Sarcouncil Journal of Applied Sciences

ISSN(Online): 2945-3437

Volume- 03| Issue- 04| 2023

Research Article **Received:** 12-02-2023 | **Accepted:** 17-03-2023 | **Published:** 14-04-2023

Study of Etnopharmaceutical Plants in Harapan Village Barru Regency, South Sulawesi

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Abstract: The people of Harapan Village who have used plants as traditional medicine. The residents believe that these medicinal plants can cure diseases. The knowledge they get from generation to generation has used plants as traditional medicine. Therefore, the population uses a lot of plants in traditional medicine. This study aims to find out the ethnopharmaceutical plants used and how to use drugs by the people of Harapan Village, Barru Regency, South Sulawesi and. This type of research is a survey research with an observational method through questionnaires and interviews with 25 respondents in Harapan Village, Barru Regency. The results of the study found 25 species, 20 families and 24 genera that were used as traditional medicine by the people of Harapan Village. The plant parts used are leaves, rhizomes, fruit and stems. The method of processing plants is by boiling and pounding / squeezing. Then how to use it by drinking, affixed / smeared. Local people of Harapan Village have used plants as traditional medicine. They believe that the medicinal plant can cure the disease. It is the knowledge gained for generations; therefore, many people use plants for this purpose. This research to find out the ethnopharmaceutical plants used as well as how to use drugs by the society. This research was conducted survey study with observational methods through questionnaires and interviews including 25 respondents of local people. The results of the study specified 25 species, 20 families and 24 genera that were used as traditional medicines. The parts used were leaves, rhizomes, flesh, and stems. The process method was by boiling, grinding, or squeezing. Then, the ways to use were by drinking, taping or applied.

Keywords: Ethnopharmacy, Medicinal plants, Harapan Village, Barru Regency.

INTRODUCTION

Plants are a significant source of medicines used in the treatment of various categories of human diseases. Historically all medicinal preparations were of plant origin, either in simple form from plant parts or in more complex form from crude extracts, mixtures, etc. (Shosan, 2014).

Traditional medicine is treatment that refers to the experience and skills passed down from generation to generation and is applied in accordance with the prevailing norms in society. Traditional medicine is an ingredient or ingredient in the form of plant material, animal material, mineral material, preparation of extracts (gelenik) or a mixture of these materials which have been used for generations for treatment based on experience. (zukulfi, 2004)

Traditional medicinal plants are generally safe because they are more natural and have fewer side effects than factory- made medicines. That is why some people prefer to take traditional medicines.

Generally, knowledge of traditional medicine is only controlled by the elderly. The current younger generation is less motivated to seek knowledge from the elderly, and is slowly starting to be abandoned due to various factors. Conditions like this, make traditional heritage will gradually experience extinction in its original place (Noocahyati, 2012). Therefore, there needs to be an effort to document knowledge of traditional medicine along with efforts to preserve medicinal plants for knowledge, conservation and public welfare. One way of documenting this is through ethnopharmaceutical studies of medicinal plants.

The use of plants as traditional medicine in every region and even every ethnic group has a different understanding, knowledge and even experience. For example, a type of medicinal plant used by people in Harapan Village to treat certain diseases, may not necessarily be used by people in other areas to treat the same disease.

The people of Harapan Village who have used plants as traditional medicine. The residents believe that these medicinal plants can cure disease. The knowledge they get from generation to generation has used plants as traditional medicine. Therefore the population uses a lot of plants in traditional medicine.

Therefore, so that the preservation of knowledge and the use of plants as traditional medicine is maintained and can be used as a basic reference for the development of new drugs, the authors would like to conduct a study entitled ethnopharmaceutical studies of medicinal plants in Harapan Village, Barru Regency, South Sulawesi.

