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# ETNOMEDISIN TUMBUHAN OBAT MASYARAKAT DI KAMPUNG KALIKI, MERAUKE - PAPUA

## *ETHNOMEDICINE OF MEDICINAL PLANTS USED BY TRIBAL COMMUNITY IN KALIKI VILLAGE, MERAUKE - PAPUA*

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**Abstrak**

Papua memiliki keanekaragaman hayati yang tinggi dengan jenis hutan yang lengkap dan flora endemik yang tidak ditemukan di daerah lain, serta pengetahuan tradisional tumbuhan obat masyarakat Papua sangat beragam. Namun pengetahuan tersebut belum diungkapkan dan di dokumentasikan dengan baik, seperti pengetahuan masyarakat suku Marind di Kampung Kaliki Merauke yang merupakan salah satu suku terbesar yang menempati pesisir pantai hingga perbatasan Papua New Guinea. Penelitian etnomedisin tumbuhan obat dimaksudkan untuk mengungkapkan presepsi dan konsepsi masyarakat lokal dalam memahami kesehatan seperti pengunaan tumbuhan sebagai bahan obat, sekaligus untuk melakukan inventarisasi keanekaragaman jenis tumbuhan berguna untuk obat-obatan tradisional dan sebagai data awal untuk riset farmasi dalam menemukan senyawa baru yang berguna dalam pengobatan. Metode penelitian dilakukan melalui pendekatan emik dan etik juga melakukan wawancara secara terbuka dan pengamatan langsung di lapangan. Hasil penelitian menunjukan sebanyak 34 spesies dari 22 famili dikenali dan dimanfaatkan untuk menyembuhkan berbagai penyakit. Daun merupakan bagian tumbuhan yang paling banyak dimanfaatkan sebagai bahan obat yaitu sebanyak 18 spesies, kulit batang 8 spesies dan akar rimpang 3 spesies. Sebagian besar pengolahan tumbuhan obat melalui metode perebusan dan konsumsi langsung. Tumbuhan obat ini dimanfaatkan untuk pengobatan 15 jenis penyakit. Persalinan dan diare merupakan pengobatan yang paling banyak memanfaatkan tumbuhan obat.

**Kata kunci***:* Etnomedisin; Kampung Kaliki; Merauke; Suku Marind; Tumbuhan Obat

***Abstract***

*Papua is rich in biodiversity with several forest types and endemic flora that cannot be found anywhere else in the world. Furthermore, diverse traditional knowledge of medicinal plants are already used by tribal community in Papua. However, this knowledge has not been published and well documented. For example, the knowledge of the Marind Tribe in Kaliki Village, Merauke, which is one of the largest tribes living on the coast to the border of Papua New Guinea. Research of ethnomedicine on medicinal plants is intended to reveal the perception and conception of local communities in understanding health, such as the utilization of plants as medicine, inventory of plant used in traditional medicines, and preliminary data for pharmaceutical research to find new compounds for drug discovery. This study used emic and ethical approaches, open-ended interviews, and direct field observations. According to study result, a total of 34 species from 22 families were identified and used to cure various diseases. It was found that plant parts most widely used as medicinal ingredients were leaves of 18 species, bark of 8 species, and rhizome of 3 species. Moreover, medicinal plants were normally boiled or processed for direct consumption. The medicinal plant was used to treat 15 species of diseases. In addition, medicinal plants were mostly used in childbirth care and treating diarrhea.*

***Keywords****: Ethnomedicine; Kaliki Village; Merauke; Marind Tribe; Medicinal Plants*

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## INTRODUCTION

Indonesia is estimated to be inhabited by around 300–700 ethnic groups. The ethnic diversity of Indonesia produces a diversity of cultures, traditions and local wisdom. One of the local wisdom owned by Indonesian ethnic is daily utilization of biodiversity, especially by people living around the forest. Each local community uses plants to fulfil their daily needs, such as health care, which is known as medicinal plants. Knowledge of medicinal plant utilization is generally inherited verbally, hence, the knowledge is only limited to certain groups of people and vulnerable to degradation due to cultural acculturation and modernization (Silalahi, 2016). Papua is one of provinces in Indonesia with the largest biodiversity. Papua has several types of forest and unique types of biota. According to experts, more than half of the various species of biota (plants, animals and microbes) that live in this region can not be found in other parts of the Earth (Latupapua & Sugiharto, 2001). Uji (2005) mentioned that the number of endemic genera in New Guinea (Papua and Papua New Guinea) reached 124 genera, yet such management and utilization are not yet done. In the indigenous culture of Papua, the use of plants for medicines has already done by the local community, including those living in the Kaliki Village.

