Ethnobotanical Study of Hypertension (High Blood Pressure) MedicinalPlants in Mekarsari Village, Pasir Jambu District, Bandung, West Java

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Abstract

Indonesia is the second richest country in terms of biodiversity, with 35,000 plant species, 3,500 of which are medicinal plants. Generally, people use these plants as traditional medicine passed down through generations, which is the concept studied in the field of Ethnobotany . This study was conducted to obtain information on the use of medicinal plants for treating hypertension and the traditional processing of these plants by the community around Mekarsari Village, Pasir Jambu District, Bandung, West Java. According to data from the West Bandung City Health Office, the most common disease affecting the people of Mekarsari Village is hypertension. The methods used in this study include observation, interviews, field observations, identification, and documentation of medicinal plants as well as residents during interviews. Based on the research, 38 plant species from 25 different families were found to be used as hypertension medicine. The plants with the highest Fidelity Level (FL) values in treating hypertension are three species: Soursop leaves (*Annona muricata*) at 30%, Bay leaves (*Syzygium polyantum*) at 25%, and Sintrong leaves (*Crassocephalum erepidioides*) at 22.5%.

Keyword: Bandung, Ethnobotany, *Fidelity Level* (FL), Hypertension, Mekarsari Village

INTRODUCTION

Indonesia is the second richest country after Brazil biodiversity as much as 35.000 types of plants and 3,500 types of which are medicinal plants, this shows that Indonesia has great potential in the development of medicinal plants whose quality is the same as medical drugs. Currently, the herbal plant industry has begun to develop rapidly due to the opinion of that herbal treatment has very little negative impact when compared to the use of drugs modern. Along with the increasing public awareness of the importance of healthy living, the increase in herbal medicine is increasing, so that research on the use of medicinal plants is also growing rapidly (Ali *et al*., 2022).

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There are two types of treatment, namely modern medicine and traditional medicine. Modern medicine uses chemical drugs while traditional or herbal medicine is treatment using natural ingredients. The choice of chemical drugs and traditional medicines depends on the situation and conditions, because there is a difference between the reaction and how the drug works. Chemical drugs are usually used for diseases that are acute, because the reaction is faster compared to traditional medicine. If you take chemical drugs continuously for a long period of time, it can cause dangerous side effects. The advantages of traditional medicine are that it is easy to obtain, the raw materials can be grown in the surrounding environment, cheap and can be mixed by everyone, while the disadvantages of traditional medicine are weak pharmacological effects, the raw materials have not been standardized, and a series of tests have not been carried out to ensure the effectiveness, safety and high rate of use of traditional medicines can be influenced by a person's knowledge which has an impact on their level of trust in medicine aforementioned. A person with a high level of knowledge tends to choose a treatment that is considered safe and beneficial for him (Andala & Safitri, 2023).

Medicinal plants or known as traditional medicine are types of plants that are efficacious as medicine and are used to cure or prevent various diseases. The use of medicinal plants by drinking, pasting, and inhaling so that their usefulness can fulfill the working concept of cell receptors in receiving chemical compounds or stimuli of medicinal plants that can be used, both intentionally planted and grown wildly. The plant is used by the community to be concocted and presented as medicine to cure diseases (Ali *et al*., 2022).

Indonesia has types of plants that can be used as traditional medicines, so that it allows many people who still often use medicinal plants, so the collection of data on the use of medicinal plants for hypertension was carried out in Mekarsari Village, Pasir Jambu District, Bandung because according to data from the West Bandung City Health Office, the disease that is most suffered by the people of Mekarsari Village is Hypertension of the Mekarsari Village Community who live around the area Gambung Tea plantation, most of them choose to work as tea pickers. This work as a picker has been passed down from generation to generation where their descendants will continue to work as pickers to replace the position of their parents who have entered retirement. Life on the plantation reflects a community isolated from the outside world (Saskara & Sita, 2023).

According to data from the West Bandung City Health Office, the most common disease suffered by the community Mekarsari Village is Hypertension. The number of Hypertension sufferers worldwide continues to increase every year (Saranani *et al*., 2021). The results of Riskesdas 2018 show that the prevalence of Hypertension in the population over 9 18 years old based on national measurements is 34.11%, higher than the prevalence in 2013 of 25.8% (Basic Health Research, 2018). There are 45% of deaths due to heart disease and 51% of deaths from stroke due to hypertension (Hardiyanti *et al*., 2022).

