

The Utilization of Plants as Medicine in Family Medicine: Potential for Conservation of Traditional Knowledge and Nature

Fadly Husain^a, Arif Purnomo^b, Heri Tjahjono, Puji Lestari and Eka Yuniati^c
Faculty of Social and Political Sciences, Universitas Negeri Semarang, Sekaran Campus, Gunungpati Semarang, Central Java, Indonesia

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Abstract: The use of medicinal plants as family medicine in society has been an important and long-standing component of health care practices in various cultures. This research aims to understand the use of medicinal plants to cure diseases in society. Apart from that, this research also understands the concepts of health and illness from a societal cultural perspective. This research applies qualitative methods and uses interview, observation and documentation techniques in data collection. The research was carried out in Mijen District, Semarang City, Central Java. There were 50 informants who participated in this research who provided information related to the concept of health and illness as well as knowledge and experience in applying medicinal plant treatments to cure illnesses in the family. Research has found that people use various types of plants which are considered to have medicinal properties in curing illnesses as part of family medicine. People consider that consuming medicinal plants is very good because they do not have negative side effects for the body compared to conventional medicines offered by allopathic medicine. These medicinal plants are formulated in such a way that they are thought to be able to cure a disease. Providing plant materials can also be accessed in various ways, namely by buying at the market, gardening in the yard or even having plants growing wild around the house. The practice of using medicinal plants by the community in family medicine can not only maintain cultural knowledge that has been acquired through generations, it can also be accessed easily and cheaply and can maintain plant species with medicinal potential in the surrounding environment.


1 INTRODUCTION


In various cultures, the use of plants that growing around the house has many positive effects on the health body. The use of medicinal plants as family medicine in society has been an important and long-standing component of health care practices. Although modern medical services are well developed in Indonesia, many Indonesians still rely on traditional medicine such as shamans, healers, massage, blind massage, fracture massage, child healers, and dental healers to cure diseases (Dilla et al., 2024; Houghton & Howes, 2024; Mahendradhata et al., 2017). Households subjects who were in urban area, private employees, had low level of education and high economic, knowing the availability of health

services were more likely to use of traditional health care (Dilla et al., 2024). Unfortunately, not all communities have succeeded in documenting knowledge about traditional medicine well. This knowledge is passed down orally from generation to generation.

A medicinal plant is any plant which, in one or more of its organs, contains substances that can be used for therapeutic purposes or which are precursors for the synthesis of useful drugs (Sofowora et al., 2013). Knowledge about the use of plants has been known by people in various regions in Indonesia. In North Bengkulu, Battra¹ uses 64 species from 37 families of medicinal plants as traditional medicinal ingredients (Fanisah et al., 2023). The most common type of family is Fabaceae. In another places, there

^a  <https://orcid.org/0000-0003-0513-2750>

^b  <https://orcid.org/0000-0002-9209-8839>

^c  <https://orcid.org/0000-0002-0011-2534>

¹ Battra: is a person who has knowledge of traditional medicine and is capable of concocting medicinal plants.

were 117 species of medicinal herbs with 57 families, while the most frequently used herb was *Areca catechu* by the Malays in South Bangka Regency (Henri et al., 2022). Traditional herbal medicine or *Jamu* is considered a traditional medicine that arises from past experiences and is embedded in the culture of the community (Elfahmi et al., 2014).

Each culture has its own definition of health and illness (Fietje & Stein, 2015; Langdon & Wiik, 2010; Uskul, 2009). WHO (1948) defined health as a state of complete physical, mental, and social well-being, not merely the absence of disease and infirmity. The definition is holistic, and it presents three major interrelated components of health: physical, social, and mental (Amzat & Razum, 2014). In Indonesia, the definition about health and illness is very different. The concept of illness was "not being able to move as usual", and two metaphors for causing illness, are "due to supernatural or magical things", and "for violating taboos" (Amzat & Razum, 2014).

