active ingredients for certain herbal plants that can be taken in the form of powder, essence or liquid. In order to treat and maintain health, the Chinese society places emphasis on the use of various natural ingredients that can provide a variety of different nutrients to the human body.

Today, traditional Chinese medicine methods are an important part of the healthcare system in most Asian countries that rely heavily on natural ingredients (Jawing, 2018). This ethnobotanical knowledge and application had played a major role in health protection and disease control for thousands of years and almost all traditional Chinese medicines are natural in nature (Jawing, 2018).

Methodology:

The approach chosen to be applied in this study is a qualitative approach. A qualitative approach can be defined as a research procedure that produces an understandable picture of data (Lexy, 2007). In this study, qualitative approach is more appropriate to be used in a study of ethnobotany and medicinal plants used by the Peranakan Chinese community in Kelantan. Qualitative strengths led researchers to choose this approach to assist in the data collection process.

In this study, the researcher chose phenomenological study as the study design. This is because, phenomenology is a science that is oriented to get an explanation of a reality. To obtain information about the subject to be studied, the researcher must apply an approach that allows the researcher to obtain information in great detail, for example through oral informants. Therefore, the researcher argues that phenomenology is the most relevant study design to be used in this study.

Data Collection:

To obtain the data required in this study, the researcher has conducted fieldwork in PulauChondong, Kelantan continuously starting 1st September, 2021. In the process of data collection, the researcher used two main sources namely secondary data and primary data. Secondary data were obtained through reading and research methods on books and journals to examine the basic concepts of traditional medicine in previous studies related to the Peranakan Chinese community and medicinal plants used by them from ancient times to today.

In the context of primary data, this data was obtained when the researcher collected information based on the process of interviews and observations involving five informants in the study area. The first source area of the study is the Peranakan Chinese community in PulauChondong, Kelantan. The informants were selected by objective sampling based on their experience and knowledge of traditional medicine.

Table 1: Informant demographic profile.

No.	Nickname	Age	Education Level	Occupation
1	Pak Chu To	65	Primary school	Self-employed
2	MekKok Tie	95	-	Farmer
3	Jin	50	SPM	Village Head / Self-employed
4	Pak Chu Aseng	99	-	Farmer
5	Tan	68	SPM	Self-employed

The settlement of the Peranakan Chinese community is shown in Figure 1.



Figure 1. Peranakan Chinese settlement in Pulau Chondong, Kelantan

Results and Discussion:

Based on the results of interviews and observations with the Peranakan Chinese community, there are 33 types of medicinal plants that are often used by them to treat and prevent various diseases. Each medicinal plant used has great potential to be utilised more widely. Details of the types of medicinal plants and their benefits can be seen more clearly in Table 2.

Table 2: Types of medicinal plants used by the Peranakan Chinese community.

No.	Local Names	Botanical Name	Family
1	Sireh Cina	<i>Peperomia Pellucida</i>	<i>Piperaceae</i>
2	Kucing Galak / Kucing Gedik	<i>Acalypha Indica</i>	<i>Euphorbiaceae</i>
3	Lidah Jin (nickname in Kelantan only) / Pokok Pecah Kaca / Pecah Beling	<i>Strobilanthes Crispa</i>	<i>Acanthaceae</i>
4	Tapak Sulaiman / Tutup Bumi	<i>Elephantopus Scaber</i>	<i>Compositae</i>
5	Rumput Buluh / Buluh Rumput Daun	<i>Oplismenus Compositus</i>	<i>Poaceae</i>
6	Bayam Peraksi	<i>Emilia Sonchifolia</i>	<i>Compositae</i>
7	Hempedu Bumi	<i>Andrographis Paniculata</i>	<i>Acanthaceae</i>
8	Dukung Anak	<i>Phyllanthus Niruri</i>	<i>Phyllanthaceae</i>
9	Daun Susu Kambing	<i>Euphorbia Hirta</i>	<i>Euphorbiaceae</i>
10	Sambung Nyawa	<i>Gynura Procumbens</i>	<i>Asteraceae</i>
11	Pokok Denggi (nickname in the Kelantan Peranakan Chinese community) / Sawi Langit	<i>Vernonia Cinerea L</i>	<i>Compositae</i>
12	Rumput Cina / Rumput Beijing	<i>Murdania Bracteata</i>	<i>Commelinaceae</i>
13	Naga Buana	<i>Phyllanthus Pulcher</i>	<i>Euphorbiaceae</i>
14	Cendawan Susu Harimau	<i>Lignosus Rhinocerus</i>	<i>Polyporaceae</i>
15	Sireh	<i>Piper Betle</i>	<i>Piperaceae</i>