MATERIALS AND METHODS

This research was conducted in Harapan Village, Barru Regency, South Sulawesi. The tools and materials used in this study were writing

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DOI- https://doi.org/10.5281/zenodo.7827965

instruments, questionnaire sheets, and cameras. This type of research is a survey research with observational method

Collecting data by means of direct interviews using questionnaires containing the results of observations and information from the community. The source of the informant was determined by *purposive sampling*, namely the informant was selected based on his knowledge and experience about medicinal plants

RESULTS AND DISCUSSION

This research is a type of research by collecting information about plants that are believed to have medicinal properties in Harapan Village, Barru Regency, South Sulawesi. Data was obtained by distributing questionnaires and interviews to the community or residents of Harapan Village who have knowledge of medicinal plants. Questionnaires and interviews contain the identity of the community (respondents) and information about plants that can be efficacious as drugs including the types of plants used, local names of plants, diseases being treated, parts used, processing methods, methods of use, form of materials, age of plants used. used, storage method, storage time, directions for use, duration of treatment and side effects.

The following is data on ethnopharmaceutical plants used by the community in Harapan Village, Barru Regency, South Sulawesi. Table 1. Ethnopharmacy of plants used by the community in Harapan Village, Barru Regency, South Sulawesi.

Table 1: Grouping of ethnopharmaceutical plant species in Harapan Village, Barru Regency, South Sulawesi

No	Family	Genus	Species	Name of Indonesia/Region
1.	Acanthaceae	Andrographis	*Andrographispaniculata*	Sambiloto (Pai-pies)
2.	Piperaceae	Peperomia	*Peperomia pellucida*	Order (glass/oil oil leaf)
3.	Rubiaceae	Morinda	*Morinda citrifolia*	Noni (Steel')
4.	Amaryllidaceae	Allium	*Allium hurry*	Shallots (Lasuna cella)
5.	Caricaceae	Carica	*Carica papaya*	Papaya (Kaliki)
6.	Basellaceae	Anredera	*Anredera cordofolia*	Binahong (Binahong)
7.	Myrtaceae	Syzygium	*Sizygium polyanthum*	Greetings (Greetings)
8.	Moringaceae	Moringa	*Moringa oleifera*	Moringa (Keloro)
9.	Cucurbitaceae	Momordica	*Momordica charentia*	Pare (Paria)
10.	Acanthaceae	Strobilanthes	*Strobilanthes crispa*	Kecibeling (broken glass)
11.	Myrtaceae	Psidium	*Psidium guajava*	Guava (Guava)
12.	Lamiaceae	Orthosiphon	*Orthosiphon aristatus*	Cat whiskers (Cat whiskers)
13.	Pandanaceae	Pandanus	*Pandanus amaryllifolius*	Pandan (View)
14.	Muntingiaceae	Muntingia L.	*Muntingia calabura*	Kersen (Karseng)
15.	Zingiberaceae	Kaempferia	*Kaempferia galanga*	Kencur (Cekku)
16.	Piperaceae	Piper	*Piper bitle*	Betel (Ota)
17.	Alliaceae	Allium	*Allium sativum*	Garlic (Lasuna pute)
18.	Solanaceae	Physalis L.	*Physalis peruviana L.*	Ciplukan (Anggoro)
19.	astraceae	Ageratum	*Ageratum conyzoides*	Bandotan (Cambodia)
20.	Phylanthaceae	Phyllantus	*Phyllantus acidus L.*	Ceremai (Caramel)
21.	Annonaceae	Annona	*Annona muricata*	Soursop (United States ofAmerica)
22.	Zingiberaceae	Zingiber	*Zingiber officinale*	Ginger (Alayya)
23.	Euphorbiaceae	Jatropa	*Jatropa curcas*	Jatropha (Pelle kaliki)
24.	Lamiaceae	Ocimum	*Ocimum africanum*	Basil (squid)
25.	Poaceae	Cymbopogon	*Cymbopogon ciratus*	Lemongrass (Serei)

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Table 2: List of ethnopharmaceutical plant species used as traditional medicine in Harapan Village, Barru Regency,South Sulawesi