This research aims to understand the use of medicinal plants to cure diseases in society. Apart from that, this research also understands the concepts of health and illness from a societal cultural perspective.

2 METHODS

This research applied in qualitative approach. The qualitative approaches were chosen with the aim of studying the social phenomenon and understanding of individuals' culture (Creswell, 2014; Kalu & Bwalya, 2017).

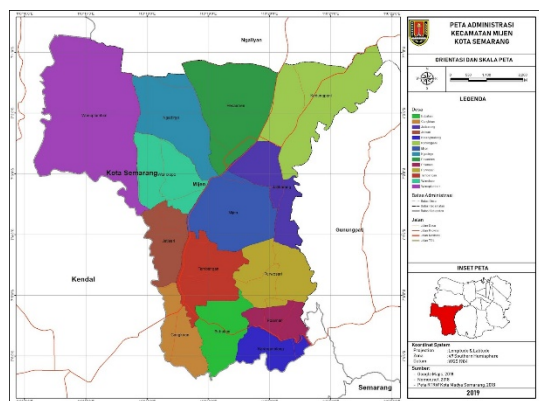


Figure 2: Maps of Mijen subdistrict, Semarang City.
Source: <https://mijen.semarangkota.go.id>

This research was conducted in Mijen district. Mijen is one of the districts in Semarang City, Central Java. Administratively, Mijen district borders directly

with Ngaliyan district in the north, Gunungpati district in the east, and Kendal regency in the south and west.

This research applies qualitative methods and uses observation, interview, and documentation techniques in data collection. Observation was conducted by selecting 5 subdistricts in Mijen. researchers conducted interviews with 10 informants from each subdistrict. There were 50 informants who participated in this research who provided information related to the concept of health and illness as well as knowledge and experience in applying medicinal plant treatments to cure illnesses in the family. Documentation is carried out to obtain information about traditional medicine, the use of medicinal plants, the conservation of medicinal plants, theoretical frameworks, and supporting research data.

3 RESULT AND DISCUSSION

The results of this research will be divided into three parts. First, a description of the concept of health and illness according to the people in Mijen district. Second, a list of medicinal plants used for family medicine, an explanation of processing methods, and the parts of the plants used. Third, this section will describe medicinal plants that have potential for conservation of traditional knowledge and nature.

3.1 Health and illness concept

The concepts of health and illness are viewed from various different angles. Based on the results of interviews conducted with 50 informants from the Mijen district community, here are several concepts related to health and illness.

3.1.1 Health, illness, and access

It is often, illness is identified by symptoms of not feeling well and you have to consume lots of traditional concoctions regularly in the morning and evening. In the treatment process, everything is carried out based on the concept of access and affordability of treatment resources.

If someone experiences pain, there are two treatment options. The first is to look for medicinal plants around the house. If there are none, then the second option is made, namely buying at a shop. Warung is believed to be a place that now sells various medicines for disease complaints.

3.1.2 Health, illness, and conventional medicine

The emergence of disease complaints causes a person to choose treatment in two ways, namely conventional or modern medicine. In Mijen, many people still use traditional medicine. Traditional medicine using plants around the house. The choice of traditional treatment cannot be free from side effects. People in Mijen think that conventional medicine tends not to have bad side effects for the body.

Conventional medicines are widely available in stalls. Someone will come to the shop according to the detection of their illness complaints. Then, buy the conventional medicine that you usually buy. People's fear arises when they consume conventional medicine too often.

Conventional medicine is widely consumed in Asian society, especially Indonesia. Felicilda-Reynaldo et al. (2020) researches the use of complementary and alternative medicine (CAM) in Asia. This could be a form of medical pluralism, a mixture of Eastern and Western health approaches. Significant predictors included age (≥ 65 years), associated with being female, having higher education, and having a chronic medical condition (Mehta et al., 2007). Sociodemographic factors were also significant predictors within Asian subgroups.