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Hypertension is a condition when blood pressure in the blood vessels increases chronically, it can occur because the heart works harder to pump blood to meet the body's oxygen and nutrient needs. If left unchecked, this disease can interfere with the function of other organs, especially vital organs such as the heart and kidneys. The Hypertension criteria used refer to the diagnostic criteria of JNC VII 2013, namely the results of measuring systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg (Thahir *et al*., 2021). Given the increasing number of people with hypertension, the danger of complications caused and the side effects or pharmacological impacts of antihypertensive drugs due to long-term treatment, it is necessary to carry out socialization on how to control hypertension using non-pharmacological therapies such as the use of medicinal plants or TOGA (Irfan *et al*., 2021).

In the use of medicinal plants, people have confidence in certain plants to treat a disease, this can be known by using the FL formula. The Fidelity Level (FL) value is an ethnobotanical index value that describes the percentage of utilization of Hypertension medicinal plants. Local communities for certain uses have higher FL values compared to other plants that are still underutilized (Malik, 2019). Thus, the public can find out information about the types of medicinal plants that can be used to treat hypertension, especially in Mekarsari Village, Pasir Jambu District, Bandung, West Java. This research was conducted with the aim of obtaining information on the use of medicinal plants and how to process traditional medicinal plants for hypertension by the community around Mekarsari Village, Pasir Jambu District, Bandung, West Java based on data obtained during interviews.

METHOD
Study area
The present study was conducted in Mekarsari Village, Pasir Jambu District, Bandung, West Java on May 2 to 4, 2024. The data of the research location can be seen in figure 1.
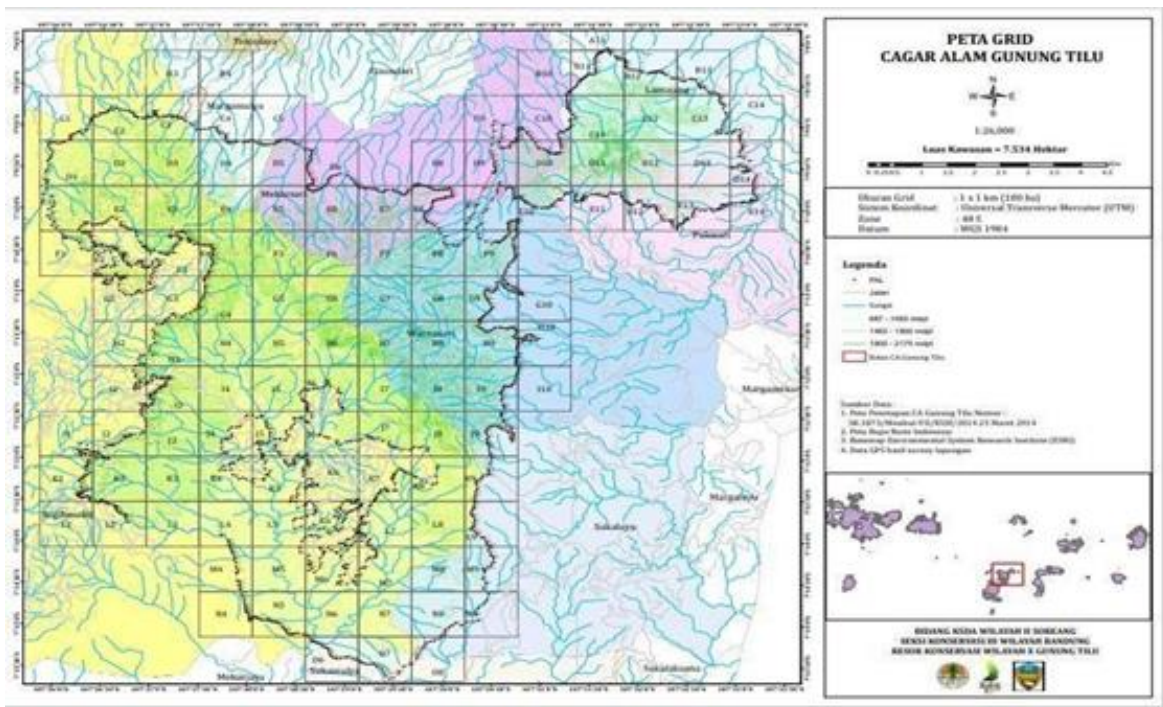
Picture 1. Gunung Tilu Nature Reserve Tea and Quinine Research Center, Gambung, Ciwidey, West Bandung, West Java

Research Instruments

I.   Tool

The tools used in this study include: questionnaires, digital cameras, stationery, road boards, documents or reports, Sukarya, Deniek G (2013) book 3500 Plant Species of the Botanic Garden of Indonesia, pocket book "Flora" by C. G. G. J. van Steenis (1981) and the book Medicinal Plant Tourism Path in the Bogor Botanical Garden (2016) by Syamsul Hidayat et al., book 1001 Garden Plants in Singapore (2015) by Boo Chin Min Kartini Omar et al., and book FLORA (1987) by Dr. C. G. G. J. Van Steenis, et al.