No	Indonesian / Regional Name	Efficacy	Parts Used	Processing Method	How to use andhow to use
1.	Sambiloto (Pai-pies)	Lowering blood sugar levels (Diabetes)	Leaf	Boiled with drinking water as much as 3 cups for 5 minutes	Drink boiled bitter leaf, 1x a day before eating
2.	Order (glass/oiloil leaf)	Treat rheumatism	Leaf	Boiled with drinking water as much as 3 cups for 5 minutes	Drink the decoction of the leaves of the messenger 2 times a day after eating
3.	Noni (steel)	Overcoming stomach inflammation	Fruit	Pounded / mashed with a smooth texture	Eaten, 1x a daybefore eating
4.	Shallots (lasuna cella)	For colds / aches	Bulbs	Pounded / mashed with a coarse texture	Pasted on the body (painful part) minutes for 30
5.	Papaya (kaliki)	For Malaria	Leaf	Boiled with drinking water as much as 2 cups for 30 minutes	Drink boiled water papayaleaves 3 times a day after eating
6.	Binahong (binahong)	Treat stomach pain / ulcer	Leaf	Boiled with 2 glasses of drinking water for about 5 minutes	Drink boiled water from binahong leaves1x a day before eating
7.	Greetings (greetings)	Lowering blood sugar (Diabetes) levels	Leaf	Boiled with drinking water as much as 3 cups for about 10 minutes	Drink boiled water of bayleaves 3 times a day before eating
8.	Moringa (moringa)	To treat gout and rheumatism	Leaf	Boiled with drinking water as much as 3 cups for 6 minutes	Drink boiled water fromMoringa leaves 2times a day after eating
9.	bitter melon (pariah)	To treat fever	Leaf	Pounded or kneaded by hand with a rough texture	Pasted on the forehead for about1 hour 2x a day
10.	Kejibeling (broken)	Lowering blood sugar (Diabetes) levels	Leaf	Boiled with drinking water as much as 3 cups for 5 minutes	Drink boiled water from the leaves of kejibelin 1x a day after eating
11.	Guava (herbal)	Treat rheumatism	Leaf	Boiled with drinking water as much as 3 cups for about 10 minutes	Drink boiled water guava leaves 1x a day after eating
12.	cat whiskers (cat whiskers)	Lowering high blood pressure (Hypertension)	Leaf	Boiled with drinking water as much as 3 cups for approximately	Drink boiled water cat whiskers leaves 1x a day before eating

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				5 minutes	
13.	Pandan (view)	Lowering high blood pressure (Hypertension)	Leaf	Boiled with drinking water as much as 2 cups for approximately 30 minutes	Drink boiled water pandanleaves 2 times a day before eating
14.	Kersen (kerseng)	Treat headaches/dizziness	Leaf	Boiled with 2 glasses of drinking water for about 5 minutes	Drink boiled water cherry leaves 1x a day before eating
15.	Kencur (check)	Treat cough	Bulbs	Boiled with 2 glasses of drinking water for about 5 minutes	Drink boiled water kencur 2x a day after eating
16.	Betel (ota)	Cure cough	Leaf	Boil 3 cups of betel leaves for about 5 minutes	Drink boiled water betel leaves 3 times a day aftereating
17.	Garlic (lasuna pute)	Treating toothache	Bulbs	Pounded or grated with a fine texture	Pasted on the teeth or gums for 15 minutes
18.	Ciplukan (anggoro)	Lowering blood sugar levels (Diabetes)	Leaf	Boiled with 2 glasses of drinking water for 5 minutes	Drink boiled water ciplican leaves 1x a day after eating
19.	Bandotan (Cambodia)	Treating external wounds	Leaf	Pounded or kneaded with a coarse texture	Apply to the injured skin for about 1 hour, 3 times a day
20.	Cermai (caramele)	Lowering fat levels in the blood(cholesterol)	Leaf	Boiled with drinking water as much as 3 cups for 5 minutes	Drink boiled water of cermai leaves 3 times a day before eating
21.	Soursop(Union)	Treat aches	Leaf	Boiled with water as much as 3 cups for 2 minutes	Drink boiled water betel leaf 1x a day after eating
22.	Ginger (alayya)	As a medicine in	Bulbs	Boiled with drinking water as much as 3 cups for about 10 minutes	Drink boiled ginger water 3 times a day after eating
23.	Jatropha (pellekaliki)	Reducing fever in children	Leaf	Crushed or kneaded with a rough texture	Pasted on the forehead for about1 hour (until dry), 3 times a day
24.	Basil (squid)	For vomiting	Leaf	Boiled with water as much as 3 cups for 5 minutes	Drink 1x after a day meals
25.	Lemongrass (sereh)	For cough medicine and aches	Stems, leaves	Boiled with drinking water as much as 3 cups for 3 minutes	Drink lemongrass boiled water 3 times a day aftereating

