

# Etnofarmasi\_MICPS\_faradiba

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## STUDY OF ETNOPHARMACY ON THE USE OF MEDICINAL PLANTS IN THE BUGIS TRIBE IN CORAWALI VILLAGE, BARRU REGENCY

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### ABSTRACT

Ethnopharmaceutical studies are an approach used to explore local knowledge of certain communities in terms of the use of medicinal plants. This study aims to determine how to use and plant parts used as medicine by the Bugis tribe in Corawali Village, Barru Regency. By using purposive sampling technique. Collecting data through semi-structured interviews on questionnaire media with open-ended question types. The results of the study found 31 families, 45 genera, and 40 species of medicinal plants. These medicinal plants are efficacious as hypertension, diarrhea, wounds, diabetes, cholesterol, cough, asthma, fever, acne, dysentery, hemorrhoids, warm the body, stomach pain, toothache, gout, internal disease, swelling, flatulence, vaginal discharge, common cold, ulcers, headaches and smallpox. Leaves are plant parts by boiling and then drinking boiled water is the most commonly used. The highest Use Value (UV) with a value of 1. The highest Informant Consensus Factor (ICF) with a value of 1.00. While the highest Fidelity Level (FL) with a value of 100%. From the results of the research, the people of Corawali Village still have a high level of utilization of plants in the process of treating diseases.

**Keywords:** Ethnopharmacy, Medicinal Plants, Corawali Village, Bugis Tribe

### INTRODUCTION

The Indonesian people have long known and used medicinal plants as an effort to overcome health problems. This encourages efforts to preserve local knowledge of traditional medicine as early as possible. One is using an ethnopharmaceutical approach (Dianto, 2015).

Ethnopharmacy is a part of pharmaceutical science that studies and explores the use of drugs and methods of treatment

carried out by ethnic or ethnic groups or certain regions.

Many other plants are used as ingredients for the treatment of various diseases. Because it is around human life and is easy to obtain, it is not surprising that most of the Bugis people are still familiar with the traditional medical procedures they have inherited from generation to generation.

Most of the population in Corawali Village, which is the location of the study, self-medicate for certain diseases

such as itching, diarrhea, and burns by using plants in their yard. Corawali village also has a supportive geographical location such as fertile land which is suitable for planting all kinds of plants that have medicinal properties.

The use of medicinal plants by local communities has been widely carried out in Indonesia. However, research on the ethnopharmacy of medicinal plants by the Bugis tribe in Corawali Village, Barru Regency has never been carried out, although health efforts through the use of traditional medicines from these plants have been known to the public Corawali Village to date. Therefore, it is necessary to conduct an ethnopharmaceutical study on the Bugis tribe in Barru Regency, precisely in Corawali Village, to benefit health and scientific development.

## RESEARCH METHOD

### a) Research Time & Location

Penelitian ini dilaksanakan di Desa Corawali Kabupaten Barru. Waktu Penelitian ini dilakukan pada bulan Maret 2021- April 2021. Sp. (ETS)

### b) Population and Sample

#### Population

The population used in this study were the natives of the village of Corawali, Barru Regency. Those who know the use of plants as medicine.

#### Sample

The sampling of this study used a purposive sampling method in which the informants or respondents were selected based on their knowledge and

experience of medicinal plants, namely people with experience in traditional medicine who were taken proportionally scattered in several Corawali Villages, Barru Regency who know the use of drugs.

### c) Tools and Materials

The tools used in this study were stationery and digital cameras. While the material used in this study is a questionnaire sheet.

### d) Research Type & Design

This type of research is interview research with a survey method

### e) Research Instrument

The research instrument is a questionnaire containing:

1. Characteristics of respondents
2. Plants that have the potential as drugs

## RESEARCH PROCEDURES

### a) Preliminary Study

At this stage, a preliminary study is conducted, including an introduction to the research area, approaches to residents and informants at the research site, as well as preliminary observations by digging information to informants about knowledge of the use of traditional medicines and the willingness of informants to become resource persons. The purpose of this preliminary study is to determine the sampling technique.