Knowledge about traditional uses of medicinal plants can be examined through ethnomedical research. According to Silalahi (2016), ethnomedicine is one of ethnobotany studies that reveals local knowledge of various ethnicities in maintaining their health. Ethnomedicine is etymologically derived from the words ethno (ethnic) and medicine (medicine). Therefore, ethnomedicine is associated with two things, namely ethnicity and medicine. It is scientifically stated that ethnomedicine is the perception and conception of the local community in understanding health or study about medical system by traditional ethnic. Walujo (2009) mentioned that ethnomedicine studies are carried out to understand the extent of health culture for the community (emic) to be further scientifically proven (etic) (Silalahi, 2016). Research of ethnomedicine in Papua is not much done due to the condition of Papua region that is difficult to reach. However, several studies on plant utilization have been carried out in Papua, especially in Merauke Regency, namely by Susiarti and Rahayu in 2003 with the publication titled 'Utilization of plants in the lives of the Muyu people in Soa and surrounding villages, Merauke, Papua', Haryanto, Tanjung, and Kamaeubun in 2009 titled 'Utilization of medicinal plants of Marind people living in Wasur National Park, Merauke' and Winara and Mukhtar in 2016 with the title of publication 'Utilization of medicinal plants by Kanum Tribe in Wasur National Park, Papua'. Whereas, research on plant utilization in Kaliki Village, Merauke was not yet done.

In the daily life of Papua communities, especially in the Kaliki Village, Merauke, the use of traditional medicine continues to be carried out by the local community. However, this knowledge has not been published and well documented, such as the knowledge of the Marind Tribe in Kaliki Village, Merauke, which is one of the largest tribes living on the coast, scattered from the Digul River (Yos Sudarso Island) throughout the hinterland to the upstream (Maro, Kumbe, Bian, Bulaka) and surrounding the Fly River on the border of Papua New Guinea (Haryanto et al., 2009). Although currently, the government continues to build health facilities in all corners of the village, the condition of damaged public roads and the location of villages that is far from urban areas resulting in poor modern health services (no medical personnel and medicines at the health care center). Thus, villagers continue to use traditional medicine by utilizing plants as medicinal ingredients. It is interesting to study ethnomedicinal knowledge as basic information in revealing the diversity of medicinal plant species known by the Kaliki community, besides providing important information for conservation of forest resources in Papua and as initial data for pharmaceutical research in finding new compounds for drug discovery.

## MATERIALS AND METHODS

### Research Sites

Merauke Regency is located between 137° 33' 141° 00' E and 4° 25'–9° 19' S with total land area of ±123.220 km$^2$. The study was conducted in the Kaliki, Kurik Village,

Merauke Regency (Figure 1). The village is covering an area of ±208.84 Ha. Data were collected for 3 weeks, while total time required to complete this research was about 4 months included data processing which involved plant species identification at the Herbarium Bogoriense.