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Table 3: Grouping of Plants Based on Diseases in Harapan Village, Barru Regency, South Sulawesi

No	Indonesian/Regional Name	Parts used	Presentation form	Type of disease
1.	Sambiloto (pies)	Leaf	Single	
2.	Greetings (greetings)	Leaf	Single	ıbetes (bloodsugar)
3.	Kejibeling (pecabeling)	Leaf	Single	
4.	Ciplikan (anggoro)	Leaf	Single	
5.	Order (glass/oil oil leaf)	Leaf	Single	
6.	Moringa (moringa)	Leaf	Single	rheumatism
7.	Guava (herbal)	Leaf	Single	
8.	Noni (steel)	Fruit	Single	Stomach ulcer
9.	Shallots (lasuna cella)	Bulbs	Single	Get wind / sore
10.	Soursop (Union)	Leaf	Single	
11.	Papaya (kaliki)	Leaf	Single	Malaria
12.	Binahong (binahong)	Leaf	Single	Stomach pain / stomach ache
13.	Cat whiskers (cat whiskers)	Leaf	Single	Hypertension (highblood pressure)
14.	Pandan (view)	Leaf	Single	
15.	Kersen (kerseng)	Leaf	Single	Headache/dizziness
16.	Kencur (check)	rhizome	Single	
17.	Betel (ota)	Leaf	Single	Cough
18.	Lemongrass (serre)	Stems, leaves	Single	
19.	Garlic (lasuna pute)	Bulbs	Single	Toothache
20.	Bandotan (Cambodia)	Leaf	Single	External wound
21.	Cermai (caramele)	Leaf	Single	Cholesterol
22.	Ginger (Alayya)	rhizome	Single	Internal medicine
23.	Jatropha (pellekaliki)	Leaf	Single	
24.	bitter melon (pariah)	Leaf	Single	Fever
25.	Basil (squid)	Leaf	Single	Vomiting

This research was conducted with the aim of finding out medicinal plants in Harapan Village using a *purposive sampling method* in which the informants or respondents were selected based on their knowledge and experience of medicinal plants, namely traditional healers or their descendants, traditional/community leaders, and people who are experienced in traditional medicine who use traditional medicine. taken proportionally scattered in Harapan Village, Barru Regency, South Sulawesi who have knowledge about the use of traditional medicine.

From the results of filling out questionnaires and interviews, it was obtained as many as 20 families and 25 species of ethnopharmaceutical plants which are believed by the people of Harapan Village, Barru Regency, South Sulawesi to be used as traditional medicine that not only uses 1 plant species for 1 type of disease, but there are several types of plants that are efficacious. more than 1 type of disease.

There are various diseases that are usually treated using plants that are around. The most frequently used plant parts are leaves, rhizomes, fruit and stems. The method of processing plants is by boiling and pounding / squeezing. Then the way to use it is by drinking it, sticking it/smearing it.

Sambiloto has been studied to contain the active compound andrographolide as the main compound that has a bitter taste, where plants that have a bitter taste are believed to be used as antidiabetic drugs by the public. In Nugroho's study, 2012, testing of sambiloto, especially on *andrographolide compounds* on *high-fructose-fat-fed rats* showed that sambiloto extract and andrographolide compounds significantly reduced blood glucose, triglycerides, and LDL levels compared to controls, where it can be concluded that sambiloto extract and compounds *andrographolide* exerted hypoglycemic and hypolipidemic effects in test rats.