II.   Research Object

The collection of research data is based on the results of questionnaires obtained during direct interviews with the community at the intended location and documentation to find out the type of plants used in the treatment.

How it works

I.   Data Collection Method

Ethnobotanical research is carried out in 5 stages, namely observation, interviews, field observations, identification, and documentation.

   1.   Observation

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The observation was carried out in Mekarsari Village, Pasir Jambu District, Bandung, West Java. This activity is to find information about people who still use medicinal plants for hypertension.

2. Interview

   The collection of information on the use of medicinal plants for hypertension in Mekarsari Village, Pasir Jambu District, Bandung, West Java. was conducted by means of semi-structured interviews with 40 respondents while according to Cohen et al., (2000), the minimum number of respondents was 30 respondents. Semi- structured interviews are an interview process that uses questionnaires but is more flexible because it can develop the topic of the question by asking questions outside the questionnaire but still in line with the main topic. The technique for determining respondents is purposive sampling, which is the determination of respondents based on direct directions from key respondents (Heads of RT and RW, Elders) to collect data on general respondents (the community).

3. Field Observation

   One of the methods of data collection after the interview, is field observation, where respondents show the types of medicinal plants based on knowledge about the use of medicinal plants for hypertension in the community in Mekarsari Village, Pasir Jambu District, Bandung, West Java. Field observations are carried out in the yards of community houses and in gardens, this aims to determine the status of wild or cultivated (domestic) plants. Wild plants are plants that are free to live in nature, while cultivated (domestic) plants are plants that have been maintained and are usually planted in the yard of the house.

4. Identification

   The identification process was carried out directly with the help of field assistants, followed by further identification at the National University Botanical Laboratory using plant identification books, namely the book 3500 Plant Species of the Botanic Garden of Indonesia (2013) and the book FLORA (1981) by Dr. C.G.G.J. Van Steenis, et al.

5. Documentation

   The data obtained from the respondents was tidied up, then a table was made containing the name of the tribe, the scientific name of the plant, the local name of the plant, the benefits to cure the disease, the organs used, the status of the plant, how to use it, and the FL value. Plants are also documented in the form of photos based on the knowledge of medicinal plants owned by the respondents.

2. Data Analysis

The data analysis in this study uses quantitative and qualitative data. Qualitative and quantitative data were obtained from the results of interviews with local communities regarding the use of family medicinal plants in Mekarsari Village, Pasir Jambu District, Bandung, West Java. Data on each plant species used by the local community is recorded such as: the local name of the plant, its properties, the parts used, the way it is processed, as well as the identification of the scientific name, the status of the plant including cultivation or not.

A. Fidelity Level (FL) according to (Friedman et al., 1986) the percentage of information that uses and utilizes a particular type of plant for the same primary function as in the equation below:

$$FL\ (\%) = \frac{Np}{N}\ x\ 100$$

Description:
FL = Fidelity level
Np = Number of respondents who mentioned species for a particular use
N = Total number of respondents who mentioned species for various uses

RESULT

A. Characteristics Responden

Table 1. Characteristics of Respondents

It	Name	Gender	Age (years)	Work
1.	Ade sukmara	L	66	Plantation
2.	Fadli	L	45	Chairman of RW 08
3.	Idar	P	66	Selling
4.	Soni	P	70	Selling
5.	Yuli	P	40	IRT
6.	Abi	L	83	PPTK Retirement
7.	Sonah	P	72	IRT
8.	Wiwi	P	56	IRT
9.	M.Susena	L	63	PPTK Retirement
10.	Rohmat	L	62	PPTK Retirement
11.	Gem	P	59	IRT
12.	Hernawati	P	33	PPTK Employees
13.	Yudianto	L	44	PPTK Employees
14.	Ira	P	44	IRT
15.	Titin	P	25	IRT
16.	Nyangjang	L	50	Chairman of RW 05
17.	Ardiansyah	L	31	PPTK Security Guard
18.	Intercept	L	53	Homestay Keeper
19.	Yanto	L	42	PPTK Security Guard
20.	Endang	L	57	PPTK Retirement
21.	Titin	P	51	Chairwoman of RT 07
22.	Hittite	P	65	Pendium PPTK
23.	Nining	P	50	IRT
24.	Leni	P	39	IRT
25.	Grandchild	P	54	Merchant
26.	Imas	P	55	IRT
27.	D	L	70	Coffee Farmers

