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Utilization of Plants as Traditional Medicine by the People of Momiwaren Village, West Papua

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Abstrak

Momiwaren Village is one of the villages close to the Momiwaren Protected Forest Area. In line with regional development and technological advances, knowledge of the use of plants as medicinal ingredients is starting to disappear. For this reason, it is necessary to conduct research on how many types of plants are still used by the community as medicinal ingredients. The method used in this research is a survey method with interview techniques. The results of this research show that the people of Momiwaren Village still use plants as medicinal ingredients. There are 30 species from 22 families used by the community. If we look at the conservation status of the plants used, the types of plants used are still included in the naturally available (LC/DD) category, but there is one type of plant that is threatened with extinction and requires further silvicultural action so that this plant can be cultivated and not extinct from nature.

Key words: Medicinal plant, Momiwaren village, Momiwaren protected forest.

INTRODUCTION

West Papua has a high level of plant diversity (Murdjoko et al., 2021; Siburian et al., 2020). This is due to the very diverse natural landscape, from coastal areas to mountainous areas (Kartikasari et al., 2012). The characteristics of this region encourage Papuan people to live side by side with nature and utilize natural potential as part of their daily lives, including the use of plants as traditional medicine.

Momiwaren is a village in South Manokwari Regency, West Papua. This area is one of the expansion areas, with only recently available and still limited infrastructure. The people who live in this village really appreciate and depend on nature and the surrounding environment (Gerrits et al., 2021).

Momiwaren Village is located on the edge of the Momiwaren protected forest in South Manokwari. This forest area is included in the lowland tropical forest area with fertile soil, good climate, and a high diversity of vegetation types (Siburian et al., 2020). Plants with medicinal properties are also often found in this area. However, in line with technological developments, regional developments and also open access to information, knowledge of the use of plants as medicinal ingredients is starting to erode and even disappear (Ramli et al., 2021). This also happens in several regions (Weckmüller et al., 2019); (Navia et al., 2022). In fact (Zhou et al., 2023) stated that knowledge regarding medicinal plants among the Mulam community in Guangxi, China is threatened due to the lack of records regarding this matter. For this reason, research

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related to the use of plants as ingredients for traditional medicine is very much needed as a basis for plant development and information for the development of future medicines.

RESEARCH METHODS

This research was conducted from September to December 2023 in Momiwaren Village, South Manokwari. The location of the village is around the Momiwaren Protected Forest Area. The information collected was the traditional use of medicinal plants by the local community.

Respondents were selected using the snowball sampling method, with a list of questions that had been prepared including the category of plants used, the components used, how they are used, and the place where the plants live. If the species is not yet known by its scientific name, a specimen will be made for further identification in the Manokwariensis herbarium. The data collected was then analyzed and presented in tabulated form.

RESEARCH RESULTS

The results of this study indicate that there are several types of plants that can be used singly or as a mixed component, which are believed to be able to cure a type of disease or have the potential to maintain human health. However, not all people in Momiwaren Village have the same level of knowledge about the use of plants as medicinal materials. Some of this knowledge comes from parents, local community experiences that have been passed down from generation to generation, information from social media and even some are associated with religious values. This also happened in several other areas as stated by (Ramli et al., 2021; Hiola et al., 2016).

Momiwaren people who utilize plants from tree habitus, palms, lianas, ferns, and other herbaceous species. The plants used come from 30 species and 22 families. Information on the number of medicinal plants used is shown in Figure 1.