Traditionally messenger herbs (*Peperomia*

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pellucida, (L) Kunth) are used to treat abscesses, acne boils, gout, headaches, reduce pain in rheumatism and rheumatic gout (Pulak, 2011). The results of the proximate analysis showed high ash content, higher crude fiber content, while carbohydrate content was observed to be the highest. Mineral analysis showed very low manganese content, low zinc, iron, and copper, but high sodium content. Phytochemical screening revealed the presence of alkaloids, cardenolids, saponins and tannins (Egwuche, 2011). Giving messenger herbal infusions can reduce blood serum uric acid levels (Sumardiyanto, 2003). In a study (Nanang yunarto, 2013) In *vivo* extracts of water and hexane of messenger herbs (*Peperomia pellucida*, (L) Kunth) have the potential to reduce blood uric acid levels in uric acidlevels in aqueous extract was greater than that of hexane extract. Efficacy of aqueous extract 200 mg/Kg BW is comparable to Allopurinol 10 mg/Kg BW.

Noni can lower blood pressure in people with hypertension because it contains a type of phytonutrient, namely *Scopoletin* which serves to widen the constricted blood vessels and improve blood circulation. This causes the heart does not have to work too hard to pump blood, so blood pressure becomes normal. Experts believe that scopoletin is one of the substances contained in Noni fruit that can bind to serotonin, one of the important chemicals in the human body (Cahyo, 2010). Based on Hendriani's research (2017), the administration of a combination of noni fruit ethanol extract and elephant ginger rhizome results from macroscopic observations showed that there were no organ abnormalities nor were there any ulcers in the stomachs of the test animals. In general, noni fruit can prevent and treat various health disorders and diseases (Latief, 2012).

Shallots contain high nutritional substances and chemical compounds that are natural for public health because they have a considerable pharmacological effect in the content of traditional medicine shallots. Based on research conducted, the content of traditional medicine shallots can treat colds, bloating, stomach ulcers, asthma, etc. and can even treat serious diseases such as diabetes, hypertension, bad cholesterol and so on (Aryanta, 2019). In a study (Wayan, 2019) concluded that various diseases ranged from mild (cold, cough, heartburn, flatulence, asthma, nosebleeds, constipation, acne, boils, dandruff, hair loss and others) to severe/degenerative (heart disease, diabetes mellitus, hypertension, bad cholesterol, cancer and others) can be prevented or treated with a concoction of shallots.

Phytochemical screening of the 70% ethanol extract of guava leaves and papaya leaves each containing tannins, terpenoids, quinones, alkaloids and flavonoids (Arifuddin, 2018). Several alkaloids, terpenes, flavonoids, quinones, xanthones, coumarins, peptides, phenols and lignans have been reported as antimalarials (Sebisubi, 2011). Also, diterpenoids, flavonoids, polyphenols, saponins, alkaloids, kaempferol, and acetogenins are known to have antimalarial activity (Somsak, *et al.*, 2016). So that in the compound content approach, each extract has the potential as an antimalarial. In the study (Arifuddin, *et al*., 2018) concluded that Based on the results of the heme polymerization inhibition test, samples of 70% ethanol extract of papaya leaves (*Carica papaya*) and guava leaves (*Psidium guajava*) have antimalarial activity and have the potential to be further developed as antimalarials.

One of the plants that has many properties in treating disease is the binahong plant (*Anredera cordifolia).* According to (Rochani, 2007 have active compounds of alkaloids, saponins, and flavonoids. (Manoi, 2009), stated that all parts of this plant can be used as medicine, starting from the stems, roots, flowers, and leaves. However, the leaves most often used for health as herbal medicine are the leaves. (Shabella, 2012), stated that among the people binahong leaves are used to treat pain, ulcers, canker sores, provide extra stamina, improve blood circulation, and gout. In addition, consuming it can also overcome swelling and blood clots, treat diabetes mellitus, lower cholesterol, and heal wounds. The leaves are efficacious for treating intestinal inflammation, smoothing and normalizing blood circulation, and blood pressure, preventing stroke, gout, ulcers, increasing body vitality, overcoming hemorrhoids, diabetes, constipation or constipation. The various properties of binahong cannot be separated from the chemical content in it (Mardiana, 2012).