3.1.3 Health, illness, and traditional medicine knowledge

Traditional medicine is defined by the community as treatment that can be done alone through the use of medicinal plants around. This knowledge is passed down from generation to generation. This proves that there is a strong relationship between humans and nature, since its origins, humans have discovered the benefits of the plant kingdom (Šantić et al., 2017). The concept of traditional medicine is related to two things, suitability and taboo. Suitable means that

Even though traditional medicine is conceptualized as the lightest and simplest treatment, there are some people who are not suitable for this method of treatment. There are types of plants that are considered healing, some are not.

“Ya kalau menurut saya ya menyembuhkan tapi itu kan cocok-cocokan ada orang yang nggak cocok kalau pakai daun jambu lah, atau kunir jadinya orang tersebut mending minum obat dokter atau obat warung, terus kalau

saya tahu tanaman tersebut bisa dijadikan obat itu turun temurun karena kan zaman dahulu sangat jarang sekali ada obat-obat sekarang jadi kebanyakan orang zaman dahulu sering menggunakan obat-obat tradisional.”

"Yes, in my opinion, it's healing, but it's suitable, there are people who don't like using guava leaves, or turmeric, so that person would be better off taking doctor's medicine or shop medicine, and if I knew that this plant could be used as a medicine, it's been passed down from generation to generation because "In ancient times, there were very few medicines nowadays, so most people in the past often used traditional medicines."

This assumption is based on the experience felt when consuming herbal medicine. The formation of suitability and incompatibility with herbal medicine is related to experience, hereditary knowledge, and the effects felt after consuming it. Beliefs about the suitability and incompatibility of medicinal plants used are then continuously implemented in everyday life.

Apart from that, the concept of taboos has emerged when consuming plants. Some medicinal plants even contain myths when consuming them. Such as loss of power or other dangers. However, in the Mijen community there are no plants that are considered taboo.

“Tidak ada, ramuan ini herbal dan tidak ada pantangan di desa ini. Mungkin jika di desa lain hal seperti itu dipantangkan karena dianggap tidak sesuai dengan budaya mereka, tapi disini tidak ada.”

"No, this concoction is herbal and there are no taboos in this village. Maybe in other villages things like that are prohibited because they are considered not in accordance with their culture, but here it doesn't happen."

The absence of these restrictions means that people have more opportunities to explore plants for benefits in their daily lives, especially for alternative family medicine.

3.1.4 Health, illness, and disease

Healing of disease is usually adjusted to the complaints felt, whether choosing traditional medicine or modern medicine.

In the selection of traditional medicine, the selection of plants used as medicine is based on the illness they are suffering from (see Table 1), such as coughs, body aches, tonsils, gout, and others. Likewise, modern medicine adapts to the drugs they usually consume. Each plant has its own benefits for healing.

In Southern Ethiopia, there are 57 species of medicinal plants belonging to 31 families have been collected in the research area and local residents use them to treat various diseases in humans and livestock (Megersa & Woldetsadik, 2022).

3.2 Traditional and modern medicine concept

The concept of healing pain that has developed in the Mijen community is divided into two, namely traditional and modern medicine. Some people still maintain the concept of traditional treatment, but other people have shifted and believe more in modern medical treatment.

People who maintain traditional medicine choose this method as the main choice. The choice of medicine is also not arbitrary, it follows what they are used to consuming. Traditional herbal medicine is the main choice, peoples can make it by themselves or buy it at a shop.

"Iya sering membuat jamu tradisional, karena saya tensinya tinggi jadi buat jamu dari bahan-bahan yang ada di kebun."

"Yes, I often make traditional herbal medicine, because I have high blood pressure, I make herbal medicine from ingredients found in the garden."

Traditional medicine is considered more effective for family medicine, as shown in the following interview excerpt.

