

Traditional Knowledge of Medicinal Plants among Sellers of Jamu Gendong in Wonolopo, Indonesia.

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Abstract. This study focuses on knowledge of medicinal plants that are used as raw materials by the sellers of *jamu gendong*. In addition, this study explores the types of *jamu* that are produced from those medicinal plants. The qualitative method was applied in this research because it can reveal the phenomenon of informants' knowledge and experiences especially concerning on medicinal plants utilization in producing *jamu gendong*. The research was conducted in Wonolopo Village, Mijen, Semarang, in 2018. There were 20 *jamu gendong* sellers volunteered in this study. There are 26 species of medicinal plants and 16 plant families are usually used as raw material in making *jamu gendong*.

Keywords: *Jamu, Medicinal Plant, Semarang, Traditional Knowledge*

1 INTRODUCTION

Indonesia is one of the mega biodiversity countries that has around 20,000 plant species [1]. There are about 1,180 species of plants have the potential to be medicine [2]. However, only about 300 species have been used for traditional medicine [3].

Plants are known to be a significant source of medicines used in the treatment of various categories of human diseases. Historically all medicinal preparations originating from plants, whether in simple forms of plant parts or in more complex forms of raw, mixed extracts. At present, a large number of drugs are developed from plants that are active against a number of diseases [4]–[8].

The utilization of plants as raw material for medicines has been carried out by humans since the process of concocting. Even though modern medicine has developed to remote areas, the use of plants as medicine is still in demand by the public. The use of this medicinal plant is believed by people because it has relatively small side effects and is cheaper compared to conventional drugs [9], [10]. Traditional medicine has enormous potential benefits in the development of public health. Medicinal plants have been used for centuries by the Indonesian people as traditional medicine which is usually in the form of herbs.

This research is an ethnobotanical study which aims to reveal local knowledge related to medicinal plants owned by the community. This is very important because the ignorance of the potential of medicinal plants could trigger the loss of natural resources that have an impact on decreasing biodiversity.

As known that the tradition of treatment of a society is inseparable from the connection of local culture. Perceptions about the concept of sickness, health, and the diversity of medicinal plant species are formed through a process of socialization which is inherently trusted and believed to be present [11], [12]. Community in a particular area must have a way of maintaining their health or maintaining their quality of life, which they obtain from generation to generation. The use of medicinal plants as ingredients of traditional medicine is also implemented in quite diverse ways. Treatment of certain diseases can be done differently or with different plants and different rituals [13]. The formulation of the problem of this research are: what types of plants species used in jamu as herbal drinks, what types of jamu are produced by the herbalists.

2 RESEARCH METHOD

The research method applied in this research project is qualitative. This research was conducted in Summersari Hamlet, Wonolopo Village, Mijen District, Semarang City. The research location is one of the thematic villages (kampung jamu) that raises the theme of jamu as its uniqueness for tourism purposes. Some residents in this hamlet work as sellers of jamu. The study conducted between March-October 2018.

The focus of the study is about the knowledge of medicinal plants that are used as ingredients of herbs and plant parts used. In addition to this matter, this study explores herbal products produced in each production, manufacturing process, and how to obtain the herbal ingredients. The informants were the sellers of jamu gendong as members of the herbal medicine group.

3 RESULT AND DISCUSSION

3.1 Overview of research site

Wonolopo Village is one of the urban villages that is included in the administrative area of Mijen District, Semarang City. This village is a division of the Mijen Urban Village. Mijen Sub-district currently administers 14 urban villages. From the geographical side, Wonolopo Village shares regional boundaries with four villages, namely Mijen Village on the east side, Jatisari Village on the south side, Wonoplumbon Village in the west and Ngadirgo Village on the north.

This hamlet is known as Kampung Jamu because of the 115 heads of families who live in this area nearly 40 percent of the residents work as sellers of jamu. The profession has been occupied by people from generation to generation from their ancestors. The profession as a jamu gendong seller has become the primary source of peoples' income.