Salam leaves have many benefits, namely treating diabetes, high cholesterol, hypertension, diarrhea, and gastritis. (Student 2005) Phytochemical analysis showed the content of essential oils, tannins, flavonoids and terpenoids from bay leaves. Flavonoids are a class of phenolic compounds that are thought to reduce blood glucose levels. (Widyawati, 2014). In a study (Nita parisa, 2016) concluded that bay leaf extract had a significant effect in lowering glucose levels in the blood.

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Therefore, considering that this plant is widely available in Indonesia, this plant has the potential to be developed as a modality of herbal medicine therapy in the prevention and treatment of diabetes mellitus.

One of the plants that is thought to have a therapeutic effect in reducing uric acid levels is Moringa leaves. Moringa leaves include tannins, steroids, triterpenoids, flavonoids, saponins, anthraquinones and alkaloids (Kasolo, Bimenya, Ojok, & Ochieng, 2010). Some researchers state that flavonoid compounds are thought to be effective in inhibiting the formation of uric acid and have anti- inflammatory and analgesic properties. This is because flavonoids can inhibit the activity of the xanthine oxidase enzyme through interactions with these enzymes on side groups and competitive inhibition mechanisms. In vitro, several flavonoid compounds can inhibit xanthine oxidase enzymes including flavonoids, luteolin, apigenin, quercetin and miresetin (Muthadi, Retnani, & Wahyuningtyas, 2012; Kristinawati & Nurlaela, 2013; Rinayanti, Rahayu, & Syachfitri, 2016).

Bitter gourd (*Momordica charantia* L. *)leaves* can be used as a febrifuge or antipyretic. In addition, bitter melon leaves can also be used to cure diarrhea in infants, clean the blood for women who have just given birth, remove pinworms, and can cure coughs (Sudarsono and Subagus 2002). Bitter gourd leaves are used by some people as a fever reducer by pounding it then adding water and filtering it and drinking it in the morning before eating (Dalimartha 2008).

One of the plants used as traditional medicine is vile shard. The plant is also used empirically as an antidiabetic drug. Vile shard leaves contain polyphenols, saponins, alkaloids, potassium and calcium. In addition, coumarins, flavonoids and sterols were also found (Sudarsono, *et al.*, 2002). In a study (Faridha, 2016) concluded that kejibeling leaf extract (*Strobilanthes Crispus Linn*) was able toreduce blood glucose levels in mice (*Mus musculus*) induced by glucose, and the most effective dose in lowering blood glucose levels in this study was a dose of 14.7 mg. /g BB.

Changes in uric acid levels are influenced by the content of vitamin C contained in guava. Based on several studies, showing the activity ofguava as an anti-rheumatic agent, as an anti- inflammatory agent, in reducing oxidative stress, reducing blood pressure, and lowering lipid profiles. Red guava has potential as an antioxidant (due to the content of vitamin C, vitamin E, -carotene, zinc, polyphenols, and flavonoids) and acts as a phytonutrient which has been scientifically proven through various studies. The active compounds in red guava that play a role in reducing uric acid levels are vitamin C, polyphenols, and flavonoids. (Boss, 2016).

Cat's whiskers (*Orthosiphon stamineus*) have the ability to reduce sodium and potassium levels in test animals. The content of quercetin from cat whiskers leaves can lower blood pressure by preventing platelet aggregation and thrombus. (Almatar, 2014).

Fragrant pandan leaves are the leaves of a plant species *(Pandanus amaryllifolius)* whose presence is very abundant in the environment containing many natural compounds that are useful for lowering blood pressure because they have sedative and diuretic properties. The active compounds contained in pandan leaves are terpenoids, steroids, alkaloids, flavonoids and saponins (Tasia and Widyaningsih, 2015).