28.	Cylinder	L	43	Merchant
29.	Empin	L	74	Peternak
30.	Ecep	L	44	PPTK Employees
31.	Asep	L	48	PPTK Security Guard
32	Lia Rahmawati	P	41	IRT
33.	Kusodikin	L	52	PPTK Security Guard
34.	Asep Wardiman	L	40	PPTK Security Guard
35.	Dudun	L	58	Coffee Farmers
36.	Ila Susanti	P	54	Mrs. RW 09
37.	Anonymous	P	49	PPTK Employees
38.	Rohayanto	L	57	PPTK Retirement
39.	Etih Rohanti	P	47	Merchant
40.	Deni	L	43	PPTK Security Guard

B.   Medicinal Plants for Hypertension

Hypertension (High Blood Pressure) is a manifestation of a hemodynamic balance disorder of the cardiovascular system whose cause is multifactorial, so it cannot be explained by a single mechanism (Nuraini, 2015). One of them is the interaction between diet and age. Diet is an important factor that determines blood pressure in the elderly. Unbalanced eating habits are one of the risk factors for increased high blood pressure. Modern nutritional factors are the main cause of the development of Hypertension. While it is not guaranteed that practicing healthy eating habits will prevent disease, it is worth paying attention to daily food intake patterns can help minimize the risk to someone affected by the disease (Andrianei & Sita, 2023).

Based on the results of interviews with residents of Mekarsari Village, there are several medicinal plants used in treating Hypertension. There are 38 types of medicinal plants that can be seen in Table 2, including *Aleurites molluccanus* (Pecan), *Allium sativum* (Garlic), *Amomum compactum* (Cardamom), *Annona muricata* (Soursop), *Anredera cordufolia* (Binahong), *Apium gravolens* (Celery), *Averrhoa carambola* (Starfruit), *Camellia sinensis* (Tea), *Carica papaya* (Papaya), *Centella asiatica* (Antanan), *Citrullus lanatus* (Watermelon),*Citrus limon* (lemon), *Coriandrum sativum* (Coriander), *Cnidoscolus aconitifolius* (Japanese papaya), *Crassocephalum erepidioides* (Sintrong), *Cucumi sativus* (Cucumber), *Curcuma longa* (Turmeric) *Erigeron sumatrensis* (Jalantir), *Gyunura procumbens* (Connecting life/sambi lotok), *Hylocereus polyrhizus* (Dragon fruit), *Melastoma malabathricum* (Senduduk), *Muntinga calabura* (Cherry), *Pandanus amaryllifolius* (Pandan), *Persea americana* (Avocado), *Phelleria macrocarpa* (Crown of Gods), *Physalis angulata* (Ciplukan/Cecenet), *Piper betle* (Betel (Bettah), *Psidium guajava* (Guava), *Rubus rosifolius* (Mountain Arbei), *Scurrula artopurpurea* (Benalu tea), *Sechium edule* (Chayote), *Solanum betaecum* (Dutch eggplant), *Solanum muricatum* (Pepino), *Solanum torvum* (Takokak), *Syzygium pdyantum* (Salam), *Scurrula artopurpurea* (Benalu tea), *Solanum dulcis* (Kedondong), *Taraxacum offcinale* (Wadelia) and *Vigna radiata* (Toge). Most local residents are more likely to use these medicinal plants by boiling.

The plants that are most widely used for the treatment of Hypertension by the people of Mekarsari Village, Pasir Jambu District are, Soursop Leaf (*Annona muricata*), Salam Leaf (*Syzygium polyantum),* and Sintrong Leaf (*Crassocephalum erepidioides).* Soursop leaves (*Annona muricata*) have antioxidants that can ward off free radicals and these antioxidants can flex and dilate blood vessels, lower blood pressure and other contents such as potassium ions which have several mechanisms in lowering blood pressure, namely weakening myocardial contractions, increasing sodium production from the body, inhibiting renin production, causing vasodilation, and inhibiting vasoconstriction endogenous (Swastini, 2021), ssakan in bay leaves (*Syzygium polyantum)* contains flavonoid compounds to lower blood pressure due to oxidation and repair organs damaged due to high blood pressure and tannins function to relax arterial muscles so as to lower blood pressure in people with hypertension (Nurtanti & Sulistiyoningsih, 2022). And sintrong leaves (*Crassocephalum erepidioides)* have chemical components such as saponins, flavonoids, and polyphenols. Thecontent of polyphenols protects the body's cells from damage caused by free radicals, inhibitshydrolytic and oxidative enzymes, and has an antibacterial effect (Puji *et al.,* 2020).