"Ya kalo pas asam lambung itu ya kaya minum obat biasa aja, tapi lebih cepat itu ya. ya pokoknya rasanya udah sakit banget, jadi kalo udah minum itu rasanya adem, enak. lain kalo minum obat di medis, ga langsung banget. saya kan minumnya sudah

dari promag, antasida, sudah sampai saya minum yang sirup, saya agak lupa. tapi masih aja, ya mungkin kondisinya. kalo disini nyari kunyit si tinggal ambil, kalo kota disana kan susah harus ke pasar dulu, saya biasanya suka stok."

"Yes, if you have stomach acid, it's like taking ordinary medicine, but it's quicker. Yes, basically it feels like I'm really sick, so when I drink it, and feels cool, good. On the other hand, if you take medication at a medical facility, it's not very immediate. I've been drinking promag, antacids, I've been drinking syrup, I kind of forgot. but still, maybe it's the condition. If you're looking for turmeric here, just pick it up, in the city there it's difficult, you have to go to the market first, I usually like to stock up."

Traditional herbal medicine is one of the most familiar forms of alternative family medicine options for the public, especially for disease prevention.

"Kalau sakit ringan itu biasanya kita merebus jahe, kunyit dan serai. Anget-anget diminum pagi dan sore. Kalau untuk pencegahan saya kan udah sekali flu mba, gampang sekali, jadi kalo dengar orang bersin-bersin saya langsung wah ini untuk mencegah, jadi daya tahan tubuhnya kuat, soalnya kalo kita mengkonsumsi obat terus kan ada efeknya ke ginjal, pokoknya sebisa mungkin dengan jamu. Tapi untuk anak-anak itu kan namanya remaja ga suka kaya gitu, saya kasih kunyit yang kental sama asem jawa sama gula aren di rebus, jadi kan seger ituma mba, kalo pas menstruasi itu kan kebanyakan sakit, kalo minum itu rutin jadinya perutnya ga sakit kan masih remaja."

"When we have a minor illness, we usually boil ginger, turmeric, and lemongrass. Drink it warm in the morning and evening. As for prevention, I once had the flu, it was really easy, so when I heard someone sneeze, I immediately thought, oh this is for prevention, so that the immune system is strong, because if we keep taking medicine, it will affect the kidneys, the important thing is to use herbal medicine as much as possible. But for the children, they are teenagers, they don't like that, I give them

thick turmeric, tamarind, and boiled palm sugar, so it's refreshing. Mom, when they are menstruating, they are usually sick, if I drink it regularly, my stomach doesn't hurt because they are still teenagers."

From the description above, it can be concluded that traditional medicine is very important for society and is chosen as family medicine. Based on several sources, family medicine is defined as that specialty of medicine which is concerned with providing comprehensive care to individuals and families and integrating (Al Gelban et al., 2013; WHO, 2003).

"Penghangat tubuh menggunakan jahe atau minuman rempah bir pletok yang berisi berbagai tanaman obat seperti, kapulaga, kayu manis cengkeh, jahe, serai dan daun pandan."

"Body warmers use ginger or the spice drink bir pletok which contains various medicinal plants such as cardamom, cinnamon cloves, ginger, lemongrass and pandan leaves."

However, many people prefer modern medical treatment. Modern medical treatment is carried out in 3 ways, namely: a) buying at a shop; b) come for a check-up at the community health center; and 3) go to the doctor.

At the start of an illness, usually the first thing that comes to mind is to buy medicine at the shop. People already have their own preferences regarding the shop medicines chosen for treatment.

"Kalau saya cuma pusing itu mungkin obat warung terlebih dahulu, kalo belum sembuh baru ke puskesmas. karena saya sering sakitnya itu pusing ya jadi ya ga obat obatan yang lain."

"If I just have a headache, maybe I'll take medication at the shop first, if it doesn't heal, then go to the community health center. "Because I often get sick, I get dizzy, so I don't need any other medicine."

Apart from that, there are also people who choose to go for a check-up at the health center, if the shop medicine does not have the effect of curing the pain they are suffering from.