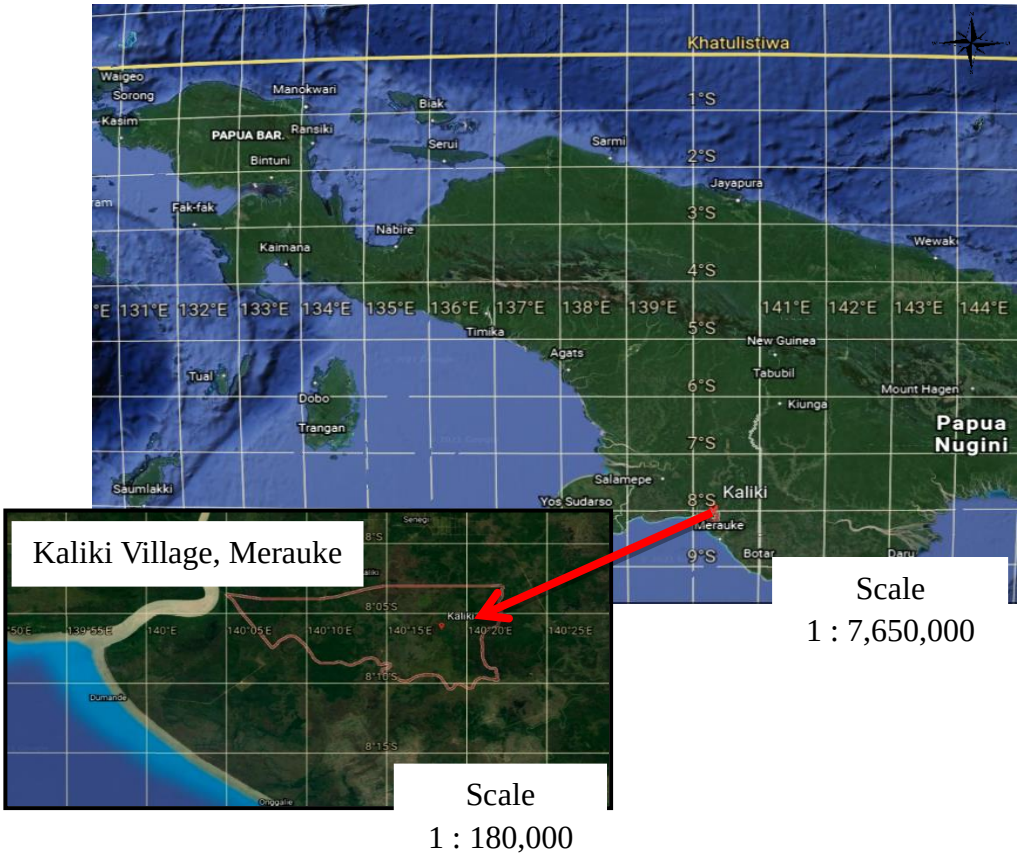


**Figure 1.** Map of Kaliki Village, Merauke Regency (Google Earth, 2021)

This area is divided into: forests, settlements, yards, village offices, schools, cemeteries, roads, and other public infrastructures. The community of Kaliki Village from the Marind Tribe consisting of seven clans, namely Gebze, Kaize, Mahuze, Balagaize, Ndiken, Bazik-bazik, and Samakakai. Kaliki Village is bordered by Sinegi Village in north, Onggari Village in south, Sumber Rejeki Village in east, and Domande Village in west. The distance from Kaliki Village to the capital of Merauke Regency is quite far, that is around 105 km and connected by muddy road. The community was also found to have difficulty to travel to the capital of regency or other regencies due to the absence of public vehicles in the village of Kaliki.

## Data Collection

The study was conducted exploratively (interview and direct observation) using emic and ethical approaches. The emic approach is an approach that refers to the local knowledge system framework, while the emic ethical approach refers to the scientific theoretical framework. An emic approach is used to explore and obtain data about people's knowledge of the object being observed from their perspective and language (Walujo, 2004). Furthermore, through the system of knowledge and cognition, public knowledge in the form of conceptual rules, categories, codes, and cognitive rules (emics) are discussed and analyzed based on conceptual categories obtained with a scientific background (ethics). Data collection techniques were carried out through direct semi-structured interviews based on the list of questions (simple questionnaire) as a controller for researchers to ask questions to informants. Interviewees were selected by considering several criteria such as: have a lot of knowledge and experience about traditional medicine like traditional elders or village heads of Kaliki, midwife (ndaken) and others who know a lot about the use of plants

as medicinal ingredients, age between 35–60 years old, and work daily as farmer and hunter. Most of the medicinal plants utilized by the community were processed by boiling or burning. All species of medicinal plants recognized by the community were recorded in their local names, how to use them, and their uses. The recorded plants were collected and made for herbarium to be further identified for their scientific names. Identification was carried out at the Biology Research Center LIPI.