16	DaunKapalTerbang	<i>ChromolaenaOdorata</i>	<i>Asteraceae</i>
17	DaunLidahBuaya	<i>Aloe Vera</i>	<i>Asphodelaceae</i>
18	BungaCina	<i>Gardenia Augusta</i>	<i>Rubiaceae</i>
19	Lada Pahit	<i>BrucweaJavanica</i>	<i>Simaroubaceae</i>
20	Kunyitmuda	<i>Curcuma Longa / Curcuma Domestica</i>	<i>Zingiberaceae</i>
21	Halia Bara	<i>AlpiniaPurpurata</i>	<i>Zingiberaceae</i>
22	Cekur	<i>KaempferiaGalanga</i>	<i>Zingiberaceae</i>
23	Bunga Jam 12 /Bakawali	<i>EpiphyllumAnguliger</i>	<i>Cactaceae</i>
24	TimunBatang	<i>CucumisSativus</i>	<i>Cucurbitaceae</i>
25	DaunInai	<i>LawsoniaInermis</i>	<i>Lythraceae</i>
26	JarumEmas	<i>StrigaAsiatica</i>	<i>Scrophulariaceae</i>
27	BetikMuda	<i>Carica Papaya</i>	<i>Caricaceae</i>
28	Pinang (flowers and shoots)	<i>Areca Catechu</i>	<i>Areaceae</i>
29	KurmaCina /KurmaMerah	<i>ZiziphusJujuba</i>	<i>Rhamnaceae</i>
30	Halia	<i>ZingiberOfficinale Roscoe</i>	<i>Zingiberaceae</i>
31	Manjakani	<i>QuercusInfectoria</i>	<i>Fagaceae</i>
32	HaliaBentong	<i>ZingiberOfficinale</i>	<i>Zingiberaceae</i>
33	BelimbingBuluh	<i>AverrhoaBilimbi</i>	<i>Oxalidaceae</i>

Based on the results of interviews and observations that have been conducted, there are 22 families of medicinal plants have been identified that are often used by the Kelantan Peranakan Chinese community to treat various diseases. Of the 22 botanical families, there are several species from the same family, namely the Zingiberaceae family has 5 species, the Compositae family has 3 species and the Euphobiaceae has 3 species. Piperaceae, Acanthaceae and Asteraceae have 2 species while the rest have only 1 species from each family.

The Peranakan Chinese people apply medicinal plants in their traditional medical activities. Their medical culture is greatly influenced by the local community, namely the Malays and Siamese who live close to their settlements. The medicinal plants are usually obtained from nearby forests, areas around the house and there are herbs that are grown for their use. Typically, they use medicinal plants to treat various types of diseases such as diabetes, high blood pressure, cancer, kidney problems, fever, eczema, women's internal diseases, skin and eye diseases. Typically, each type of medicinal plant has more than one function. The benefits of each medicinal plant can be seen more clearly in Table 3.

Table 3: Benefits and ways of using medicinal plants by the Peranakan Chinese.

