Inventory of Medicinal Plants for Male and Female Reproductive Health by Ethnic Javanese and Ethnic Dayak Seberuang in Balai Harapan Village, Tempunak District, Sintang Regency

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ABSTRACT

Indonesia is a country that has high biodiversity, so it is known as a mega-biodiversity country.1-3 Indonesia has the third-largest tropical rain forest after Africa and Brazil.4 Kalimantan Island is one of the areas in Indonesia with quite extensive forests.5 One of the diversity that can be found in the forests of Kalimantan is medicinal plants.6,7 Medicinal plants are a storehouse of chemicals that have many benefits, one of which is as a traditional medicine for various diseases and increasing body immunity.8,9 Using plants as medicine is considered safer than using synthetic chemical drugs.10 Ethnographically, Indonesian society consists of various ethnic groups, so it does not rule out the possibility of differences in the use of plants as traditional medicine.11-13 Indonesian people have the habit of using plants as traditional medicine, both people on Kalimantan Island and outside Kalimantan Island. Several previous studies have been carried out regarding the use of plants as medicine on several islands in Indonesia, including research on the island of Sumatra was conducted.14-21 One of the provinces on Kalimantan Island is West Kalimantan, namely Pontianak City and Singkawang City, and consist of twelve districts namely Kubu Raya, North Kayong, Ketapang, Mempawah, Landak, Sanggau, Sekadau, Sintang, Melawi, Kapuas Hulu, Bengkayang, and Sambas.22 Tempunak District is one of the many sub-districts in Sintang Regency. Tempunak District consists of twenty-six villages and one of them is Balai Harapan Village. There are three hamlets in Balai Harapan Village with a total population of 1,481 people or 467 families with an area of 3,384 km². Balai Harapan Village also has ethnic diversity, including Dayak, Javanese, Sasak, Sundanese, Malay, Madurese, and Batak ethnic groups. However, the majority of the residents of Balai Harapan Village are ethnic Javanese, numbering 654 people, and Dayak Seberuang people, numbering 559 people.

INTRODUCTION

Based on the results of interviews with the people of Balai Harapan Village, information obtained that the Javanese are ethnic immigrants who have long migrated to Balai Harapan Village, while the Dayak Seberuang ethnic are native residents of Balai Harapan Village. The Javanese ethnic group has been used medicinal plants since they were in their area of origin, namely Java Island. Until now, the people in Balai Harapan Village still maintain their local wisdom, both from the Javanese and Dayak Seberuang ethnic groups, which have been passed down by their respective ancestors. Ethnic Javanese still maintain their local wisdom in the form of traditional ceremonial activities, such as tingkeban (seven months of pregnancy), sadran (grave pilgrimage), tedak siden (lowering the ground for the baby), and temu manten (bringing the bride and groom together during the wedding procession). The Dayak Seberuang ethnic group also usually performs traditional rituals in the form of ceremonies such as rejecting reinforcements, beuma (farming), nugal (planting rice), mabau (pulling grass), ngetam (harvesting rice), dances performed before and after

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planting rice, and gawai (party). However, the two ethnic groups have differences in local wisdom inherited from their ancestors. However, they have the same local wisdom, one of which is the use of plants as traditional medicine.

The use of plants as traditional medicine by each ethnic group also varies, both in terms of the types of plants used and the processed methods according to the disease. Until now, the people of Balai Harapan Village, especially the Javanese and Dayak Seberuang ethnic groups, still maintain local wisdom, namely the use of plants as medicine which has been passed down from generation to generation since ancient times. In its use, the people of Balai Harapan Village process plants as traditional medicine independently at home. However, it is not uncommon for people to come to traditional healers for treatment, because they are thought to better understand the use of plants as medicine according to the disease they are suffering from. In this way, local wisdom emerges in the form of culture in the use of the values and properties of plants as traditional medicine. 23-26