## RESULTS

Based on the study result, at least 34 species of medicinal plants which belong to 22 families (Table 1) were recognized and utilized by the Marind Tribe in Kaliki-Merauke Village. *Euphorbiaceae, Rubiaceae,* and *Zingiberaceae* are families with the highest number of species that consisted of three species of each. Classification of plants up to family level is an important factor in determining the use of plant species in local communities (Silalahi, 2016).

**Table 1.** Diversity of medicinal plants utilized by Marind Tribe

| Family | Species | Local name | Part used in medicine | Diseases treated | Processing |
|---|---|---|---|---|---|
| *Acanthaceae* | *Andrographis paniculata* (Burm.f.) Nees. | Sambiroto | Leaves | Malaria | Boiled |
| *Anacardiaceae* | *Mangifera indica* L. | Mangga air/piaw | Bark | Diarrhea | Boiled |
| *Apocynaceae* | *Alstonia scholaris* (L.) R. Br. | Kayu susu | Leaves and Bark | Malaria and toothache | Boiled |
| | *Tabernaemontana pandacaqui* Lam. | Kayu susu | Root | Diarrhea | Boiled |
| *Areaceceae* | *Metroxylon sagu* Rottb. | Sagu/dah | Trunk/ Strach | Roseola infantum (*serampah*) | Mixed with hot water |
| | *Cocos nucifera* L. | Kelapa/ onggad | Fruit | Digestive tract cleansing | Consumed directly |
| *Bombacaceae* | *Ceiba pentandra* (L.) Gaertn. | Kapas | Bark | Lung | Boiled |
| *Caricaceae* | *Carica papaya* L. | Pepaya | Leaves and Flower | Malaria | Boiled |
| *Cucurbitaceae* | *Momordica charantia* L. | Papare | Leaves | Remove mucus in the throat | Pounded |
| *Convolvulaceae* | *Ipomoea triloba* L. | Kumkari | Leaves | Diarrhea | Boiled |
| *Euphorbiaceae* | *Phyllanthus niruri* L. | Meniran | All parts of plants | Birth process | Boiled |
| | *Manihot esculenta* Crantz | Ubi kayu | Leaves | Eye cleansing | Boiled |
| | *Ricinus communis* L. | Jarak | Sap | Eye cleansing | Drop into eyes |
| *Fabaceae* | *Sophora tomentosa* L. | Ndembum/ asam hutan | Leaves | Cough and pneumonia | Boiled |
| | *Intsia bijuga* (Colebr.) Kuntze | Kayu besi/kanda | Bark | Body cleaning after birth process | Boiled or pounded |
| *Gentianaceae* | *Fagraea* Sp. | Bukung | Leaves | Body pain | Boiled |
| *Lamiaceae* | *Plectranthus scutellarioides* (L.) R.Br. | Mayana | Leaves | Anemia | Boiled |

| Family | Species | Local name | Part used in medicine | Diseases treated | Processing |
|---|---|---|---|---|---|
| | *Orthosiphon aristatus* (Blume) Miq. | Kumis kucing | Leaves | Asthma | Boiled |
| *Malvaceae* | *Abelmoschus manihot* (L.) Medik. | Gedi | Leaves | Increasing breast milk (ASI) supply | Boiled |
| | *Hibiscus tilliaceus* L. | Wakati | Bark and Leaves | Wound and ulcer | Pounded and put on the wound |
| *Moraceae* | *Artocarpus heterophyllus* Lam. | Nangka | Young Leaves | Body cleaning after birth process | Boiled to drink or take a bath |
| *Musaceae* | *Musa paradisiaca* L. | Pisang/ dewaka | Sap | Fresh wound | Drop on the wound |
| *Myrtaceae* | *Psidium guajava* L. | Jambu biji/ gejawas | Leaves | Diarrhea | Boiled, but for young leaves are consumed directly with salt |
| *Piperaceae* | *Piper betle* L. | Sirih | Leaves | Eye cleansing | Boiled |
| | *Piper methysticum* G. Forst. | Wati | Leaves | Birth process | Stacked or Squeezed |
| *Poaceae* | *Bambusa* Sp. | Bambu/illa, yella | Bark | Fresh wound | Peeled wood |
| *Rubiaceae* | *Morinda citrifolia* L. | Mengudu | Leaves and Fruit | Body pain | Boiled |
| | *Nauclea orientalis* (L.) L. | Gar, gampol | Bark | Anemia and remove mucus in the throat | Boiled or Pounded |
| | *Timonius timon* (Spreng.) Merr. | Mambrar | Leaves | Cough | Boiled |
| *Sapindacaeae* | *Allophylus cobbe* (L.) Raeusch. | Matoa | Branch | Make baby's umbilical cord dry | Burnt |
| *Urticaceae* | *Pipturus verticillatus* H.J.P.Winkl. | Gersen hutan | Bark | Hair fertilizers | Pounded |
| *Zingiberaceae* | *Curcuma longa* L. | Kunyit | Rhizome | Ulcer | Grated and Smeared |
| | *Alpinia galanga* (L.) Willd. | Lengkuas | Rhizome | Tinea versicolor | Grated and Smeared |
| | *Zingiber officinale* Roscoe | Jahe | Rhizome | Cough | Grated and Squeezed |