C.   Hypertension Medicinal Plant Tribe

Based on the results of the interview, the Hypertension (High Blood Pressure) medicinal plants used by the community in Mekarsari Village, Pasir Jambu District are as many as 38 types that are included in 25 plant tribes. These medicinal plants are used as traditional medicines that are used as an alternative and the first step for treatment and care that can be taken directly in the yard of the house, community cultivation gardens or from theforest. The medicinal plants used come from various plant tribes can be seen in figure 2.
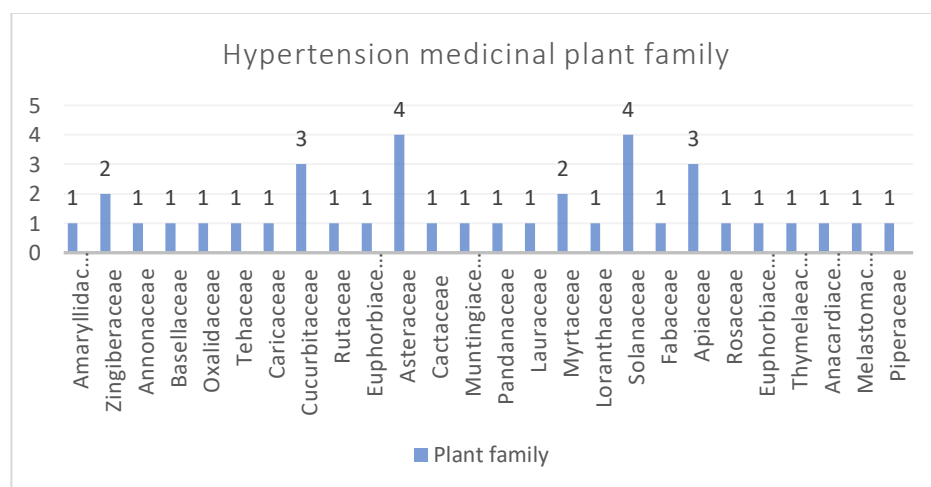

Figure 2. Diagram of Hypertension Medicinal Plants in Mekarsari Village, Pasir JambuDistrict, Bandung, West Java

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D.   Parts of the plant used

The results of interviews with respondents found that the parts of plants that are often used as a medicine for hypertension in the Mekarsari Village Area, Pasir Jambu District, Bandung, West Java, are 52% leaves, 29% fruits, 5% rhizomes, 5% seeds, 3% sprouts, 3% roots and all parts 3%.

Table 2. Medicinal plants for Hypertension in Mekarsari Village, Pasir Jambu District, Bandung, West Java