In his research Haki, (2009) explains that the Peruvian people have long used this cherry plant as atraditional medicine. Cherry leaves are used as aheadache medicine and anti-inflammatory due to its various chemical compounds, namely; flavonoids, tannins, triterpenoids, saponins and polyphenols which exhibit antioxidant and antimicrobial activity.

In a study (Marina, 2019) explained that Ethyl-trans-p-methoxy cinnamate and trans-ethyl cinnamate are the main compounds that are very important in *K. galanga* and are components that have pharmacological properties. Ethnobotanically *K. galanga* is used as expectorate, carminative, cough medicine, rheumatism, and anti-cancer, cholera, vasorelaxation, anti-microbial, antioxidant, anti-allergic wound healing. Its bioactivity proves the activity of *K. galanga* as anti-cancer, anti-oxidant, anti-inflammatory, analgesic and anti-bacterial.

According to (Dalimartha, 2006) that betel leaf (*Piper betle* L) is used to treat diseases such as cough, asthma, inflammation of the airways (bronchitis), stomach ulcers, flatulence, aches and pains (*rheumatism*), swelling, lowering cholesterol, vaginal discharge., body odor and bad breath. The properties and properties vary from warm, astringent,aromatic, and stimulant.

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Allium sativum is a natural ingredient that is very effective in reducing pain in cavities. Garlic is a plant of the *Allium genus* that is used as the main ingredient in basic cooking spices. Garlic also contains sulfur compounds which include chemicals, namely allylin. Alliline is an amino acid that functions as an antibiotic. Besides allin, there is another substance called allicin which functions as an antiseptic and can inhibit the growth of microorganisms and kill bacteria. (Fatmawaty, 2015).

Physalis angulata (ciplukan) is an annual plant from the Solanaceae family. The pharmacological effects contained in ciplukan include antidiabetic drugs, hypertension, gout, testicular swelling, influenza and sore throat, increasing the number of Langerhans cells and stimulating beta cells to release insulin (Abo, 2013). The results of the phytochemical screening of simplicia and ciplukan extract showed the presence of flavonoids, alkaloids, steroids/triterpenoids, tannins/polyphenolic saponins, anthraquinones, anthracenes and terpenoids. The chemical content that is thought to have an effect on lowering blood glucose is terpenoids which have antidiabetic activity, can stimulate the regeneration of Langerhans cells so that Langerhans cell damage, especially cells, can be gradually reduced and the number returns to normal. (Rohyani, 2015)

Empirically, the efficacy of *Ageratum conyzoides* (Bandotan) is used externally to heal wounds, leprosy and ulcers and as antihaemorrhagic, antiseptic and haemostatic (Dash & Murthy, 2011). Hidayati & Harjono, 2017).

One of the traditional plants used for antihypercholesterolmic drugs is ceremai (*Phyllanthus acidus* L.) Ceremai grows in almost all parts of the Indonesian archipelago. (Afifah, BS, DKK 2013) states that ceremai leaves contain flavonoids, polyphenols, and saponins. Flavonoids will affect the concentration of cholesterol, especially LDL (*Low Density Lipoprotein*) levels and inhibit its oxidation, so that it will reduce the possibility of injury to the endothelial wall, which can reduce the risk of arteriosclerosis, while saponins have activity as hypercholesterolemia, which can inhibit the absorption of plasma cholesterol.

Soursop is often used for therapeutic treatment, for example for sore waist, pain, gout, hemorrhoids, and gallstones. All parts of the soursop fruit have properties to cure diseases, one of which is soursop leaves. Soursop leaves are the part that contains many compounds including *acetogenins, annocatin, annocatalin, annohexocin, annonacin, annomuricin, annomurine, ananol, caclourine, gentisic acid, gigantetronin, linoleic acid, and muricapentocin.* Soursop leaf (*Annona muricata*) is the most efficacious part for curing disease. (Lina, 2012).