In traditional medicine, each ethnicity can treat various diseases. As a result of interviews conducted with traditional healers from the Javanese and Dayak Seberuang ethnic groups, Balai Harapan Village, it is known that diseases that usually still use plants as medicine include fever, digestive disorders, skin diseases such as snake pox, treatment of broken bones, post-natal care for mothers, childbirth, and respiratory problems. Furthermore, the Javanese and Dayak Seberuang ethnic groups can treat several reproductive health disorders, both men and women. Reproductive health is a collection of methods, techniques, and services that support reproductive health and well-being through preventing and resolving reproductive health problems related to sexual activity, life status, and individual relationships in all aspects related to the reproductive system, its functions, and processes.27,28 Thus, reproductive health is not just about being free from disease, but rather the process a person carries out to be able to have a safe and healthy sexual life.29-31

Currently, the knowledge of the Javanese and Dayak Seberuang ethnic of Balai Harapan Village regarding plants with medicinal properties, especially for the reproductive health of men and women, is only passed down by their ancestors orally from one generation to the next and this information has not been recorded. Research regarding the inventory of medicinal plants for reproductive health used by the Javanese and Dayak Seberuang ethnic groups in Balai Harapan Village has also never been carried out. This causes a lack of public knowledge regarding medicinal plants for reproductive health and over time this knowledge may be lost because it is not properly documented. Thus, it is necessary to carry out inventory activities of medicinal plants, especially for male and female reproductive health in Balai Harapan Village so that the local wisdom found in the village is maintained and can be preserved in the next generation.

MATERIALS AND METHODS

This research was conducted in Balai Harapan Village, Tempunak District, Sintang Regency, West Kalimantan in August-September 2023. Based on its location, Balai Harapan Village has borders with other areas such as the northern part borders with Tempunak Kapuas, the eastern part borders with Nanga Tempunak, to the south it borders Suka Jaya, and to the west it borders Tanjung Prada (Figure 1). Balai Harapan Village has a population of 1,481 people or 467 families with an area of 3,384 km² and there are three hamlets, namely Trimulya Hamlet, Barak Baru Hamlet, and Harapan Jaya Hamlet.

Figure 1. Map of Tempunak District (Source: https://sintangkab.bps.go.id/)

: Balai Harapan Village.
This research used qualitative research with triangulation techniques which are a combination of interview, observation, and documentation techniques. Data analysis in this research was carried out during data collection and after data collection was completed. Data analysis was carried out on the interviewees' answers until the desired data was obtained by the objectives of this research. There are four stages in the research carried out, namely collection and analysis, taking plant samples, making a herbarium, and identification. The first stage is data collection and analysis with four activities, namely data collection, data reduction, data presentation, and conclusions or data verification. Data collection activities were carried out by field observation using triangulation techniques. The activity began with determining informants using purposeful sampling techniques, the number of informants were two traditional healers who came from different ethnicities, namely Javanese and Seberuang Dayak ethnicities. This aims to ensure that researchers obtain information that varies according to the characteristics of each traditional healer. The interviews conducted in this research used a structured technique that contained information about types of plants, benefits of plants, parts used, processing methods, and rules for using traditional medicines using interview sheets, then everything seen and heard is recorded. After that, field observations and plant documentation were carried out using a camera. The data reduction activity carried out is to summarize or sort out the important things that have been obtained during data collection. Next, data presentation carried out by presenting the data in narrative form accompanied by pictures and tables containing the results of the interview. The final activity was making conclusions that are supported by valid evidence from research. The second stage was taking plants that are efficacious as medicine for reproductive health based on the results of interviews between researchers and traditional healers regarding the types of plants. The third stage was making a dry herbarium on the plants that have been taken. The fourth stage was herbarium identification at the Biology Laboratory, Faculty of Mathematics and Natural Sciences, Tanjungpura University Pontianak with letter number 182/A/LB/EMIPA/UNTAN/2023.