No.	Scientific Name	Local Name	Suku	Usage section	How to Use	Technique, Single/Mixed	FL Value
1	*Aleurites molluccanus*	Muncang	Euphorbiaceae	Seed	The seeds are mixed with warm water and consumed immediately	Single	2.5
2	*Allium sativum*	Bawang bodas	Amaryllidaceae	Rhizome	The rhizomes are boiled andconsumed immediately	Single	7.5
3	*Amomum compactum*	Kapol	Zingiberaceae	Seed	The seeds are boiled in sufficientquantities	Single	2.5
4	*Annona muricata*	Manalika	Annonaceae	Leaf	The leaves are boiled in sufficientquantities	Single	30
5	*Anredera cordifolia*	Binahong	Basellaceae	Leaf	The leaves are boiled in sufficientquantities	Single	5
6	*Apium gravolens*	Saledri	Apiaceae	Leaf	The leaves are boiled and can bejuiced	Single	2.5
7	*Let's make money*	Balimbing	Oxalidaceae	Fruit	The fruit is consumedimmediately	Single	10
8	*Camellia sinensis*	Enteh	Tehaceae	Leaf	The leaves are boiled in sufficientquantities	Single	2.5
9	*Karika Papaya.*	Gedang	Caricaceae	Leaf	The leaves are boiled andconsumed immediately	Single	2.5
10	*Centella asiatica*	Antanan	Apiaceae	Leaf	The leaves are boiled in sufficientquantities	Single	10
11	*Citrullus lanatus*	Samangka	Cucurbitaceae	Fruit	The fruit is consumedimmediately	Single	20
12	*Citrus limon*	Lemon	Rutaceae	Fruit	The fruit is mixed with warmwater	Single	2.5
13	*Coriandrum sativum*	Katuncar	Apiaceae	Seed	The seeds are mixed with warmwater	Single	2.5
14	*Cnidoscolusaconitifolius*	Tangkal Edi	Euphorbiaceae	Leaf	The leaves are boiled in sufficientquantities	Single	7.5
15	*Crassocephalumerepidioides*	Sintrong	Asteraceae	Leaf	The leaves are boiled in sufficientquantities	Single	22.5
16	*Cucumis sativus*	Bonteng	Cucurbitaceae	Fruit	The fruit is consumedimmediately	Single	12.5
17	*Curcuma longa*	Koneng	Zingiberaceae	Rhizome	The rhizomes are boiled insufficient quantities	Single	2.5
18	*Ergeron sumatrensis*	Jalantir	Asteraceae	Leaf	The leaves are boiled in sufficientquantities	Single	7.5
19	*Gyunura procumbens*	Sambi lotok	Asteraceae	Leaf	The leaves are boiled in sufficientquantities	Single	2.5
20	*Hylocereus polyrhizus*	Dragon Fruit	Cactaceae	Fruit	The fruit is consumedimmediately	Single	5
21	*Melastoma malabathricum*	Harendongbokor	Melastomaceae	Fruit	The fruit is consumedimmediately	Single	2.5
22	*The City of Calabura*	Cherries	Muntingiaceae	Fruit	The fruit is consumedimmediately	Single	5

| 23	*Pandanus amaryllifolius*	Pandan	Pandanaceae	Leaf	The leaves are boiled in sufficientquantities	Single	5
24	*Persea americana*	Alpuket	Lauraceae	Leaf	The leaves are boiled in sufficientquantities	Single	5
25	*Phelleria macrocarpa*	Bad Dewa	Thymelaeaceae	Leaf	The leaves are boiled in sufficientquantities	Single	2.5
26	*Physalis angulata*	Checenet	Solanaceae	Whole parts	All parts are boiled in sufficientquantities	Single	12.5
27	*Piper betle*	Seureuh	Piperaceae	Leaf	The leaves are boiled in sufficientquantities	Single	5
28	*Psidium guajava*	Guava	Myrtaceae	Leaf	The leaves are boiled andconsumed immediately	Single	7.5
29	*Rubus rosifolius*	Arbei Mountain	Rosaceae	Fruit	The fruit is consumedimmediately	Single	2.5
30	*Scurrula artopurpurea*	Manganeuh tea	Loranthaceae	Leaf	The leaves are boiled in sufficientquantities	Single	22.5
31	*Sechium edule*	Lajet	Cucurbitaceae	Fruit	The fruit is boiled in sufficientquantities	Single	17.5
32	*Solanum betaceum*	Terong kori	Solanaceae	Want	The roots are boiled in sufficientquantities	Single	5
33	*Solanum muricatum*	Arput	Solanaceae	Fruit	The fruit is consumedimmediately	Single	2.5
34	*Solanum torvum*	Takokak	Solanaceae	Leaf	The leaves are boiled in sufficientquantities	Single	2.5
35	*Spondias dulcis*	Kadondong	Anacardiaceae	Leaf	The leaves are boiled in sufficientquantities	Single	2.5
36	*Syzygium polyantum*	Salam	Myrtaceae	Leaf	The leaves are boiled in sufficientquantities	Single	25
37	*Taraxacum officinale*	Jombang	Asteraceae	Leaf	The leaves are boiled in sufficientquantities	Single	5
38	*Radiata vineyard*	Toga	Fabaceae	Sprouts	The sprouts are boiled insufficient quantities	Single	2.5
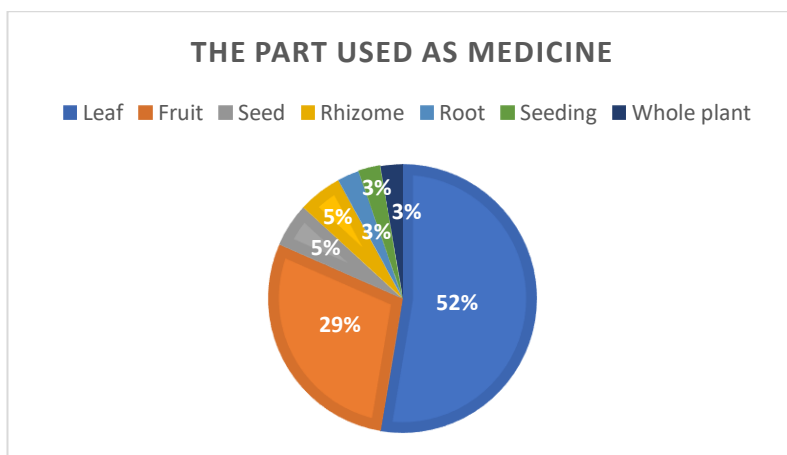
Figure 3. Diagram of the Parts of Medicinal Plants Used in Mekarsari Village,
Pasir JambuDistrict, Bandung, West Java