### b) Sampling Technique

The technique used in this research is the purposive sampling technique. Purposive sampling is a sampling technique selected based on certain considerations to obtain samples

with the desired characteristics (Nugraha, 2005).

### c) Preparation of Research Instrument & Materials

The instruments used in this study were interview guides (questionnaires), as well as documentation facilities (cameras) and stationery used when the resource persons conveyed information related to traditional medicinal plants while the materials used in this study are a type of plant used as traditional medicine by the people of Corawali Village, Barru Regency.

### d) Interview

Techniques were conducted through semi-structured interviews with open-ended questions types. The first step is to dig up information about the use of medicinal plants to informants, then specific data is then obtained using structured interviews with the help of interview guide media (questionnaires) (Pieroni et al, 2002).

### e) Data Analysis

The analysis technique used is the data obtained and analyzed using descriptive and quantitative data analysis.

## RESULTS AND DISCUSSION

Research that has been conducted on the ethnopharmaceutical study of medicinal plants of the Bugis tribe in Corawali Village, Barru Regency, based on observations made, data obtained that some communities still have a high level of use of plants as medicine. After being categorized based on inclusion and exclusion criteria, the final data obtained for respondents who met these criteria were 21 respondents.

In this study, respondents were selected, one of which was *sanro*, which is a designation for someone who can make efforts to prevent, treat and cure diseases using plants that are recited prayers/incantations, and also some others are community shops who work as IRT and Entrepreneurs and Farmers. The results of the study can be seen in the following table:

Table 1. Groups of ethnopharmaceutical plant species in the Bugis tribe in Corawali Village, Barru Regency

| Indonesian name/<br>Region Bugis | Species                               | Family        | Use                                    | Part used      |
|----------------------------------|---------------------------------------|---------------|----------------------------------------|----------------|
| Bawang merah (Lasuncella)        | <i>Allium sativum</i> L.              | Liliaceae     | Fever                                  | Bulbs          |
| Bawang putih (Lasuncella)        | <i>Allium sativum</i> L.              | Liliaceae     | Hypertension                           | Bulbs          |
| Pepaya (Kaliki)                  | <i>Carica papaya</i> L.               | Caricaceae    | Warms the body                         | leaves         |
| Delima (Delima)                  | <i>Punica granatum</i> L.             | Lythraceae    | Cough                                  | bark           |
| Mengkudu (Sebbung)               | <i>Morinda citrifolia</i> L.          | Rubiaceae     | Hemorrhoids                            | leaves         |
| Ciplukan (Cecendet)              | <i>Physalis peruviana</i> L.          | Solanaceae    | Wounds                                 | leaves         |
| Jambu biji (Jambu batu)          | <i>Psidium guajava</i> L.             | Myrtaceae     | Diarrhea, hypertension                 | leaf           |
|                                  |                                       |               | Diabetes                               | polyanthum     |
| Salam (Salam)                    | <i>Syzygium polyanthum</i>            | Myrtaceae     | Cough                                  | Fruit          |
| Jamblang (Coppeng)               | <i>Syzygium cumini</i> L.             | Myrtaceae     | Cholesterol                            | Leaves         |
| Jeruk nipis (lemol)              | <i>Citrus x aurantifolia</i>          | Rutaceae      | Diarrhea                               | Bark           |
| Kemiri (Pelleng)                 | <i>Aleurites Malaccana</i> (L.) Wild. | Euphorbiaceae | Leaves: Stomach pain<br>Sap: Toothache | Leaves and sap |
| Binahong (Binahong)              | <i>Androdera cordofolia</i>           | Basellaceae   | Cough                                  | leaves         |
| Kemiri (pelleng)                 | <i>Aleurites moluccanus</i> L.        | Euphorbiaceae | Diabetes                               | leaves         |
| Jarak pagar (Pellakaliki)        | <i>Ricinus communis</i> L.            | Euphorbiaceae | Hypertension                           | leaf           |
| Miana (Miana)                    | <i>Coleus scutellarioides</i> L.      | Lamiaceae     | Wounds                                 | Sap            |
| Kumis kucing (Kumis kucing)      | <i>Orthosiphon stamineus</i>          | Lamiaceae     | Colds                                  | rhizome        |
| Kemangi (Comangi)                | <i>Ocimum sanctum</i>                 | Lamiaceae     | Burns                                  | rhizome        |
| Belimbing (Caleneng)             | <i>Averrhoa bilimbi</i> L.            | Oxalidaceae   | Asthma                                 | officinale     |
| Pisang (Otti)                    | <i>Musa X paradisiaca</i> L.          | Musaceae      | Turmeric                               | Curcuma        |
| Jahe (Layya)                     | <i>Zingiber officinale</i>            | Zingiberaceae | Cholesterol                            | fruit          |
| Kunyit (Unyyi)                   | <i>Curcuma domestica</i> L.           | Zingiberaceae | sores                                  | leaf           |
| Temulawak                        | <i>Curcuma zanthorrhiza</i>           | Zingiberaceae | Hypertension                           | )              |
| Kencur                           | <i>Kaempferia galanga</i> L.          | Zingiberaceae | cacarpa                                | Leaves         |
| Mahkota dewa (Mahkota dewa)      | <i>Phaleria macricarpa</i>            | Thymelaeaceae | Fever                                  | Leaves         |
| Bidara (Bidara)                  | <i>Ziziphus mauritiana</i>            | Rosales       | Hypertension                           | Pard           |