From various research results, Leach (2017) concludes that ginger is very effective for preventing or curing various diseases because it contains gingerol which is very strong anti-inflammatory and antioxidant. It was further stated that ginger is efficacious for treating various diseases, such as nausea when women are pregnant, reducing muscle aches and pains, helping to cure osteoarthritis, lowering blood sugar levels in patients suffering from type 2 diabetes which at the same time reduces the risk of heart disease., helps overcome chronic digestive disorders, relieves pain when women are menstruating. Suparyo (2014) stated that ginger has anti-histamine properties which are commonly used to treat stress, allergies, fatigue, and headaches, treat throat disorders, nausea during seasickness, and treat side effects of chemotherapy. In addition, ginger also has anti-inflammatory properties so it is good for treating arthritis and various muscle disorders, lowering bad cholesterol levels, and maintaining heart health.

According to the results of research from Mradu, *et al.,* (2013), flavonoids have various kinds of bioactivity including antipyretic, analgesic and anti-inflammatory effects. The results of the qualitative test of the class of metabolites present in the Jatropha leaf extract were positive for antibacterial compounds, namely flavonoids, tannins, and saponins. The active components of the plant, namely flavonoids, can inhibit fever-inducing prostaglandins, protein kinases, monoaminoxidases, DNA polymerases and cyclooxygenases (Septiawan, 2014). The mechanism of prostaglandin inhibition will lower the body's thermostat point in the hypothalamus so that the fever goes down(Rakayudha, 2010).

One of the plants used by the Indonesian people as medicinal ingredients is basil (*Ocimum* spp.). According to a research team from the *Center for New Corps and Plant Products, Purdue University*, United States, basil leaves are proven to be effective for curing headaches, colds, diarrhea, constipation, intestinal worms and kidney

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disorders. (Asep, *et al*., 2011).

Lemongrass is efficacious for relieving fatigue and aches after activities, preventing insect bites, overcoming acne, both on the back and on the face, as well as removing black spots from acne scars. The distinctive aroma of lemongrass in soap also helps as an anti-depressant (aromatherapy). (Simarmata, 2017). Lemongrass can be used as a urine laxative, sweat laxative, phlegm laxative or cough medicine, mouthwash, body warmer, indigestion, stomach pain, colds, anti-fever, vomiting prevention, and. *lemongrass* so that it makes lemongrass has a distinctive aroma with a slightly spicy taste (Kurniawati, 2010)

CONCLUSIONS

The types of medicinal plants used as traditional medicines in Harapan village are 20 families and 25 species. Which consists of *Andrographis paniculata* sambiloto, *Peperomia pellucida L.* Suruhan, *Morinda citrifolia* Noni, *Allium ascalonium* Shallots, *Carica papaya* Papaya, *Anredera cordofolia* Binahong, *Eugenia aperculata* Salam, *Moringa oleifera Moringa, Momordica charentia Paredium,* Sericocalingva *Jambu* seeds, *Crispy guava, Orthosiphon aristatus* Cat's whiskers, *Pandanus pandan, Muntingia calabura L.* Kersen, *Piper bitle* Sirih, *Allium sativum* Garlic, *Physalis peruviana L.* Ciplukan, *Ageratum conyzoides* Bandotan,

Phyllantus acidus L. Ceremai, *Annona muricata* Soursop curcuma, *Jahengiber officina* Jatropha, *Ocimum basilicum* Basil, *Cymbopogon nardus* Sereh.

The way to use it is by drinking it, sticking it/smearing it. The method of processing plants is by boiling and pounding / squeezing.The parts of plants that are most often used as medicine by the community in Harapan village, Barru Regency, South Sulawesi, are leaves, rhizomes, fruit and stems.

ACKNOWLEDGMENTS

Thank You to Faculty of pharmacy, Universitas Muslim Indonesia for funding this research.

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Source of support: Nil; **Conflict of interest:** Nil.

Cite this article as:
Emelda, A., Handayani, V. and Irmayani. "Study of Etnopharmaceutical Plants in Harapan Village Barru Regency, South Sulawesi." *Sarcouncil Journal of Applied Sciences* 3.4 (2023): pp 1-12

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