Parts of medicinal plants used by community in the Kaliki Village consisted of leaves, bark, rhizome, sap, fruit, flowers, root, trunk, branch, and all parts of plants (Figure 2). Parts of the medicinal plants mostly used by the people were leaves (18 species), bark (8 species), and rhizomes (3 species).

Medicinal plants are normally boiled or processed for direct consumption by the people of Kaliki Village (Table 1). In this study, the Kaliki villagers were observed to use

medicinal plants to treat 15 types of diseases (Figure 3). It was found that approximately 6 species of medicinal plants were used in childbirth care. One type of medicinal plants can cure some types of diseases, such as wakati (*Hibiscus tilliaceus*) to treat wound and ulcer; kayu susu (*Alstonia scholaris*) to treat malaria and toothache; asam hutan (*Sophora tomentosa*) to treat cough and pneumonia; also gampol (*Nauclea orientalis*) to treat anemia and remove mucus in the throat. Each type of plants has different parts to use and also different function (Table 1).

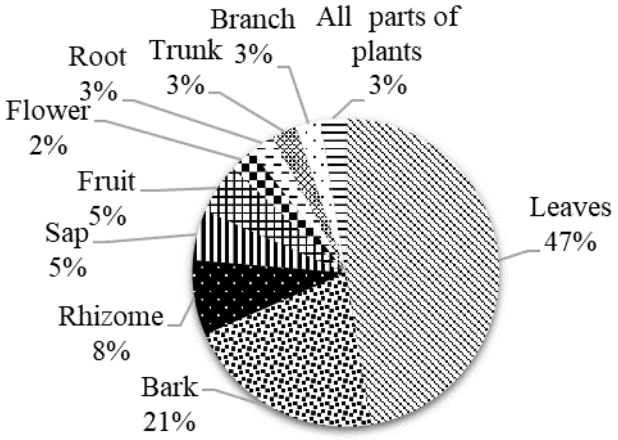


**Figure 2.** Percentage of plant parts used

Based on interviews with the respondents, species of kayu susu (*Alstonia scholaris*) and pepaya (*Carica papaya*) were mostly used to cure malaria by those who frequently suffered from malaria since the plants are easy to obtain, available in large quantities in the fields, and easily processed. Moreover, wati (*Piper methysticum*) was rarely used for its status as a sacred plant, thus only certain people (traditional elders) who can process it as a medicinal ingredient.