|                              |                                     |                |                           |                  |
|------------------------------|-------------------------------------|----------------|---------------------------|------------------|
|                              | L.                                  |                |                           |                  |
| Avokad (alpokat)             | <i>Persea americana</i>             | Lauraceae      | Asthma                    | Fruit            |
| Pare (Paria)                 | <i>Momordica charantia</i>          | Cucurbitaceae  | Leucorrhoea               | Leaves           |
| Kelor (Keloro)               | <i>Moringa oleifera</i>             | Moringaceae    | Cholesterol               | Leaf             |
| Seledri (So)                 | <i>Apium graveolens</i> L.          | Apiaceae       | diabetes                  | Piper            |
| Lada (barica)                | <i>Piper nigrum</i> L.              | Piperaceae     | Leaves :<br>Diarrhea      | Leaves and roots |
| Sirih (Ota)                  | <i>Piper betle</i> L.               | Piperaceae     | Roots : Fever             |                  |
| Suruhan (Kaca-kaca)          | <i>Peperomia pellucida</i> L.       | Piperaceae     | sores                     | leaf             |
| Sambiloto (pai pai)          | <i>Andrographis paniculate</i>      | Acanthaceae    | Stomach bloating          | leaves           |
| Bandotan (Bandotan)          | <i>Ageratum conyzoides</i>          | Asteraceae     | Diabetes                  | Kirinyuh         |
| Kirinyuh (Dong ijol)         | <i>Chromolaena odorata</i> L.       | Asteraceae     | Ulcers                    | Beluntas         |
| Beluntas (Lamutasa)          | <i>Pluchea indica</i> L.            | Asteraceae     | Internal Diseases         | Herbs            |
| Kasumba Turate (Kasumba ogi) | <i>Chartamus tinctorius</i> L.      | Asteraceae     | Treating Gout             | Leaves           |
| Kersen (Keressen)            | <i>Muntingia calabura</i> L.        | Muntingiaceae  | Treat Diabetes            | Leaf             |
| Paliasa (Paliasa)            | <i>Kleinhovia hospita</i> L.        | Malvaceae      | Swollen                   | Leaf             |
| Meniran (Mani-mani')         | <i>Phyllanthus urinaria</i> L.      | Phyllanthaceae | Fever                     | Stem             |
| Sukun (Baka)                 | <i>Artocarpus altilis</i>           | Moraceae       | Headache and Hypertension | Leaf             |
| Nangka (Panasa)              | <i>Arthocarpus heterophyllus</i> L. | Moraceae       | Dysentery                 | Leaf and Bark    |
| Tembelekan (Tahi Ayam)       | <i>Lantana camara</i> L.            | Verbenaceae    | Acne                      | Leaf             |
| Brotowali (Aliali)           | <i>Tinospora crispa</i> L.          | Menispermaceae | Diabetes, Cough and Fever | Flower           |
| Sirsak (Sarikaja)            | <i>Annona muricata</i> L.           | Annonaceae     | Hypertension              |                  |
| Jambu Mete (Jambu lase)      | <i>Anacardium occidentale</i>       | Anacardiaceae  | Fever                     | Bulbs            |