3.2 Medicinal plants used for jamu

Producers and sellers of jamu in Summersari hamlet have the knowledge of various kinds of plants that are used in making jamu. There are 26 species of plants that are commonly used to concoct herbs. The following is a list of names of plants commonly used as herbal ingredients based on scientific names of uses and parts of plants used:

Table 1. Names of medicinal plant

No.	Vernacular name	Scientific name of species	Family	Use	Parts
1	Kencur	<i>Kaempferia galanga</i>	<i>Zingeiberaceae</i>	- Treating cough - Treating sore throat	Rhizome
2	Kunir (Kunyit)	<i>Curcuma domestica</i> Vahl.	<i>Zingeiberaceae</i>	- Antibiotic - Menstruation - Strengthen bones - Wound healing - Abdominal pain	Rhizome
3	Temulawak	<i>Curcuma xanthorrhiza</i> Roxb.	<i>Zingeiberaceae</i>	- Healthy liver - Strengthen teeth - Treating typhus - Increasing appetite	Rhizome
4	Jahe emprik (Jahe putih kecil)	<i>Zingiber officinale</i>	<i>Zingeiberaceae</i>	- Warms the body - Treating flatulence	Rhizome
5	Sirih	<i>Piper betle</i> L.	<i>Piperaceae</i>	- Cleanse vaginal discharge - Antiseptic - Strengthen teeth - Healthy eyes - Eliminate body odor - Woman's skin rejuvenation	Leaf
6	Asem (Asem jawa)	<i>Tamarindus indica</i>	<i>Fabaceae</i>	- Treating cough - Reduces excessive appetite	Fruit
7	Sambiloto	<i>Andrographis paniculata</i> Ness.	<i>Acanthaceae</i>	- Treat itching - Blood circulation	Leaf

8	Cabe Ceplik	<i>Piper retrofractum</i>	<i>Piperaceae</i>	<ul style="list-style-type: none"> - Treat allergies - Prevent diabetes - Overcoming hypertension - Add the essence of jamu 	Buah
9	Kates	<i>Carica papaya</i>	<i>Caricaceae</i>	<ul style="list-style-type: none"> - Dengue fever - Mother's breast milk - Diabetes - Increase appetite - Overcoming constipation 	Leaf
10	Brotowali	<i>Tinospora crispa</i> L.	<i>Menispermaceae</i>	<ul style="list-style-type: none"> - Treating diabetes - Treating hypertension 	Stem
11	Lempuyang	<i>Zingiber zerumbet</i> Smith.	<i>Zingeiberaceae</i>	<ul style="list-style-type: none"> - Overcoming tired bodies 	Rhizome
12	Beras	<i>Oryza sativa</i>	<i>Graminae</i>	-	Fruit/seed
13	Adas	<i>Foeniculum vulgare</i>	<i>Apiceae</i>	- Adds spicy flavor	Fruit/seed
14	Kayu Manis	<i>Cinnamomum burmani</i>	<i>Lauraceae</i>	<ul style="list-style-type: none"> - Removes belly fat - Lower blood sugar/diabetes - Adds delicious aroma 	Stem bark
15	Manjakani	<i>Quercus infectoria</i> Gall	<i>Fagaceae</i>	<ul style="list-style-type: none"> - Increase stamina, uterine muscles 	Fruit
16	Kayu Rapet	<i>Paramecia laevigata</i>	<i>Apocynaceae</i>	<ul style="list-style-type: none"> - Tighten Woman's sex organs 	Stem
17	Kunir Putih	<i>Curcuma zedoaria</i> Rosce.	<i>Zingeiberaceae</i>	<ul style="list-style-type: none"> - Treat and prevent cancer 	Rhizome
18	Temu (kunyit) Mangga	<i>Curcuma mannga</i>	<i>Zingeiberaceae</i>	<ul style="list-style-type: none"> - Treating cysts - Treat uterine cancer 	Rhizome

19	Sirsak	<i>Annona muricata</i> L.	<i>Annonaceae</i>	- Lowers cholesterol - Overcoming gout	Leaf
20	Luntas (beluntas)	<i>Pluchea indica</i> Less	<i>Asteraceae</i>	- Mother's breast Milk	Leaf
21	Dadap	<i>Erythrina variegata</i>	<i>Fabaceae</i>	- Complete the efficacy of jamu	Leaf
22	Jambu	<i>Psidium guajava</i> Linn	<i>Myrtaceae</i>	- Treating diarrhea	Leaf
23	Salam	<i>Syzygium Polyanthum</i>	<i>Myrtaceae</i>	- Overcoming hypertension - Lowers cholesterol	Leaf
24	Sere (serai)	<i>Cymbopogon citares</i>	<i>Poaceae</i>	- Add herbal flavor	Leaf
25	Jeruk Nipis	<i>Citrus aurantifolia</i>	<i>Rutceae</i>	- Add herbal flavor	Fruit
26	Mahoni	<i>Swietenia macrophylla</i>	<i>Meliaceae</i>	- Treating diabetes	Fruit/seed

In addition, there are some additional herbal ingredients or products from plants such as sugar from palm trees (*Arenga pinnata*) and sugar taken from *Saccharum*.