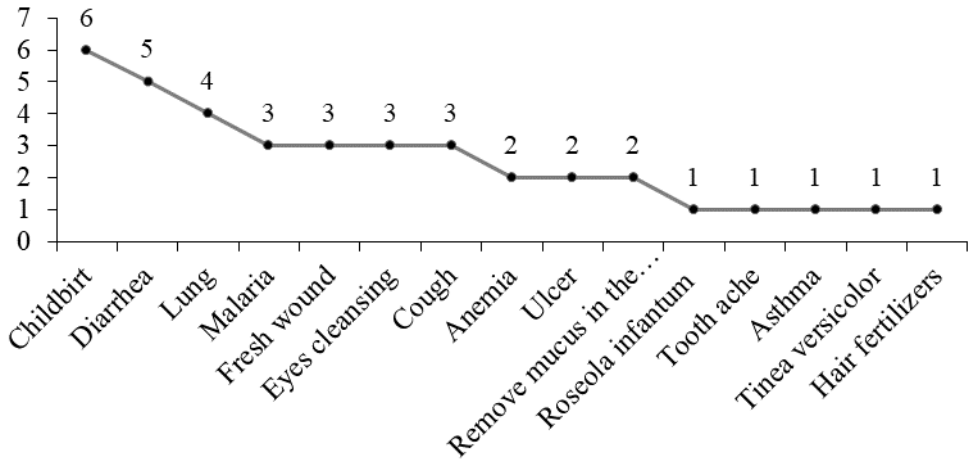


**Figure 3.** Species diversity by type of disease

## DISCUSSION

### The Concept of Health and Pain According to the Marind Community in the Kaliki-Merauke Village

This study is conducted to investigate How Papuans, based on their culture, conceptualize healthy and sick. Because of the diversity of Papuan culture which consists of various ethnic groups, the concept of health and sickness can be perceived differently according to the basic views of their respective cultures. To Kaliki villagers from the Marind Tribe, pain is caused by the existence of supernatural forces such as spirits and human strength by use of evil spirits. They also believe that disease will occur if there is no balance between the environment and humans. Similarly, people of Amungme Tribe also

assume that imbalance between the environment and humans will result in various diseases. In this case, environment means the land, that is the mother (mama) who nurtures, educates, and feeds them. For this reason, Amungme people are prohibited to damage nature (land), and must sustain the nature properly (Dumatubun, 2002).

The concept of illness following the suggestion of the Kaliki villagers, is in line with their perception that knowledge to use plants as medicine is based on belief carried down over generation. They believed that their ancestors were inspired by the God (Occultism) that certain plants have the power to cure a disease, thus the plants are used as medicine. In addition, the belief in plants arises because the community thinks that plant parts with the same shape or color as parts of the human body will have their own properties that can treat these body parts, for example the red mayana is plant used by the Kaliki community as a blood booster medication.

Healthy, according to the Kaliki villagers is a condition where there is no disturbance in their body that can interfere with their daily activities. To say, a person is considered healthy if he does not feel a physical disorder, or even if he is aware of an abnormality, but it is not yet causing extreme sick feeling and disturb their activities. Hence, the main basis of the decision is that they still can carry out their daily social roles as usual. Meanwhile, according to Dumatubun (2002) the concept of health when examined more deeply through the ethical approach introduced by the Wold Health Organization (WHO), is "a state of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity". In this concept, it is clearly seen that health is not only concerned with physical conditions, but also one's mental and social conditions. If this concept is associated with understanding in society, health is, on the whole, a functional ability to carry out social roles in daily life (Dumatubun, 2002).

**Richness and Diversity of Medicinal Plants**

The Marind tribal community in the Kaliki Village was found to use at least 34 species of medicinal plants from 22 families (Table 1). However, the number of medicinal plant species examined in this study was lower than the number of Marind tribal medicinal plants in Wasur National Park (Haryanto et al., 2009), Muyu tribal medicinal plants (Susiarti & Rahayu, 2003), and Kanum tribal medicinal plants (Winara & Mukhtar, 2016). Utilization of medicinal plants by local people can be influenced by various factors including language, cultural history, beliefs, understanding, social relations as well as the efficacy and availability of plants in their neighborhood (Silalahi, Nisyawati, & Walujo, 2018). In addition, differences in plant species that are utilized by local communities can be affected by the process of modernization and changes in forest functions (Ibo & Arimukti, 2019).