RESULTS

Based on the results of interviews conducted in Balai Harapan Village, Tempunak District, Sintang Regency, West Kalimantan, 26 plants were found that have medicinal properties for reproductive health (Table 1). The results of plant documentation that have been obtained based on interviews and field observations with informants are presented in Figure 2. The plants used as medicine for male and female reproductive health by the Javanese and Dayak Seberuang ethnic groups in Balai Harapan Village come from several families, namely Zingiberaceae, Asteraceae, Poaceae, Lamiaceae, Fabaceae, Polypodiaceae, Rubiaceae, Caricaceae, Melastomataceae, Gliemechiaceae, Dilleniaceae, Phylanthaceae, Blechnaceae, Schizaceae, Piperaceae, Moraceae, and Asparagaceae. The most common types of plants used come from the Zingiberaceae family. The Using tribe of Banyuwangi Regency also showed that the Zingiberaceae family is a family that is widely used as medicine for women's reproductive health.

Based on research results, plant organs those can be used to support reproductive health by the Javanese and Dayak Seberuang ethnic groups include fruit, flowers, leaves, stems, roots, and rhizomes. However, the part of the plant that is often used as medicine for male and female reproductive health is the leaves. Leaves are the plant organs most commonly used as medicinal materials for reproductive health by the community in Kuantan District, South Central East Regency and female reproductive health by the community in Kayu Baong Pekawai Hamlet, Sayan District, Melawai Regency.

Based on the results of this research, the processed of plants into medicine by the people of Balai Harapan Village is quite varied, such as boil and drink the water, cook it into vegetables, mash it then sticking it on, and consume it directly. Most of the plants in this study were processed by boiled them and then drink that water. Simple processing of plants by boiling it so they can be used directly in treatment. People believe that processed plants into medicine by boiling can kill germs in plants, is safer, and can contain more compounds in plants.

DISCUSSION

Plants used to support male and female reproductive health by the Javanese and Dayak Seberuang ethnic groups in Balai Harapan Village, Tempunak District, Sintang Regency contain various metabolite compounds that are useful for other treatments. Based on research conducted, the leaves of (*Schizaea dictoma* (L.) Sm) are used by the Seberuang Dayak ethnic group in Balai Harapan Village as a medicine to treat infertility or sterility. So far, no research has been found regarding the content of metabolite compounds contained in *Schizaea dictoma*. *Telusuh empeliau* roots have benefits as a medicine to treat coughs and sore throats.

The rhizome of *Kunyit putih* (*Curcuma zedoaria* (Cristm.) Roscoe) is used by the Javanese ethnic group in Balai Harapan Village as a medicine to help reduce pain during menstruation. *Kunyit putih* rhizomes contain metabolite compounds including flavonoids, steroids, tannins, and saponins. *Kunyit putih* rhizome has other potential, namely as an antibacterial and anti-diabetic.

The stem of *Tebu hitam* (*Saccharum officinarum* L.) is a tebu that almost the same as *tebu kuning*. However, *tebu hitam* has different stem and leaf colors from *tebu kuning*. *Tebu hitam* stalks are usually used by the Seberuang Dayak ethnic group in Balai Harapan Village to treat erectile dysfunction in men. *Tebu hitam* stems contain metabolite compounds including phenolics, flavonoids, tannins, alkaloids, saponins, steroids, and triterpenoids. *Tebu hitam* stems have other potential, namely as antioxidants and antibacterials.

The leaves of *Terntang manu'* (*Cassia sp.*) used by the Dayak Seberuang ethnic group in Balai Harapan Village as a medicine to treat infertility or sterility. So far, no research has been found regarding the content of metabolite compounds contained in *terntang manu*. However, *terntang manu* included in the genus *Cassia* which has other species, one of them is the *ketepeng cina* (*Cassia alata* L.). The use of the *ketepeng cina* plant can be used as a medicine for canker sores and to treat bad breath.

The leaves and tubers of *penekat* (*Brachypodium sylvaticum* (Huds.) P.Beauv) used by the Dayak Seberuang ethnic group in Balai Harapan Village as a medicine to treat infertility or sterility. So far, there is no research has been found regarding the content of metabolite compounds contained in *penekat*. *Penekat* is used as a traditional medicine for cut wounds.

The leaves of *Pengelas buluh* (*Musaenda frondosa* L.) used by the Dayak Seberuang ethnic group in Balai Harapan Village to treat several reproductive health disorders such as menstrual disorders, vaginal discharge, and infertility or sterility. *Pengelas buluh* leaves contain metabolite compounds including flavonoids, saponins, glycosides, sugars, steroids, phenols, and proteins which have the potential to act as antimicrobials and antifungals.