No.	Local Names	Ways of Consumption	Benefits
1	SirehCina	Whole plants - boiled and drunk	Treating diabetes, joint and vein pain, arthritis
2	KucingGalak / KucingGedik	Whole plants - boiled, drunk or bathed	Treating eczema, joint and vein pain, diabetes
3	LidahJin (nickname in Kelantan only)/ PokokPecahBeling	Leaves - boiled and drunk	Treating thyroid disease
4	TapakSulaiman / TutupBumi	Whole plants - boiled and drunk	Treat various internal diseases of women such as menstruation and irregular menstruation
5	RumputBuluh / BuluhRumputDaun	Leaves - boiled and drunk	Treating premature urination and prostate problems
6	BayamPeraksi	Leaves - boiled and drunk / eaten raw or cooked	Treating hemorrhoids and constipation
7	HempeduBumi	Leaves - boiled and drunk	Treating heart blockage, nerve damage, diabetes and high blood pressure
8	DukungAnak	Whole plants - boiled and drunk	Helps cleanse the kidneys
9	DaunSusuKambing	Leaves - boiled and drunk	Helps cleanse the kidneys
10	SambungNyawa	Leaves - boiled and drunk	Treating joint and vein pain and cough
11	PokokDenggi (nickname in the Kelantan Peranakan Chinese community) / Sawi	Whole plants - boiled, drunk or bathed	Treating fever, dengue fever and infantile jaundice

	Langit		
12	RumputCina / Rumput Beijing	Leaves - take 3 leaves, put in hot water and drink as tea	Treating prostate disease
13	Naga Buana	Leaves - take 3 leaves, put in hot water and drink as tea	Treating prostate disease
14	CendawanSusu Harimau	Whole plants - boiled and drunk	Treat cancer / kill cancer cells
15	Sireh	Leaves - chew with nutmeg and lime	Promotes dental health and prevents oral diseases
16	DaunKapalTerbang	Leaves - sharpen with a jug and take the leaf's water, place it on the sore spot	Heals wounds or burns
17	DaunLidahBuaya	Leaves - Remove the filling in the leaves, boil with rock sugar. Drink or used as a face mask	Removes scars and beautifies the skin
18	BungaCina	Leaves and flowers – Crumple and squeeze with water and apply on the head	Treating headaches
19	Lada Pahit	Fruit - Eat	Treating boils
20	Kunyitmuda	Tubers or rhizomes - Eaten raw (made into salad)	Slows down the aging process of facial skin, brightens the skin and treats acne problems
21	Halia Bara	Tubers or rhizomes - Eaten raw (made into salad)	Slows down the aging process of facial skin
22	Cekur	Tubers or rhizomes - Eaten raw (made into salad)	Slows down the aging process / skin elasticity
23	Bunga Jam 12 / Bakawali	Flowers - Take seeds in flowers, mash or finely grind and apply on face	Helps smoothen and beautify the skin
24	TimunBatang	Sliced - ground and made into a mask / thinly sliced and placed on the eyes	Reduces dark circles under the eyes, moisturises and refreshes the face
25	DaunInai	Leaves - pounded until crushed. Mixed with rice, charcoal, kaffir lime and smeared on the scalp and hair	Helps produce healthy, thick and beautiful shining hair
26	JarumEmas	Whole plants - boiled and drunk. Boiled for about half an hour and will produce yellow boiled water. The plant can be boiled repeatedly	Helps shrink the womb after childbirth
27	BetikMuda	Fruit - put and simmered in gravy (soup)	Helps increase body milk and prevent back pain
28	Pinang	Flowers - take betel nuts flowers that have not bloomed, boiled with chicken (can be made into soup) Leaf shoots – mashed, added to water and drunk	Helps relieve back pain Stop bleeding
29	KurmaCina / KurmaMerah	Fruit - boiled with chicken bones, ginger, garlic and young papaya	Helps relieve back pain
30	Halia	Rhizomes or tubers - Eaten raw (as salads) and included in cooking	Helps expel gas in the body
31	Manjakani	Fruit - boiled and drunk	Helps to improve blood circulation
32	HaliaBentong	Rhizomes / flesh - soak and stir in hot water and drink	Helps to improve blood circulation
33	BelimbingBuluh	Leaves - boiled and drunk Fruit- cut into small pieces and boiled	Treats high blood pressure, diabetes and cough.