In this study, information was obtained that the people of the Bugis tribe in Corawali Village, Barru Regency in their daily life still use plants for treatment can be seen in (table 1). From these data, 31 families, 45 genera, and 40 species were obtained. The data was written through interviews by

researchers in the form of a questionnaire.

These medicinal plants are used as medicinal ingredients, not only one part is used but there are several parts such as leaves, roots, stems, sap, fruit, bark, rhizomes, tubers, herbs, and seeds. Likewise with different processing methods, such as boiling, pounding, brewing, and



squeezing. There are methods of processing these plants, which are processed singly and in combination, such as the addition of honey and brown sugar to give the ingredients a sweet taste. In addition, as for how to use these plants, such as drinking, affixing, and rinsing. These plants have different doses and times of use. The plant data can be seen in (table 2).

4 Of the 45 types of plants used to treat various types of diseases used by the Bugis people in Corawali Village, Barru Regency, such as hypertension, wound, diarrhea, diabetes, cholesterol, cough, asthma, fever, acne, dysentery, hemorrhoids, warms the body, stomach pain, toothache, gout, internal disease, swelling, flatulence, vaginal discharge, colds, ulcers, headaches, and smallpox. In the use of plants as treatment, it is not only using 1 type of plant for 1 type of disease. But there are several types of plants that have the same efficacy and some plants also have more than 1 efficacy. The data can be seen in (table 3).

The results of the survey on medicinal plants where most of these plants grow wild and some are cultivated or deliberately grown by the community as medicinal plants and can be found in yards around people's homes, plantations, and also forests so that there are some of these plants, which are starting to be classified as rare so that they are only found in a few locations.

Based on the information obtained at the time of the study, several respondents used medicinal plants with inappropriate

processing methods, such as the plants used were not washed before use, and some of the plants used as a medicine did not have a definite dose. The education that we can provide to respondents is that the plants used before being processed into medicinal herbs should be washed first to avoid bacterial contamination or unwanted substances mixed in the plants.

As for the information provided by some respondents who use herbal medicines combined with chemical drugs such as hypertension if it causes very severe and unbearable symptoms such as headaches and dizziness which causes the respondent to be unable to carry out activities, as usual, the respondent consumes chemical drugs. If the symptoms do not interfere with the respondent's activities, they can only consume herbal medicines. Data analysis was carried out in the form of a tabulation of the results of interviews with respondents and quantitative and descriptive analyses were carried out.

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the form of a tabulation of the results of interviews with respondents and quantitative and descriptive analyses were carried out. While the lowest result was found in *ciplukan* plant species, *kencur*, *bidara*, messenger, and *meniran* with the number of users 1 respondent from 21 respondents with a value of 0.04. It can be seen in (Table 4).

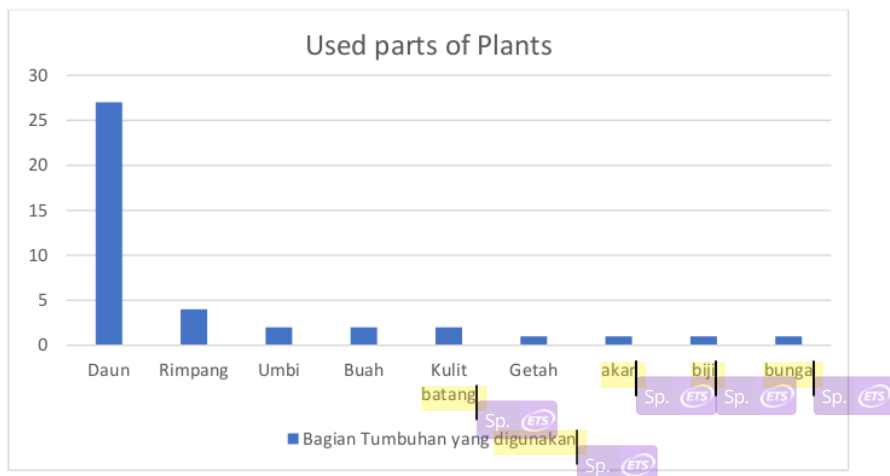
Informant consensus factor (ICF) ICF analysis was used to determine the level of homogeneity between the information provided by different informants in the study area for certain disease categories (Trotter, 1986). According to Gazzaneo (2005), the ICF value will be low (close to zero) if the informants do not exchange information about the use of these