The rhizome of *Lengkuas* (*Alpinia galanga* (L.) Willd.) used by the Seberuang Dayak ethnic group as a medicine to treat erectile dysfunction. The rhizomes of *lengkuas* contain metabolite compounds including flavonoids, alkaloids, saponins, and phenols which have the potential to be antibacterial and anti-inflammatory.

The leaves of *atti-ati* (*Coleus scutellarioides* (L.) Benth) used by ethnic Javanese in Balai Harapan Village as a medicine to increase female...
Table 1. Species of plants used by the Javanese and Dayak Seberuang ethnic groups in Balai Harapan Village as medicine for reproductive health.

<table>
<thead>
<tr>
<th>NO</th>
<th>LOCAL NAME</th>
<th>SCIENTIFIC NAME</th>
<th>BENEFIT</th>
<th>PART USED</th>
<th>PROCESSING METHOD</th>
<th>HOW TO USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Telusah empedius</td>
<td>Schizae dictoma (L.) Sm</td>
<td>Treat infertility</td>
<td>Leaves</td>
<td>Take enough telusah empedius leaves, then the telusah empedius leaves can be processed by boiled it</td>
<td>Boiled water from telusah empedius is consumed 3 times a day by men and women</td>
</tr>
<tr>
<td>2</td>
<td>Kusyit putih</td>
<td>Curcuma zedoaria (Cristm.) Roscoe</td>
<td>Reduces menstrual pain</td>
<td>Rhizome</td>
<td>Take enough temu putih rhizomes, wash them clean and then they can be processed by boiling or making herbal medicine</td>
<td>Boiled water and herbal medicine are consumed twice a day</td>
</tr>
<tr>
<td>3</td>
<td>Tebu hitam</td>
<td>Saccharum officinarum L.</td>
<td>Treat erectile dysfunction</td>
<td>Stem</td>
<td>Take enough tebu hitam stem, then cut the tebu hitam stem and peel them and extract the tebu hitam juice</td>
<td>Tebu hitam juice is consumed once every 2 days</td>
</tr>
<tr>
<td>4</td>
<td>Ternang Manu’</td>
<td>Cassia sp.</td>
<td>Treat infertility</td>
<td>Leaves</td>
<td>Take enough ternang manu’ leaves, then the ternang manu’ leaves can be processed by crumbling or mashing them</td>
<td>Crushed or mashed leaves of the ternang manu’ plant can be used by rubbing them on the stomachs of women and men once every 3 days.</td>
</tr>
<tr>
<td>5</td>
<td>Penekat</td>
<td>Brachypodium sylvaticum (Huds.) P.Beauv</td>
<td>Treat infertility</td>
<td>Leaves and tubers</td>
<td>The leaves and tubers of the penekat plant are taken, then the leaves and tubers of the penekat can be processed by boiling them together</td>
<td>Boiled water from penekat plants can be consumed 3 times a day</td>
</tr>
<tr>
<td>6</td>
<td>Pengelas buluh</td>
<td>Mussaenda frodenso L.</td>
<td>Treat infertility</td>
<td>Leaves</td>
<td>Take 3-4 pieces of pengelas buluh leaves, then the pengelas buluh leaves can be processed by boiled it</td>
<td>Boiled water from pengelas buluh leaves can be consumed 3 times a day</td>
</tr>
<tr>
<td>7</td>
<td>Lengkuas</td>
<td>Alpinia galanga (L.) Wild.</td>
<td>Treat erectile dysfunction</td>
<td>Rhizomes</td>
<td>Take enough the rhizome of lengkuas, then wash it clean and boil it until it boils</td>
<td>Cooked water from the rhizomes of lengkuas is consumed once a day</td>
</tr>
<tr>
<td>8</td>
<td>Ati-ati</td>
<td>Coleus scutellarioide (L.) Benth</td>
<td>Increases female fertility</td>
<td>Leaves</td>
<td>Take 7-8 ati-ati leaves. The leaves that have been taken are then washed clean and boiled</td>
<td>Boiled water from ati-ati or iler leaves is consumed 3 times a day</td>
</tr>
<tr>
<td>9</td>
<td>Paku miding</td>
<td>Stenochlaena palustris (Burm. Fil) Bedd.</td>