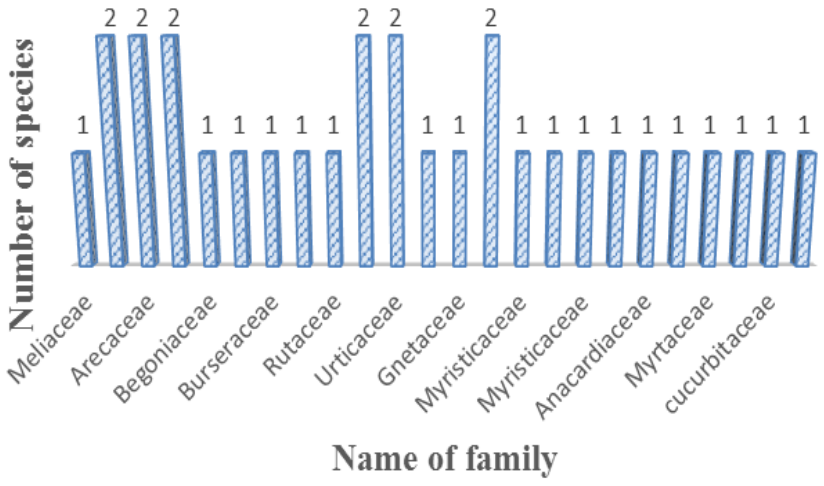

Figure 1: Families of medicinal plants used in Momiwaren Village.

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Growth form of plants used as medicinal plants, dominated by trees. This shows the proximity of the Momiwaren village community to the protected forest area. Hutapea et al., (2022) also stated the same thing about the pattern of plant use used by the community around the PT Wijaya Sentosa area. Generally, people are closer and friendlier with annual plant species, because in addition to being able to be used several times, the pattern of passing on knowledge to generations is easier when compared to herbs and shrubs that generally grow wild around the forest area, as in Figure 2.

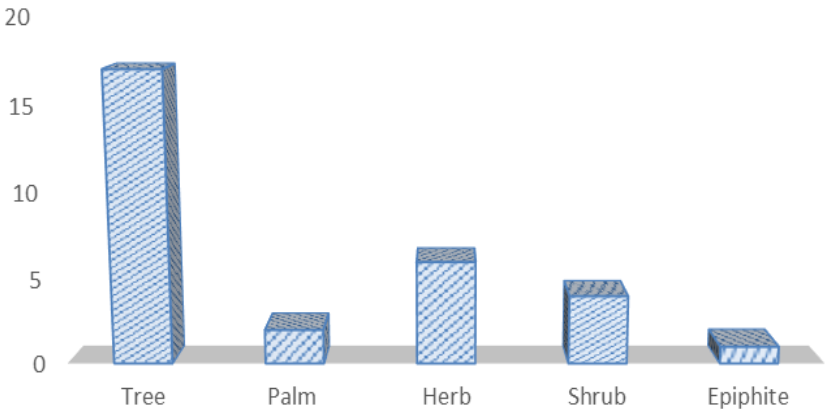

Figure 2. Growth form of medicinal plants used by the people of Momiwaren village.

The technique of utilizing plants as medicinal materials carried out by the people of Momiwaren Village is by boiling plant materials. This technique is also carried out by several communities in other areas such as in the Wasur National Park area (Winara, Aji & Mukhtar, 2016). And this is a very easy and cheap technique that can be done by the community (Alipin, 2022).

The treatment done by the community against several types of diseases, when traced using several research references conducted by several researchers, has a very extraordinary scientific value. In Table 1, the types and parts used by the community in treating several diseases are described. And if traced further the content of these types of plants scientifically, then the content of these plants has a very close relationship in overcoming the various diseases recommended.

Table 1. Medicinal plants used by the people of Momiwaren Village

No	Species	Parts Used	Desease	Referensi	Conservation status
1	*Aglaia argentea*	Leaf and bark	moisturizing the lungs, reducing fever and treating contused wound, coughs and skin diseases	(Desi et al., 2018)	LC