The FL value is used to determine the most preferred plant species for a certain use so that plants that are widely used by local communities for certain uses have higher FL values than other less popular plants (Alexiades, 1996). Khan (2014) added that the FL value shows the percentage of informants utilizing a plant species for the same main purpose. Based on the results of the calculation of the Fidelity Level (FL) of 45 plant species used by the community in the village of Corawali, Barru Regency, the highest results were obtained with an average value of 100% as many as 43 plant species. Shallots, Garlic, Papaya,

plants in traditional medicine. The score will be high (close to one) if there are well-defined selection criteria in the community and/or if informants exchange information. In this case, it can be said that the ICF value is a value that shows the uniformity of information between informants who are the samples in the study. Based on the results of the ICF calculation, from 23 types of diseases, 15 types of diseases have a high level of homogeneity or uniformity of information (ICF = 1), namely: acne, dysentery, hemorrhoid, warm body, stomach pain, toothache, gout, internal disease, swelling, flatulence, vaginal discharge, colds, ulcers, headaches, and smallpox. It can be seen in (Table 5)

Pomegranate, Noni, Ciplukan, Guava, Salam, Jamblang, Lime, Binahong, Candlenut, Jatropha for stomachache, Miana, Cat whiskers, Starfruit, Banana, Ginger, Turmeric, Temulawak, Kencur, Mahkota Dewa, Bidara, Avocado, Moringa, Celery, Pepper, Betel, Suruhan, Sambilot, Kiriya, Beluntas, Kersen, Paliasa, Meniran, Breadfruit, Jackfruit, Tembelekan, Brotowali, Soursop, Cashew, Basil, saffron flower for diabetes. The lowest yield was found in noni with a value of 20%. From the results of the fidelity level calculation, the lowest yield is the type of Jatropha plant for the use of toothache. It can be seen in (Table 6).