<td>Facilitates breast milk</td>
<td>Stem and young leaves</td>
<td>Take enough paku miding steam and young leaves, then it can be processed by cutting it into vegetables</td>
<td>Consumed during breastfeeding</td>
</tr>
<tr>
<td>10</td>
<td>Paku kijang</td>
<td>Platycerium bifurcatum (Cav.) C.Chr.</td>
<td>Facilitates breast milk</td>
<td>Stem and young leaves</td>
<td>Take enough paku kijang steam and young leaves and process them by cooking them into vegetables</td>
<td>Consumed during breastfeeding</td>
</tr>
<tr>
<td>11</td>
<td>Kedada di</td>
<td>Ficus hispidi L. fill.</td>
<td>Facilitates breast milk</td>
<td>Leaves</td>
<td>Take enough young kedada di leaves, then cook them as a vegetable</td>
<td>Consumed during breastfeeding</td>
</tr>
<tr>
<td>12</td>
<td>Sirih</td>
<td>Piper betle Linn.</td>
<td>Tighten the female organs</td>
<td>Leaves</td>
<td>Take 5-7 sirih leaves, then the sirih can be processed by boiled it and used to wash the female organs</td>
<td>Boiled water from sirih leaves is used 2 times a day</td>
</tr>
<tr>
<td>13</td>
<td>Sembung</td>
<td>Blumea balsamifera (L.) DC.</td>
<td>Postnatal care</td>
<td>Leaves</td>
<td>Take 3-6 pieces of sembung leaves, then wash the sembung leaves and can be processed by boiled it</td>
<td>Boiled water from sembung leaves can be consumed twice a day</td>
</tr>
<tr>
<td>14</td>
<td>Karimunating</td>
<td>Melastoma malabarificum L.</td>
<td>Treat erectile dysfunction</td>
<td>Roots and leaves</td>
<td>Take 10-20 karimunating leaves and enough karimunating roots. Then the leaves and roots of karimunating can be processed by boiled it</td>
<td>Boiled water from karimunating leaves and roots is consumed 3 times a day</td>
</tr>
<tr>
<td>15</td>
<td>Cangkok</td>
<td>Breynia androgyra (L.) Chakrab. &amp; N.P.Balakr.</td>
<td>Facilitates breast milk</td>
<td>Leaves</td>
<td>Take enough cangkok leaf shoots, then cook them as a vegetable</td>
<td>Consumed during breastfeeding</td>
</tr>
<tr>
<td>16</td>
<td>Tapak liman</td>
<td>Elephantopus scaber L.</td>
<td>Treat erectile dysfunction</td>
<td>Roots and leaves</td>
<td>Take enough leaves and roots of tapak liman, then the leaves and roots of tapak liman can be processed by boiled it</td>
<td>Tapak Liman boiled water can be consumed once a day</td>
</tr>
<tr>
<td>17</td>
<td>Kumis kucing</td>
<td>Orthotropion aristatus (Blume)Miq.</td>
<td>Tighten the female organs</td>
<td>Roots, leaves, flower</td>
<td>Take enough roots, leaves and flowers of kumis kucing, then they can be processed by boiled it</td>
<td>Kumis kucing decoction can be consumed once a day</td>
</tr>
<tr>
<td>18</td>
<td>Temu putih</td>
<td>Curcuma zedoaria (Cristm.) Roscoe</td>
<td>Reduces menstrual pain</td>
<td>Rhizome</td>
<td>Take enough temu putih rhizome, then temu putih rhizomes can be processed by grating or boiling to get the juice</td>
<td>Temu putih water that has been grated or boiled is then drunk 2 times a day</td>
</tr>
<tr>
<td>19</td>
<td>Sabang merah</td>
<td>Cordyline fruticosa (L.) A.Chev.</td>
<td>Treat erectile dysfunction and menstrual disorders</td>
<td>Roots</td>
<td>Take enough sabang merah roots, then cleaned and the sabang merah roots can be processed by boiled it</td>
<td>Sabang merah root boiled water is consumed 3 times a day</td>
</tr>
</tbody>
</table>
Panjaitan RGP, et al. Inventory of Medicinal Plants for Male and Female Reproductive Health by Ethnic Javanese and Ethnic Dayak Seberuang in Balai Harapan Village, Tempunak District, Sintang Regency