E.   How to Process Medicinal Plants

The results of interviews with respondents regarding the use of medicinal plants used by residents in the Mekarsari Village Area, Pasir Jambu District, Bandung, West Java can be seen in figure 4. There were 4 ways of using drugs carried out by residents, including boiled 25 (58%), unprocessed/directly consumed 14 (33%), mixed with warm water 3 (7%) and in juice 1 (2%).
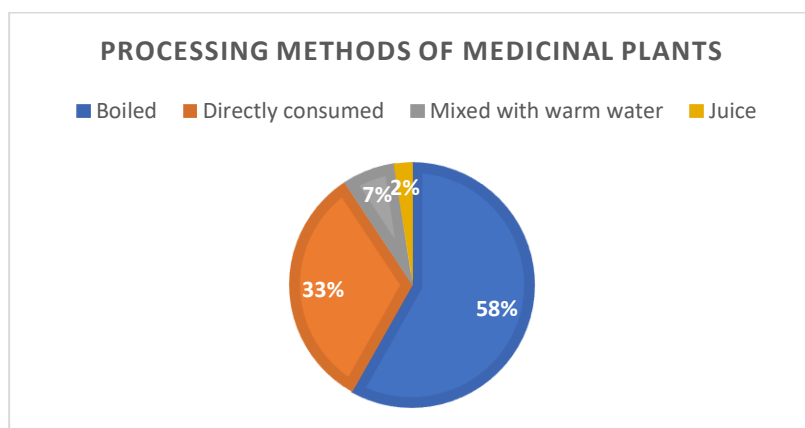
Figure 4. Diagram of How to Process Hypertension Medicinal Plants in
Mekarsari Village, Pasir Jambu District, Bandung, West Java

F.   *Fidelity Level* (FL)

Based on calculations for grades *Fidelity Level* (FL) is the highest, namely the Soursop plant (*Annona muricata)* with an FL value of 30%. According to Khan *et al.* (2014) Plants that have the highest FL tend to be known and trusted among the community in treating a certain disease.

Soursop (*Annona muricata)* is a plant that has a high *Fidelity Level* (FL) value which contains monotetrahydrofuran acetogenin, anomurisin A and B, gigante rosin A, annonasin10-one, murcatosin A and B, annonacin, goniotalamicin, and potassium ions are compounds found in soursop leaves. In addition, there are a number of additional substances contained init. These include the alkaloids murisine, calcium oxalate, phytosterols, tannins, vitamin A, B vitamins,

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and vitamin C (Daud *et al.,* 2016). According to Alfira (2017), it shows that soursopleaves can lower blood pressure in people with hypertension, both systole and diastole. Soursop leaves contain antioxidants and can ward off free radicals, can relax, dilate blood vessels and lower blood pressure (Sangging & Sari, 2017). The medicinal parts of soursop arethe fruits, leaves and seeds, but the most widely used are the leaves where soursop leaves contain flavonoids, tannins, alkaloids, quinones, polyphenols and minerals such as magnesium, calcium and potassium (La Ode, 2022).

DISCUSSION

Based on the grouping of respondents (Table 1). This study was conducted interviewsthat are expected to find out the use of Hypertension (High Blood Pressure) medicinal plantsto 40 respondents in Mekarsari Village, Pasir Jambu District, Bandung, West Java, where field assistants will direct to visit local residents. In addition, interviews were conducted with the Chairman of the RW, the Chairman of the RT, and the elders in the area to find out more complete information on the use of medicinal plants.