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Finally, if healing through drug stores or community health centers is not effective, then the final option is to go directly to the doctor for examination.

"Biasanya obat warung atau ke dokter periksa."

"Usually, it's a drug store or a doctor's check-up."

From research findings, modern medical concepts were chosen as a healing method of treatment. This is different from traditional medicine which tends to prevent disease.

3.3 Medicinal plants used by the Mijen community for treatment

Below is a variety of knowledge regarding the types of plants chosen by the people of Mijen for treatment. From the table above, there are several medicinal plants that are often used by the community. The contribution of medicinal plants and the uses of medicinal plants in treating diseases, as prevention, or health care. The use of medicinal plants for treatment is flexible and adapts to human needs. If the disease is felt to be cured, then the treatment using this medicinal plant will be stopped. According to interviews with the Mijen community, there are 23 types of medicinal plants and some of the ones that are often used, namely: ginger, Chinese betel, turmeric, Dewa tubers, pineapple, and lemon. Further explanation regarding its use can be explained as follows.

3.3.1 Ginger

Ginger is usually used for sore feet. There are four ways to process it, namely by boiling, roasting, crushing, or grating.

“Jahe itu biasanya untuk keluhan kaki pegal. Itu diolah dengan diparut, bisa juga untuk minuman kalau sedang serak suaranya. Cara membuatnya dengan disangrai terlebih dahulu, di geprek, lalu diberi air panas, dan ditambahkan gula batu. Setahu saya cuma itu, untuk yang lain-lain saya tidak tahu.”

“Ginger is usually used for complaints of sore feet. It is processed by grating it, and can also be used as a drink if your voice is hoarse. How to make it by roasting it first, crushing it, then adding hot water and adding pure sugar. That's all, I know, I don't know about the others.”

Table 1: List of medicinal plants

No	Plants/ Local Name	Scientific Name	Family	Part of Plants	Benefits for Healing Diseases	Processing Method
1	Serai/ sereh	<i>Cymbopogon citratus</i>	<i>Poaceae</i>	stem	masuk angin	boiled
2	Ginger/ jahe	<i>Zingiber officinale</i>	<i>Zingiberaceae</i>	tubers	cough, body aches, masuk angin	boiled, grated, roasted, crushed
3	Chinese betel/ sirih cina	<i>Houttuynia cordata</i>	<i>Saururaceae</i>	all part	gout	all parts of the plant are washed, bent or cut, given boiling hot water, one glass is a minimum of 2 trees
4	Bay leaf/ salam	<i>Syzygium polyanthum</i>	<i>Myrtaceae</i>	leaf	high blood pressure, cholesterol, body aches, gout	boiled, added with honey and lemon
5	Turmeric/ kunyit	<i>Curcuma longa</i>	<i>Zingiberaceae</i>	tubers	gastric acid, stomach ache, vaginal discharge, gastric pains, sore	grated
6	Aromatic ginger/ kencur	<i>Kaempferia galanga</i>	<i>Zingiberaceae</i>	tubers	cough, fever	boiled
7	Dewa's tuber/ umbi dewa	<i>Gynura divaricata</i>	<i>Asteraceae</i>	tubers, leaf	tonsils, antiseptic	grated, filtered
8	Pineapple / nanas	<i>Ananas comosus</i>	<i>Bromeliaceae</i>	fruit	tonsils	cut
9	Java tea/ kumis kucing	<i>Orthosiphon aristatus</i>	<i>Lamiaceae</i>	flower	diabetes	boiled
10	Betel/sirih / sereh	<i>Piper betle</i>	<i>Piperaceae</i>	leaf	body aches, cleaning the feminine area	boiled
11	Tamarind/ asam jawa	<i>Tamarindus indica</i>	<i>Fabaceae</i>	fruit	stomach ache, cleaning the feminine area	boiled
12	Lemon / lemon	<i>Citrus limon</i>	<i>Rutaceae</i>	fruit	eliminate fat from food consumed, soothe the throat	squeezed
13	Moringa/ kelor	<i>Moringa oleifera Lam.</i>	<i>Moringaceae</i>	leaf	vertigo	cooked as vegetables
14	Bengle / bengle	<i>Zingiber cassumunar</i>	<i>Zingiberaceae</i>	rhizome	myth, sawan	made a bracelet