### Table of Medicinal Plants

<table>
<thead>
<tr>
<th>No.</th>
<th>Plant Name</th>
<th>Scientific Name</th>
<th>Effect</th>
<th>Part Used</th>
<th>Preparation Method</th>
<th>Consumption Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Kupu-kupu</td>
<td>Bauhinia variegata L.</td>
<td>Treat erectile dysfunction</td>
<td>Leaves and flowers</td>
<td>Take 5-10 kupu-kupu leaves and enough kuptu-kupu flowers. Then the kuptu-kupu leaves and flowers can be processed by boiling them together until they boil.</td>
<td>Drink once a day</td>
</tr>
<tr>
<td>21</td>
<td>Pepaya</td>
<td>Carica papaya Linn.</td>
<td>Facilitates breast milk</td>
<td>Leaves</td>
<td>Take enough young pepaya leaves, then the pepaya leaves can be processed by cook them into vegetables.</td>
<td>Consumed during breastfeeding</td>
</tr>
<tr>
<td>22</td>
<td>Sambung nyowo</td>
<td>Gynura procumbens (Lour.) Merr</td>
<td>Treat infertility</td>
<td>Leaves</td>
<td>Take 3-6 pieces of sambung nyowo leaves, then the splicing life leaves can be processed by boiling until boiling.</td>
<td>Sambung nyowo boiled water can be consumed 2 times a day</td>
</tr>
<tr>
<td>23</td>
<td>Paku resam</td>
<td>Dicranopteris linearis (Burm. fil) Underw.</td>
<td>Facilitates childbirth</td>
<td>Roots</td>
<td>Take enough young simpor leaves, then simpor leaves can be processed by cooking them into vegetables mixed with paku miding and so on.</td>
<td>Boiled water from the roots of paku resam is consumed 2 times a day</td>
</tr>
<tr>
<td>24</td>
<td>Simpor</td>
<td>Dillenia indica Linn.</td>
<td>Facilitates breastmilk</td>
<td>Leaves</td>
<td>Take enough young paku kubok, then it can be processed by cooking it into vegetables.</td>
<td>Consumed directly</td>
</tr>
<tr>
<td>25</td>
<td>Buah kaluk</td>
<td>Etlingera elatior (Jack) S.M.Sm.</td>
<td>Facilitates breastmilk</td>
<td>Fruits</td>
<td>Kaluk fruit is consumed once a day</td>
<td>Kaluk fruit is consumed once a day</td>
</tr>
<tr>
<td>26</td>
<td>Paku kubok</td>
<td>Nephrolepis bisserata</td>
<td>Facilitates breastmilk</td>
<td>Stem and young leaves</td>
<td>Consumed during breastfeeding</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2.** Various plants that can support male and female reproductive health by Javanese and Dayak Seberuang ethnic groups in Balai Harapan Village:
fertility. *Ati-ati* leaves contain metabolite compounds including alkaloids, saponins, flavonoids, tannins, essential oils, phenols, fats, polyphenols, phytosterols, and calcium oxalate.43 *Ati-ati* leaves have other potential, namely as an antioxidant, anti-diabetic, anti-inflammatory, immunomodulator, antithistamine, and antihelmintic.42

The stem and young leaves of *paku miding* (*Stenochlaena palustris* (Burm. Fil) Bedd.) used by the Seberuang Dayak ethnic group, Balai Harapan Village, to help facilitate breastfeeding. *Paku miding* fern leaves contain metabolite compounds including phenolics, terpenes, and alkaloids.45 *Paku miding* leaves have other potential, namely as anti-inflammatory, antimarial, and antioxidant.44