Based on the table above, 19 female respondents (47.5%) and 21 men (52.5%) were obtained. This is because the time in collecting data is in the time range where most women are working as garden pickers, so only men who have retired or are working in the MekarsariVillage area are obtained. The main livelihood of the people in Mekarsari Village, Pasir JambuDistrict, Bandung, West Java is as tea pickers/PPTK employees, retired PPTK, and traders. The number of male respondents is higher because men as heads of households and most of them as retired PPTK employees, have memory and expertise in managing TOGA (Family Medicinal Plants) (Suwaryo & Yuwono, 2017). When compared to the small number of female respondents, because in the data collection female respondents are doing work. The results of the interviews showed that the level of knowledge about the use of plants as medicinal plants was higher at an older age compared to the younger population. This is in accordance with the statement of Andrianei & Sita (2023), that people with older age have higher knowledge about the use of medicinal plants compared to people with younger ages. Respondents with older ages use medicinal plants because they already believe and are used to using them. However, based on the results of interviews, respondents with young age lackthe knowledge to directly utilize medicinal plants in curing several diseases. This is because the knowledge that respondents have gained about the use of medicinal plants comes from parents or hereditary and the result of exchanging ideas with family.

In Mekarsari Village, Pasir Jambu District, there are 38 types of Hypertension medicinal plants from 25 tribes, including *Asteraceae* (4 types), *Solanaceae* (4 types), *Cucurbitaceae* (3 types), *Zingiberacea* (2 types), *Euphorbiaceae* (2 types), *Myrtaceae* (2 types), *Apiaceae* (3 types) and the tribe of medicinal plants that only 1 type was found, namely*Amaryllidaceae, Annonaceae, Basellaceae, Oxalidaceae, Rutaceae, Cactaceae, Muntingiaceae, Pandanaceae, Lauraceae, Piperacea, Lorathaceae, Fabaceae, Rosaceae, Thymelaceae, Anacardiceae, Melastomaceae, Tehaceae,* and *Caricareae.*

Plants from *the Asteraceae*, *Solanaceae* and *Cucurbitaceae tribes* are the most widelyused medicinal plants by the people of Mekarsari Village, Pasir Jambu District as a medicinefor Hypertension (High Blood Pressure). Medicines from these tribes are found in the area around

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the yard of the house which can grow wild (Mutia, 2022). In addition, plants from these tribes are also easy to care for (Meidatuzzahra & Swandayani, 2020), and have higheconomic value (Gebrina, 2021).

The use of the leaf part which is more widely used as a traditional medicine is common because the leaves are easy to find in large quantities, available throughout the year. The leaves are also easy to clean and are an easy part of the plant to make potions. Scientifically, the leaves contain compounds such as alkaloids, flavonoids, saponins, potassium, and minerals that function as medicines. This is in line with other studies that show that drinking leaf decoction water such as bay leaves can lower blood pressure in people with hypertensionbecause of the content of flavonoid compounds, potassium, and alkaloids it contains (Masyita*et al.,* 2021).

The most commonly used processing method by residents in the Mekarsari Village Area, Pasir Jambu District, Bandung, West Java is by boiling. Boiling is the most common processing method carried out by the community. The method of boiling can be trusted by thecommunity that it functions to kill germs found in plants, is safer and so that substances that function as medicine in the leaves can be dissolved into the boiled water (Pelokang *et al.,* 2018), in addition, the boiling method is an effective and economical way, can reduce the taste, taste, and bitterness compared to being eaten directly, and by boiling it is more sterile and the boiling process can remove the substances contained in the plant and have a reaction so fast when drinking (Lestari & Susanti, 2019).

Basically, the use of medicinal plants by the community is simple, only sourced from the experience and information of previous parents. The exact dosage is also unknown, but the most important thing is to process the plant so that it can be used for treatment (Mulyani *et al.,* 2020). According to Mulyani, Hasimun & Sumarna (2020), in traditional society, traditional medicine is divided into 2, namely traditional medicines or herbs and how to

process medicinal plants. Traditional medicine is a medicine that has been used by people forgenerations to treat certain diseases and can be obtained freely in nature.

CONCLUSION

The results of the study showed that the people of Mekarsari Village, Pasir Jambu District, Bandung, West Java used 38 types of plants including 25 plant tribes to treat hypertension. The most popular part of the plant is the leaves, and the most commonly used processing method is boiling. Three types of plants that have the highest *Fidelity Level* (FL)value that can be used as medicinal plants to treat Hypertension are Soursop leaves (*Annonamuricata*) by 30%, Salam leaves (*Syzygium polyantum)* by 25%, and Sintrong leaves (*Crassocephalum erepidioides)* by 22.5%.

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