15	White betel/ sirih putih	<i>Piper betle</i>	<i>Piperaceae</i>	leaf	headache, beauty care, mask	drunk, applied topically
16	Coriander seeds/ ketumbar	<i>Coriandrum Sativum</i>	<i>Apiaceae</i>	seed	diabetes	boiled
17	Garlic / bawang putih	<i>Alliumsativum</i>	<i>Amaryllidaceae</i>	rhizome	influenza	boiled
18	Lime/ jeruk nipis	<i>Citrus aurantifolia</i>	<i>Rutaceae</i>	fruit	cough, antioxidant	boiled
19	Shallot / bawang merah	<i>Alliumcepa L.</i>	<i>Liliaceae</i>	tubers	fever, cough	smeared
20	Cabai puyang / cabe puyang	<i>Piper retrofractum Vahl</i>	<i>Piperaceae</i>	flower	sore	boiled, the water ratio for one consumption is one glass
21	Screwpin e/ pandan	<i>Pandanus amaryllifolius Roxb</i>	<i>Pandanaceae</i>	leaf	sore	boiled, the water ratio for one consumption is one glass
22	Star anise/ bunga lawang	<i>Illicium verum</i>	<i>Schisandraceae</i>	flower	sore throat	boiled
23	Bidara leaves/ daun bidara	<i>Ziziphus mauritiana L</i>	<i>Rhamnaceae</i>	leaf	diabetes	boiled

(Source: Fieldwork, 2021)

Ginger is processed in various ways, such as grating or crushing. In the interview excerpt above, it can be seen that there are various benefits of ginger, such as curing sore feet, and hoarse voice.

In the Traditional Chinese Medicine (TCM) concept, consumption of ginger also has beneficial effects on diabetes, obesity, hypertension, cancer, heart disease, osteoarthritis and bacterial infections. Ginger is an herbal, easily available, cheap medication which is associated with low risk can be substituted for chemical, scarce and expensive drugs (Shahrajabian et al., 2019).

Ginger, in particular, possesses a range of pharmacological activities including antioxidant, anti-inflammatory, anti-tumor, anti-bacterial, and anticoagulant properties (Megersa & Woldetsadik, 2022).

3.3.2 Chinese betel

Chinese betel is used as a gout medicine. Unlike other types of plants which are processed by boiling, this

plant is processed by simply soaking it in boiling hot water.

"Kalau sirih cina itu gak direbus, cuma dikasih air panas setelah mendidih 1 gelas minimal 2 pohon seakar nya, rasanya ya hampir sama kayak sirih biasa itu, baunya agak kayak mint-mint semriwing-semriwing gitu. Caranya dicuci bersih terus ditekuk atau dipotong-potong juga boleh terus masukin gelas kasih air panas, karena kalau di rebus nanti jadi lembek, warnanya nanti ijo-ijo gitu kalau terlalu lembek nanti agak-agak coklat, khasiatnya mungkin nanti beda kalau terlalu lembek sama enggak. Kalau salam direbus sampai mendidih bisa, karena daunnya kan keras."

"If you don't boil Chinese betel, you just add 1 glass of hot water after boiling, at least 2 tree roots, the taste is almost the same as ordinary betel, the smell is a bit like semriwing-semriwing mint like that. The

method is to wash it clean, then bend it or cut it, you can also keep putting it in a glass of hot water, because if you boil it, it will become soft, the colour will be green, so if it is too soft, it will be a little brown, the benefits may be different if it is too soft or not. If you boil the bay leaves until they boil, you can, because the leaves are tough."