The largest number of medicinal plant species identified was included in the family *Euphorbiaceae* (3 species), *Rubiaceae* (3 species), and *Zingiberaceae* (3 species). Furthermore, 19 other families consisted of less than two species of medicinal plant species. Plant species from the *Euphorbiaceae*, *Rubiacae*, and *Zingiberaceae* were frequently used by the tribe since they were easy to obtain and some species were even cultivated, thus commonly found in yards or gardens. According to Susiarti (2015), cultivated plants are plants that have dual functions, aside from being ornamental plants/fruit plants, they also functions as medicinal plants or food plants. Hence, plant utilization was not only due to its easiness to obtain, but also based on the intended use. There were several species of plants observed to have dual functions, both as medicinal plants and foods, namely piaw (*Mangifera indica*), onggad (*Cocos nucifera*), and gedi (*Abelmoschus manihot*).

Plants commonly used as medicine by the Marind people in the Kaliki Village included *Alstonia scholaris, Bambusa* sp., *Carica papaya, Curcuma domestica, Musa paradisiaca, Morinda citrifolia*, *Nauclea orientalis,* and *Zingiber officinale*. These species are commonly known within the society. There were also several species of plants used by most people in the tribe, yet for different medicinal purpose by using different plant parts, such as milk wood (*Alstonia scholaris*). Marind tribal community in Kaliki

Village used the bark and leaves of plants to treat malaria and toothache, while Marind Tribe in the Wasur National Park area utilized the bark and leaves of the plant to treat malaria, intestinal worms and as lactation supplement for breastfeeding mothers (Haryanto et al., 2009). Moreover, Muyu Tribe used the sap to treat aches, swollen wounds and coughs (Susiarti & Rahayu, 2003). Variation in treatment applied existed due to the presence of triterpenoid compounds, such as α-amirin, ursolic acid, and lupeol acetate (Ragasa, Batarra, Tan, & Altena, 2016), which act as antimicrobials and play an active role in inhibiting the growth of pathogenic microbes (James & Dubery, 2009). In addition, the content of flavonoids (Ragasa et al., 2016) in these plants also act as antihemolysis agents with ability to maintain cell membrane stability (Somchit, 2012).

In research of ethnomedicine, if the efficacy of a medicinal plant used by various ethnicities or cultures is similar, the content of its bioactive compounds will have the same properties as claimed by the local community (Silalahi et al., 2018). Utilization of medicinal plants in a variety of treatment does not only relate to the content of bioactive compounds in these plants, but also acts as a symbol in custom events or rituals. In this study, plants used as a complement to traditional events are wati (*Piper methysticum*) plants. According to the Marind Tribe in the Kaliki Village, wati plants reflect the wealth of the Marind people, these plants, therefore, must be present in traditional events, such as marriages and interfaith events. In term of medicinal purpose, wati plants can only be used by certain people (Chief, Shaman, Men).

The use of plants in traditional medicine is quite diverse, both in term of the method of ingredient composition applied and the part of the plant used. Marind people in Kaliki Village used plants as medicinal ingredients by only using certain parts of plants (Figure 1). Leaves (47%) were the most widely used parts, followed by bark (21%), rhizomes (8%), sap (5%), fruits (5%) and other parts of each 3%, included flowers, roots, stems, branches, also all parts of plants. Some studies conducted in other areas in Papua also showed considerable use of leaf parts in traditional medicine, such as in Mansinam Island, Manokwari where Hamzah, Kesaulija, and Rahawarin (2003) identified 25 species of medicinal plants and the most widely used parts of plants were found to be leaves (18 species). In Doremena Village, Depapre District, Jayapura Regency, the community mostly used the leaves (44%) as medicinal material, namely 26 species out of 59 species of medicinal plants (Ibo & Antoh, 2017). Similarly, in Nansfori Village, Supiori Regency, the community majorly used the leaves (52.08%) as medicine, that was 25 species out of 48 species of medicinal plants (Sada & Tanjung, 2010). The leaves are often used in medicine because they are easier to obtain, relatively easy to process, and the leaves are always available regardless of season and climate. Furthermore, flowers were the least utilized part of plants since most plants flowering only at certain times.