The stem and young leaves of *paku kijang* (*Platycerium bifurcatum* (Cav.) C.Chr.) used by the Seberuang Dayak ethnic group, Balai Harapan Village, to help facilitate breastfeeding. So far, no research has been found regarding the content of metabolite compounds in *paku kijang* leaves. However, *paku kijang* leaves have potential as a medicine to treat fever, boils, and fertilizer for pregnant women.46

The leaves of *kedadai* (*Ficus hispida* L. fill.) used by the Seberuang Dayak ethnic group, Balai Harapan Village, to help facilitate breastfeeding. *Kedadai* leaves contain metabolite compounds including alkaloids, flavonoids, tannins, steroids, and triterpenoids which have the potential as antioxidants and anticancer.40

The leaves of *sirih* (*Piper betle* Linn.) used by the Javanese ethnic group in Balai Harapan Village to tighten the female organs. *Sirih* leaves contain metabolite compounds including flavonoids, saponins, polyphenols, and essential oils.47 *Sirih* leaves have another potential, namely as anti-thrush, anticoag, antiseptic, and antibacterial.48

The leaves of *sembung* (*Blumea balsamifera* (L.) DC.) used by ethnic Javanese from Balai Harapan Village to help facilitate childbirth. *Sembung* leaves contain metabolite compounds including alkaloids, flavonoids, tannins, and steroids/terpenoids.49 *Sembung* leaves have other potential, namely as an antioxidant and antibacterial.48 *Sembung* leaves also have the potential as an antihypertensive.50

The roots and leaves of *karimunting* (*Melastoma malabathricum L.* used by the Seberuang Dayak ethnic group, Balai Harapan Village, to treat erectile dysfunction. *Karimunting* leaves contain metabolite compounds including alkaloids, flavonoids, saponins, triterpenoids, and steroids.51 *Karimunting* leaves have other potential, namely as an antibacterial and antihyperglycaemia.52

The leaves of *cangkok* (*Breyonia androgyna* (L.) Chakrab. & N.P.Balakr.) by ethnic Javanese from Balai Harapan Village to help facilitate breastfeeding. *Cangkok* leaves contain metabolite compounds including phenolics, tannins, flavonoids, saponins, triterpenoids, and alkaloids.53 *Cangkok* leaves have other potential, namely as an antioxidant and antibacterial.54

The leaves of *tapak liman* (*Elephantopus scaber* L.) by ethnic Javanese in Balai Harapan Village as a medicine to treat erectile dysfunction in men. *Tapak liman* leaves contain metabolite compounds including phenols, flavonoids, and saponins.55 *Tapak liman* leaves have other potential, namely as an antioxidant, antibacterial, antiviral, and anti-inflammatory.56

The roots, stem, and flower of *kumis kucing* (*Orthosiphon aristatus* (Blume) Misq.) used by the Javanese ethnic group in Balai Harapan Village to help tighten the female organs. The leaves of *kumis kucing* contain metabolite compounds including flavonoids, saponins, tannins, and essential oils.57 *Kumis kucing* leaves have other potential, namely as an antibacterial57 and antioxidant.58

The rhizome of *temu putih* (*Curcuma zedoaria* (Cristm.) Roscoe) used by ethnic Javanese in Balai Harapan Village to help reduce menstrual pain. *Temu putih* rhizomes contain metabolite compounds including polyphenols, flavonoids, saponins, and steroids/triterpenoids.59 *Temu putih* rhizome has another potential, namely as an antimicrobial60 and antioxidant.61

The roots of *sabang merah* (*Cordyline fruticosa* (L.) A.Chev.) used by the Seberuang Dayak ethnic group, Balai Harapan Village, to treat erectile dysfunction and also treat menstrual disorders. *Sabang merah* leaves contain metabolite compounds including saponins, flavonoids, polyphenols, alkaloids, steroids, and triterpenoids.62 *Sabang merah* leaves have another potential, namely as an antioxidant and antibacterial.63