Chinese betel is a medicinal plant that uses all parts of the plant. In the phytochemical screening test, Chinese betel leaves showed positive results for saponins, flavonoids, alkaloids, tannins, and steroids. Chinese betel is a plant that has many health benefits even though it is often considered a weed (Megersa & Woldetsadik, 2022).

3.3.3 Turmeric

Turmeric is used as an ingredient for treating stomach acid. The processing is very simple.

"Kalau saya biasanya sakit asam lambung itu paling memarut kunyit dicampur kuning telur ayam kampung. Biasanya saya obati dengan minum kunyit sama telur. Itu lebih cepat sembuhnya untuk sakit asam lambung yang saya alami. Untuk obat-obatan yang lain saya belum pernah mengkonsumsi."

"When I usually have stomach acid, I just grate turmeric mixed with free-range chicken egg yolk. Usually, I treat it by drinking turmeric and eggs. It heals faster for stomach acid pain that I experience. I have never taken other medicines."

Apart from that, turmeric is used to treat stomach aches.

"Kadang kalau kita sakit perut lalu minum kunyit asem. Kadang membuat sendiri, kadang beli kalau lagi males bikin sendiri. Kunyit biasanya direbus. Kalau saya beli kunyit kental itu, sama suruh. Diminumnya seminggu tiga kali, beli dua hari sekali, ada yang datang ke sini, ada pemasok, ada penjual jamu langganan saya. Saya minum ini tidak ada efek samping sama sekali. Kalau obat-obatan dari dokter itu kan ada efek sampingnya, kalau ini tidak ada. Sebelum minum ini tidak ada pantangan-pantangan khusus dan langsung saja jamunya diminum."

"Sometimes, if we have a stomach ache, we drink turmeric (asem). Sometimes I make it myself, sometimes I buy it if I don't feel like making it myself. Turmeric is usually boiled. If I buy thick turmeric, please tell me. I drink it three times a week, buy it every other day, someone comes here, there is a supplier, there is my regular herbal medicine seller. I drink this without any side effects at all. If the medicine from the doctor has side effects, there are none. Before drinking this, there are no special restrictions and you can just drink the herbal medicine straight away."

Another benefit of turmeric is to treat vaginal discharge that often occurs in women.

"Kalau kita keputihan itu minumnya kunyit kental, atau kalau perut nggak nyaman sakit itu kalau saya. Ini murni tidak ada campuran lain, kalau mau campur mungkin sama madu atau lemon."

"If we have vaginal discharge, drink thick turmeric, or if we have stomach discomfort, that's my problem. "This is pure, there are no other mixtures, if you want to mix it maybe with honey or lemon."

In the pharmacological studies, turmeric has various beneficial properties with antioxidant activity and is useful in conditions such as inflammation, gastric ulcers, and cancer. It also has antifungal, antimicrobial, renal, and hepatoprotective activities. Therefore, it has the potential to fight various cancers, diabetes, allergies, arthritis, Alzheimer's disease, and other chronic and intractable diseases (Megersa & Woldetsadik, 2022).

3.3.4 Dewa tubers/ umbi dewa

Dewa tubers are a type of plant that has benefits for treating tonsils. Apart from that, Dewa tubers also have other antiseptic benefits by using the leaves. Dewa tubers are shaped like ginger and are slightly yellowish white in color.

"Kalau sakit amandel itu dulu anak saya diobatannya pakai umbi dewa. Itu diparut, disaring, dan nanti diminum dengan nanas muda. Itu kata dokter, dikasih ubi dewa."

Alhamdulillah kempes. Soalnya kan umbi dewa lumayan mahal 1 kg nya Rp 80.000. Daunnya dimanfaatkan untuk antiseptic."