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No	Species	Parts Used	Desease	Referensi	Conservation status
2	*Alstonia* scholaris	Sap, bark and flower	Treatment of diarrhea, malaria, anticholeric	(Kalaria et al., 2012)	LC Treatment of diarrhoea, malaria, anticholeric
3	*Alstonia spectabilis*	Sap, bark and flower	Treatment of diarrhea, malaria, anticholeric	(Kalaria et al., 2012)	LC
4	*Areca catechu*	Leave, fruit, and flower	antidiabetic, stomatitis, bleeding gums, gingivitis, conjunctivitis, glaucoma, leucorrhoea, urinary disorders, anorexia, diarrhea, blood pressure	(Ansari et al., 2021)	DD
5	*Arenga Pinnata*	Fruit and leave	osteoarthritis empirically	(Sovia & Anggraeny, 2019)	LC
6	*Baringtonia* sp	Leave and fruit	cough	(Osman et al., 2015)	-
7	*Baringtonia asiatica*	Leave and fruit	cough	(Osman et al., 2015)	-
8	*Begonia spp*	leave	cough	(Prihardina & Fatmawati, 2021)	-
9	*Carica papaya*	Fruit and leave	Malaria, stomach	(Elgadir et al., 2014)	-
10	*Calophylum inophylum*	leave	Skin infection	(Pratiwi & Nurlaeni, 2020)	-
11	*Canarium hirsutum*	leave	Skin infection	(Endewip et al., 2020)	LC
12	*Cinnamomum culilaban*	Leave and stem bark	Reumatik	(Kapelle et al., 2016)	EN
13	*Citrus aurantifolia*	Leave and fruits	Cough	(Prastiwi & Ferdiansyah, 2013)	-

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No	Species	Parts Used	Desease	Referensi	Conservation status
14	*Curcuma longa*	rhizome	cough, stamina booster	(Hewlings & Kalman, 2017)	DD
15	*Dendrocnide peltata*	leave	Stamina booster	(Simaremare et al., 2019)	LC
16	*Garcinia sp*	Fruit and leave	Hemorrhoids, flood allergies, arthritis, tuberculosis, mycosis, mouth sores, fever.	(Espirito Santo et al., 2020)	-
17	Gnetum gnemon	Fruit and leave	Arthritis, bronchitis and asthma	(Barua et al., 2015)	LC
18	*Hibiscus rosasinensis*	Leave, flower, and stem	Hypertensive, tumor	(Bala et al., 2022)	-
19	*Horsfieldia* sp	leave	Fever, antibakteri, paint killer	(B et al., 2023)	-
20	*Mimosa pudica*	leave	Dysentery, asthma, fatigue and blood disease	(Joseph et al., 2013)	LC
21	*Myristica argentea Warb*	Leave and fruits	Fever dan neuropsikiatri	(Siburian et al., 2020)	VU
22	*Piper betle L*	leave	Cholesterol and cough	(Nayaka et al., 2021)	-
23	*Laportea decumana*	leave	Stamina booster	(Simaremare et al., 2019)	-
24	*Mangifera indica*	Fruit, leave	Treat diarrhea, dysentery, anaemia, asthma, bronchitis, cough, hypertension, insomnia, rheumatism	(Yap et al., 2021)	DD

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No	Species	Parts Used	Desease	Referensi	Conservation status
25	*Momordica charantia*	Fruit and leave	Lever	(Satya Vani Chekka & Naresh Kumar Mantipelly, 2020)	-
26	*Musa paradisiaca*	Leaves, fruit and stems	Wound healing, diabetic, Cancer, kidney protection	(Ajijolakewu et al., 2021)	-
27	*Psidium guajava L*	Fruit and leave	Diabetes, hypertensi, demam, diare	(Pratiwi & Nurlaeni, 2020)	LC
28	*Sida rhombifolia*	Leave and root	lever	(Silalahi, 2020)	-
29	*Tradescantia Zebrina*	leaves	Tuberculosis, arterial hypertension, and cough	(Kumar et al., 2017)	-
30	*Zingiber officinale*	Rhizome	Stomachache	(Zhou et al., 2023)	DD

Note: LC (Least concern); DD (Data deficient); EN (Endangered)

The types of plants shown in Table 1 illustrate the diversity of vegetation that can be utilized as traditional medicinal materials. However, in its utilization, there still needs to be scientific testing carried out to obtain the accuracy of treatment related to the maximum and minimum limits of this plant material in consumption. For this reason, information related to these various species is an interesting thing to continue to be researched and developed.

The status of the existence of these plants in nature is also still within the limits that are not worrying, except for the type of Cinnamomum culilaban which has entered the endangered conservation status (de Kok, 2020). This condition encourages the policy of developing and using species, especially species that have been threatened in nature.

CONCLUSION

The results of this study indicate that the Momiwaren community still utilizes plants as medicinal materials, especially from the types of growth form trees. Generally, the types used are still widely available in nature.

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