The leaves of *kupu-kupu* (*Bauhinia variegata* L.) used by ethnic Javanese in Balai Harapan Village as a medicine to treat erectile dysfunction. *Kupu-kupu* leaves contain metabolite compounds including flavonoids, tannins, and phenols.64 *Kupu-kupu* leaves have the potential as antimicrobial, anti-diabetic, anti-inflammatory, antipyretic, wound healing, antiepileptic, and antidepressant.65

The leaves of *pepaya* (*Carica papaya* Linn.) used by ethnic Javanese in Balai Harapan Village to help facilitate breastfeeding. *Pepaya* leaves contain metabolite compounds including flavonoids, phenolics, steroids, alkaloids, terpenoids, phenolics, carotenoids, tannins, saponins, fatty acids, glycosides, glycosylates, and chlorophyll.66 *Pepaya* leaves have another potential, namely as an anticancer67 and antibacterial.67

The leaves of *sambung nyowo* (*Gynura procumbens* (Lour.) Merr) used by ethnic Javanese in Balai Harapan Village to overcome infertility. *Sambung nyowo* leaves contain metabolite compounds including saponins, flavonoids, alkaloids, essential oils, and anticoagulants.68 *Sambung nyowo* leaves have other potentials, namely as antihyperglycemia and antioxidants.68 *Sambung nyowo* leaves also have the potential as anti-inflammatory, antihypertensive, antiproliferation, antibacterial, anti-diabetic, anticancer, organ protection, and function improvement sexual.69

The roots of *paku resam* (*Dicranopteris linearis* (Burm.fil) Underw.) used by the Seberuang Dayak ethnic group in Balai Harapan Village as a medicine to help facilitate childbirth. *Paku resam* has another potential, namely as an antibacterial because *paku resam* leaves contain metabolite compounds including alkaloids, flavonoids, phenolics, tannins, saponins, triterpenoids, and steroids.70

The leaves of *simpur* (*Dillenia indica* Linn.) used by the Seberuang Dayak ethnic group, Balai Harapan Village, to help facilitate breastfeeding. *Simpur* leaves contain metabolite compounds including alkaloids, phenols, tannins, flavonoids, steroids, terpenoids, and saponins.71 Apart from the leaves which can be used to help facilitate breast milk, the roots of *simpur* have the potential to be anticancer, antibacterial, and antifungal.72

The fruit of *kaluk* (*E lithnera clator* (Jack) S.M.Sm.) used by the Seberuang Dayak ethnic group in Balai Harapan Village as a medicine to help facilitate breastfeeding. *Kaluk* leaves contain metabolite compounds including alkaloids, flavonoids, polyphenols, steroids, saponins, and essential oils.73 *Kaluk* has other potential, namely as an antimicrobial, anticancer, larvicide, and repellent for leaves, flowers, fruit, stems, and chizomes.74

The leaves of *paku kubok* (*Nephrolepis bisserata*) are used by Dayak Seberuang ethnic group in Balai Harapan Village to facilitate breast milk. *Paku kubok* leaves contain metabolite compounds including alkaloids, phenolics, flavonoids, tannins, and triterpenoids.75

**CONCLUSION**

There are 26 species of medicinal plants used by the Javanese and Dayak Seberuang ethnic groups in Balai Harapan Village,
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Tempunak District, Sintang Regency as traditional medicines for male and female reproductive health. The plants used as medicine for male and female reproductive health by the Javanese and Dayak Seberuang ethnic groups in Balai Harapan Village come from several families, namely Zingiberaceae, Asteraceae, Poaceae, Lamiaceae, Fabaceae, Polypodiaceae, Rubiaceae, Caricaceae, Melastomataceae, Gleicheniaceae, Dilleniaceae, Phyllanthaceae, Blechnaceae, Schizaceae, Piperaceae, Moraceae, and Asparagaceae. The parts used are various, namely fruit, flowers, leaves, stems, roots, and rhizomes. It can be processed by boil and drink the water, cooked it into vegetables, mash it and stick it on, and consume it directly. However, the part that most widely used the leaves and the most common way of processed is by boiling it in and then soaking it in the water. Further research is needed to determine the contents of each plant in this study as medicine for male and female reproductive health.

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CONFLICTS OF INTEREST
The authors declare no conflicts of interest.

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