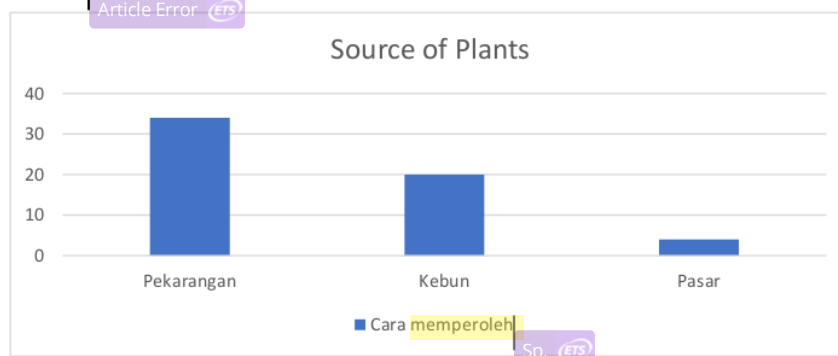




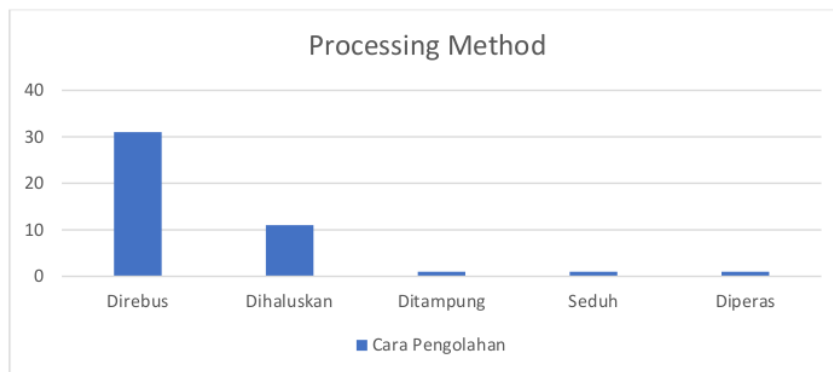
**Figure 1. Diagram of Plant's parts**

Based on the data in Figure 1 shows that the most widely used plant parts for treatment are leaves as many as 27 plants use these parts. Then followed by the rhizome to flower sequentially.

Source of Plants by local communities in Corawali Village, Barru Regency

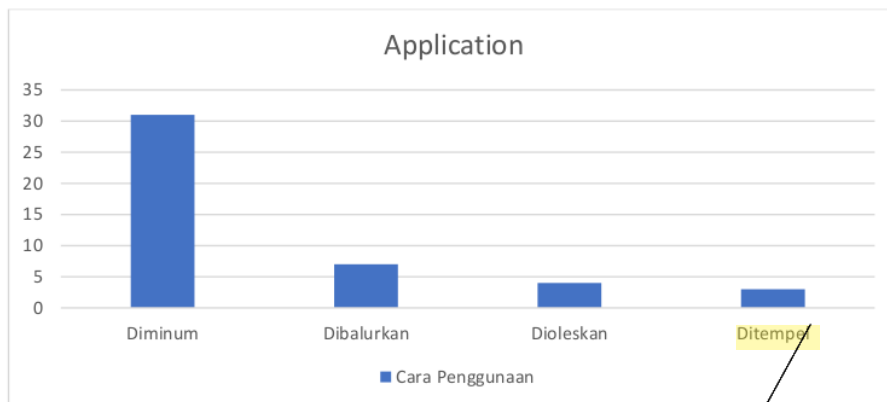


**Figure 2. Diagram of Plant's Source**



**Figure 3.** Diagram of Plant's Method

Application of Plants by local communities in Bugis Tribe, Corawali Village, Barru Regency



**Figure 4.** Diagram of Plant's Application

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## CONCLUSION

Based on the research that has been done on the ethnopharmaceutical study of medicinal plants in the Bugis tribe in Corawali Village, Barru Regency, it can be concluded as follows:

1. The medicinal plant species obtained consisted of 31 families, 45 genera, and 40 species of ethnopharmaceutical plants which are believed to

have potential as traditional medicine by the Bugis people in Corawali Village, Barru Regency.

2. Plant parts used by the Bugis people in Corawali Village, Barru Regency as medicine include leaves, stems, sap, flowers, rhizomes, tubers, seeds, herbs, bark, and fruit.
3. The method of processing ethnopharmaceutical plants by the Bugis people of Corawali

Village, Regency is by boiling, mashing, storing, brewing, and squeezing, and how use them by drinking, sticking, and smearing.

4. The highest Use Value (UV) was from guava, moringa, ginger, soursop, and lime plants with the highest value of 1. The highest Informant Consensus Factor (ICF) with an average value of 1.00 is basil, cashew, noni, papaya, jatropa, breadfruit, tembelekan, beluntas, betel, ginger, paliasa. While the value of Fidelity Level (FL), with a value of 100% as many as 43 types of plants such as shallots, garlic, papaya, pomegranate, noni, ciplukan, guava, salam, jamblang, lime, binahong, candlenut, jatropa for stomachache, miana, cat whiskers, starfruit, banana, ginger, turmeric, temulawak, kencur, crown of the gods, bidara, avocado, moringa, celery, pepper, betel, eruhan, sambiloto, kiriyu, beluntas, cherry, paliasa, meniran, breadfruit, jackfruit, tembelekan, kotowali, soursop, cashew, basil, kasumba ogi for diabetes. From the results of this study, further research is needed to determine the various components/bioactive compounds and their bioactivity as raw materials for medicines.

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