3.3 Types of jamu

Generally, there are 9 types of jamu where the herbal ingredients have their respective properties. The list of jamu types below explains the plant species used in jamu and their properties.

Table 2. Names of regular jamu

No	Name of Jamu	Medicinal plants	Properties
1	Beras Kencur	- Beras (<i>Oryza sativa</i>), Kencur (<i>Kaempferia galangal</i>), Kayu Manis (<i>Cinnamomum</i>), Jahe Emprit (<i>Zingiber officinale</i>) Additional plants: - Serai (<i>Syzygium Polyanthum</i>), Jeruk Nipis (<i>Cymbopogon citares</i>)	- Treating colds, flatulence, coughs, sore throat, Increase appetite
2	Kunir (kunyit) Asem	- Kunyit (<i>Curcuma domestica</i>), Asam Jawa (<i>Tamarindus indica</i>) Additional plants: Kayu manis (<i>Cinnamomum</i>)	- Launch women's period, Preventing ulcers, Reduces excessive appetite, Cleanse body skin
3	Gula Asem	Asam Jawa (<i>Tamarindus indica</i>)	- Refreshes the body, Suppresses excessive appetite,

4	Temulawak	<ul style="list-style-type: none"> - Temulawak (<i>Curcuma xanthorrhiza</i>), Sambiloto (<i>Andrographis paniculata</i> Ness), Kunyit (<i>Curcuma domestica</i>) 	<ul style="list-style-type: none"> Treat coughs, Treating canker sores - Increase appetite, Healthy liver, Prevent ulcers, Strengthen teeth, Promotes metabolism, Treating typhus, Prevent the growth of cancer cells
5	Cabe Puyang	<ul style="list-style-type: none"> - Cabe jamu (<i>Capsicum frutescens</i> L), Lempuyang (<i>Zingiber zerumbet</i> Smith), Adas (<i>Foeniculum vulgare</i>) 	<ul style="list-style-type: none"> - Overcoming tired and achy body
6	Daun Pepaya	<ul style="list-style-type: none"> - Pepaya (<i>Carica papaya</i>), Adas (<i>Foeniculum vulgare</i>) Additional plants: - Daun Dadap (<i>Erythrina variegata</i>), Daun Jambu (<i>Psidium guajava</i> Linn) 	<ul style="list-style-type: none"> - Treating diabetes, Increase appetite, Increase blood platelets, Treating dengue fever, Launches mother's breast milk, Defecation, Treat flatulence
7	Sirih	<ul style="list-style-type: none"> - Daun Sirih (<i>Piper betle</i> L), Kunyit (<i>Curcuma domestica</i>) Additional plant: - Manjakani (<i>Quercus infectoria</i> Gall), Kunyit Mangga (<i>Curcuma mangga</i>), Kayu Rapet (<i>Parameria laevigata</i>), Daun Beluntas (<i>Pluchea indica</i> Less) 	<ul style="list-style-type: none"> - Overcoming body odor, Treating vaginal discharge in women, Cleaning the skin, Increasing stamina, Antiseptic, Eyes, Strengthen teeth, Treating canker sores, Treating cysts, Preventing acne
8	Sambiloto	<ul style="list-style-type: none"> - Sambiloto <i>Andrographis paniculata</i> Ness), Brotowali (<i>Tinospora crispa</i> L), Temulawak <i>Curcuma xanthorrhiza</i>) Additional plants: - Mahoni (<i>Swietenia macrophylla</i>) 	<ul style="list-style-type: none"> - Treat itching, Blood circulation, Prevent from diabetes, Treat allergies, Treating hypertension
9	Kunyit Kental	<ul style="list-style-type: none"> - Kunyit (<i>Curcuma domestica</i>) 	<ul style="list-style-type: none"> - Treat abdominal pain, Antibiotics, Wound healing, Strengthens bones

Furthermore, there are also other types of jamu which are formulated by the seller according to the customer's request. This customer demand usually refers to the treatment of certain illnesses or only to maintain fitness and health of the body. The types of herbal medicine are jamu kunyit putih ((*Curcuma zedoaria* Rosce.), daun sirsak (*Annona muricata* L), kencur jahe, (*Zingiber officinale* and *Kaempferia galanga*) and daun salam (*Citrus aurantifolia*).

4 CONCLUSIONS

The producers/sellers of herbal drink of jamu gendong in Wonolopo Semarang have traditional knowledge of medicinal plants as ingredients in decoction of jamu gendong. There are 26 species of medicinal plants and 16 plant families are usually used as raw material in making jamu gendong. Some parts of species are mixed and made into nine types of regular or common jamu gendong. However, the rest of species are used into special herbal drinks or base on consumers request.

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