The medicinal plants found in this study were used to treat 15 types of diseases. Several types of diseases were treated by the Marind Tribe using more than one plant species. Childbirth care, diarrhea (abdominal pain), lung disease (internal medicine), and malaria were treated using respectively 6, 5, 4, 3 species of medicinal plants (Figure 2). The type of disease (illness) utilized various medicinal plants according to the Marind Tribe was childbirth care where medicinal plants were mainly used after childbirth process to clean the uterus. Species usually utilized were *Phyllanthus niruri* and *Abelmoschus manihot*. Meniran (*Phyllanthus niruri*) is usually grown in the neighborhood, thus it is easy to obtain. *Phyllanthus niruri* contains alkaloids and therpenoids (Ramandeep, Akhtar, Choudhury, & Kumar, 2017), which play role in reducing inflammation of the uterus (Jain, Sharma, & Ramawat, 2011), flavonoids (Ramandeep et al., 2017) which act as anti-inflammatory during postpartum period (Jain et al., 2011), and saponins (Ramandeep et al., 2017) which provide benefit in the vasodilation treatment during childbirth (Jain et al., 2011).

Gedi (*Abelmoschus manihot*) was cultivated by the local community in the yard for providing two benefits, namely cleaning the uterus as a vegetable. *Abelmoschus manihot* contains glycoside (Arangale, Dhanwate, Shinde, & Aher, 2018) which plays

role in stopping bleeding during the postpartum period (Kren & Martínková, 2001), tannins (Arangale et al., 2018) which can promote weight loss since it is able to reduce appetite besides reducing inflammation in the uterus during the postpartum period (Jain et al., 2011) and carbohydrates (Arangale et al., 2018) as an energy source.

In addition to childbirth care, abdominal pain or diarrhea could also be treated by many medicinal plants, namely the species *Mangifera indica*, *Tabernaemontana pandacaqui*, *Ipomoea triloba*, and *Psidium guajava*. Local people normally use plants that have bitter taste to deal with stomach pain. Silalahi (2014) mentioned that digestive tract disorders are the most common diseases found in rural communities due to the lack of sanitation facilities. *Tabernaemontana pandacaqui*, known as curly leaf milk wood, has the potential to be anti-inflammatory, anti-peritic and anti-nociceptive due to the discovery of alkalodies in the stem such as voacangine. In addition, the plant flowers contain acetic acid, fatty acids, and oleanolic acid (Ragasa, Reyster, Andrea, & Maria, 2018) which with ability to reduce triglycerides and cholesterol (Mitrou et al., 2015), blood pressure, diabetes and anti-inflammation (Muller, Kirkhus, & Pedersen, 2001). The genus *Ipomoea* is widely used in traditional medicine, food ingredients or traditional rituals. This genus is used in diabetes treatment, hypertension, dysentery, constipation, and inflammation. Alkaloids, phenols and glycolipids are active compounds that are widely contained in plants of this genus (Meira, Eliezer, Jorge, & Juceni, 2012). However, identification of active compounds contained in *Ipomoea triloba* is not yet carried out. Therefore, identification of chemical compounds contained in *Ipomoea triloba* is highly required.

Medicinal plant composition might contain single ingredient. In other words, only one plant species is required in treating one type of disease. In addition, there are also plant species with more than one treatment benefit, i.e. *Sophora tomentosa* which is used as medicine for cough and lung disease. This plant contains flavonoid compounds, namely isoflavonoids and alkaloids (Kinoshita et al., 1990) which both play active role as antioxidants and antimicrobials (Mukne, Vivek, & Avinash, 2011). Moreover, *Nauclea orientalis* is used as blood booster and medicine to remove mucus in the throat. According to Winara and Mukhtar (2016) *Nauclea orientalis* are for its antimicrobial and antiparasitic properties. This plant contains indole alkaloids that have potential as antimalarial (Sichaem, Surapinit, Siripong, & Khumkratok, 2018), besides its potential to heal wounds and as anti-pyretics and anti-diarrheals (Yee, 2014).

## CONCLUSION

The Marind Tribe tribal community in Kaliki Village was found to have knowledge about medicinal plant since they normally used various species of plants are as medicinal ingredients. There are about 34 species from 22 families that have been recognized and utilized by the community to cure various diseases. The species of medicinal plants that is potential for further study and development included *Tabernaemontana pandacaqui* (kayu susu), *Nauclea orientalis* (gampol), *Sophora tomentosa* (asam hutan), *Ipomoea triloba* (kumkari), and *Piper methysticum* (wati).

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