"When my child had tonsillitis, he used to treat it using tubers of Dewa. It is grated, filtered, and later drunk with young pineapple. That's what the doctor said, he was given sweet potatoes. Thank God it's deflated. The problem is that Dewa tubers are quite expensive, 1 kg costs IDR 80,000. The leaves are used as an antiseptic."

This plant is a type of plant that only grows in certain areas and is used as traditional medicine by local people.

3.3.5 Pineapple

Pineapple has benefits for treating tonsil pain.

"Jadi nanas dikupas direndam dan dibersihkan pake air garam terus dimakan. Itu bisa buat amandel."

"So, soak the peeled pineapple and clean it with salt water and then eat it. That can make the tonsils worse."

In Traditional Chinese Medicine pineapple is a yin tonic (Boudreaux & Lake, 2011). It clears heat and damp, regulates water and disperses wind. Specifically, it is good for wind—damp. Ancient Chinese medical texts suggest it enters the stomach, spleen, and bladder. For the best medicinal results, pineapples should be eaten alone.

2.3.6 Lemon

Lemon is used for consumption after eating oily food, it is believed to be able to remove the oil.

"Kalau habis makan, saya minum air yang sudah dikasih perasan jeruk. Kadang kan kita makan berminyak, maka minum air putih dan dikasih seiris lemon di gelas. Yang penting kita kan makan jaga keseimbangan, kalau saya gitu."

"When I finish eating, I drink water with orange juice added to it. Sometimes we eat something oily, so we drink water and put a slice of lemon in the glass. "The important thing is that we eat to maintain balance, if that's the case for me."

Lemon is a characteristic of traditional medicine in the current era. Infusion water is an example of one of them. Even though it tastes sour, the use of lemon combined with other types of fruit is its own attraction.

Lemon is another citrus fruit that is an excellent source of vitamin C (ascorbic acid); providing about 88% of the recommended daily intake. In addition, lemon is a source of soluble and insoluble dietary fiber that helps reduce the risk of cancer, various chronic diseases such as arthritis, and obesity and other coronary heart diseases (Megersa & Woldetsadik, 2022).

3.3 Conservation of Traditional Knowledge and Nature

The practice of using medicinal plants by the Mijen community in family medicine can not only maintain cultural knowledge that has been acquired through generations, it can also be accessed easily and cheaply and can maintain plant species with medicinal potential in the surrounding environment.

The state of conservation of cultural heritage is impacted not just by environmental aggressiveness, but also by domestic and industrial activities and the level of cultural and environmental knowledge of citizen (Nugroho & Hardilla, 2020). The producer (jamu seller) utilizes the home yard and gardens around the house to plant the herbs. By planting these plants around the house, the jamu sellers not only obtain benefit economically and get fresh ingredients, but also have implications to the conservation of medicinal plants for the purpose of sustainable use (Husain et al., 2019, 2021; Yuniati et al., 2021)

In the end, collaborative work between indigenous groups and the outside agencies remains the key means toward improving the indigenous economies and relations with external actors while also serving as a means to care for the environment across geo-political boundaries (Boudreaux & Lake, 2011). Strengthening Indigenous knowledge and values can lead to effective, locally owned, equitable and cost-effective conservation outcomes and contribute to global development goals (Boudreaux & Lake, 2011).

3 CONCLUSIONS

For the people use various types of plants which are considered to have medicinal properties in curing illnesses as part of family medicine. There are 19

types of plants that used for medicine. People consider that consuming medicinal plants is very good because they do not have negative side effects for the body compared to conventional medicines offered by allopathic medicine. These medicinal plants are formulated in such a way that they are thought to be able to cure a disease. Providing plant materials can also be accessed in various ways, namely by buying at the market, gardening in the yard or even having plants growing wild around the house.

The practice of using medicinal plants by the community in family medicine can not only maintain cultural knowledge that has been acquired through generations, it can also be accessed easily and cheaply and can maintain plant species with medicinal potential in the surrounding environment, especially in Mijen district.

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