Based on the information on the utilisation of medicinal plants obtained from the informants, it was found that the majority of medicinal plants are able to help in the treatment of more than one type of disease. There are past researchers who

support the benefits of some types of medicinal plants used by the Peranakan Chinese community in their study. Kirom (2017) explained that the medicinal plant KucingGalak (*AcalyphaIndica*) has chemical substances that can provide pharmacological benefits, including antidiabetic, hypoglycemic and antioxidant that can help lower high glucose in the blood. This coincides with the Peranakan Chinese community who use the medicinal plant in treating diabetes among them.

Other than that, the Forestry Department of Peninsular Malaysia (2016) explained the benefits of using TapakSulaiman or TutupBumi (*ElephantopusScaber*) medicinal plants in dealing with women's internal problems, which is to treat the problem of mucus secretion that comes out abnormally from the vagina (leucorrhea). Similarly, in the medical culture of the Peranakan Chinese community, they use the TapakSulaiman plant as one of the main medicinal plants in dealing with various diseases among women.

Omar et al. (2017) conducted a study on plants used in medicine and found that HempeduBumi (*AndrographisPaniculata*) is also widely used by the Siamese community in Kedah to treat high blood pressure as practiced by the Peranakan Chinese community. Kelantan. In addition, Omar et al. (2017) also explained the benefits of using KapalTerbang leaves (*ChromolaenaOdorata*) in healing wounds as done by the Peranakan Chinese community from then until now.

Ridzuan (2018) made a study on the benefits of ginger (*ZingiberOfficinale* Roscoe) to the body and found that ginger is the most effective medicine to remove gas problems in the body as well as help smoothen the digestive system. This can be evidenced by the variety of health products sold today containing ginger essence. This coincides with the Peranakan Chinese community who often use ginger to expel gas from the body, especially for women who are abstinent. Because of this, almost all Peranakan Chinese dishes contain ginger such as steam dishes, soups, fries and stews.

Although most of the medicinal plants used by the Kelantan Peranakan Chinese community can be supported by other studies that have been done before, there are still medicinal plants that have not been proven beneficial. For example, there are still no clinical or non-clinical studies done on the benefits of Bunga Jam 12 or BungaBakawali (*EpiphyllumAnguliger*), RumputBuluh (*OplismenusCompositus*), BayamPeraksi (*Emilia Sonchifolia*), DaunSusuKambing (*Euphorbia Hirta*), RumputCina (*MurdaniaBracteata*), Naga Buana (*PhyllanthusPulcher*), BungaCina (*Gardenia Augusta*), Lada Pahit (*BrucweaJavanica*), JarumEmas (*StrigaAsiatica*), Pinang (*Areca Catechu*) and KurmaCina (*ZiziphusJujuba*).

Conclusion:

As a result of the ethnobotanical documentation for medical purposes that has been done, it is clear that the Peranakan Chinese community is highly dependent on plants to treat various types of diseases. These plants are not only used to treat and cure diseases, but also become a method to prevent disease. They believe that each type of plant must have its own nutrients and benefits. However, research on medicinal plants should be conducted more widely from time to time in order to convince the public about the effectiveness and safety of the practice of medicinal plants in daily life. The Malaysian Ministry of Tourism, Arts and Culture as well as the Malaysian Ministry of Health are among the parties responsible for preserving, sustaining and developing the traditions of an ethnic group. This documentation is seen as necessary to ensure that the uniqueness of this medical practice is recorded and preserved in an effort to preserve the heritage treasures of the Peranakan Chinese community. Among other things, this paper is crucial in searching for alternative methods other than the usage of modern medicine.

Acknowledgment

The authors would like to express their deepest gratitude to the informants willing to participate and provide full cooperation in this study and funding from National University of Malaysia: Research University Grant (GUP-2019-057) and Research Distribution Fund (TAP-K021290).

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