



News Letter

Traditional medicine of Madura island in Indonesia

MANGESTUTI,^{b)} SUBEHAN,^{a)} Aty WIDYAWARUYANTI,^{b)} Syed Faisal Haider ZAIDI,^{a)} Suresh AWALE,^{a)} Shigetoshi KADOTA^{*a)}

^{a)}Institute of Natural Medicine, University of Toyama, 2630 Sugitani, Toyama 930-0194, Japan. ^{b)}Faculty of Pharmacy, Airlangga University, Jalan Darmawangsa Dalam, Surabaya 60286, Indonesia. (Accepted April 24, 2007.)

Madura Island is part of East Java Province, Indonesia, and is famous for its local traditional medicine, called Madurese jamu (jamu = herbal traditional medicine of Indonesia). Madurese women use jamu on a regular basis for health purposes, including the royal family members of the former "Sumenep" Sultanate. Their knowledge about the medicine was inherited from previous generations, and it was known that written records were once kept in the palace. This paper highlights information and observations on the art of women's health and beauty care in traditional medicines of the noble family in Sumenep District, Madura, including the formulas, ingredients, traditional knowledge pertaining to the use of the formulas, preparation and administration.

Key words Traditional medicine, Jamu medicine, Madura island, Sumenep, Women's health and beauty-care.

1. Introduction

Like other parts of the Asian region, Indonesia has its own traditional medicine popularly known as jamu. Jamu is a complex mixture of herbs and is widely used throughout Indonesia, especially in Java and Madura Islands. Madurese jamu, locally known as Jamu Madura, is one of the famous kinds of jamu medicine of Indonesia. Its origin is Madura Island, a small island in the eastern part of East Java Province, Indonesia.

Like other kinds of jamu, the origin of Madurese jamu can be traced back through some original records which are kept in palaces. Madura Islands has 4 regencies, namely Bangkalan, Sampang, Pamekasan and Sumenep. Historically, Sumenep was a sultanate and the palace was built in 1767-1780. It was Sultan Abdurrahman Pakunataningrat that brought the sultanate to prosperity and expanded in 1811-1854. His son, Panembahan Natakusuma II, was crowned after his death.

During the reign of Pangeran Natakusuma II, he was assisted by his relatives who lived in "five houses" around the palace. Nowadays, those houses are popularly known locally as "lima rumah besar" (*rumah* = house, *besar* = big, *lima* = five), and are still occupied by the royal descendants. It is known from original written records that the palace of "Sumenep Sultanate" was once the place where information on medicinal plants and their formulas was kept. After the end of the royal rule in the 20th century, the secrets of the royal family regarding traditional medicine become known to the ordinary people of Sumenep. Through a better relationship between royal family members and ordinary people outside the palace, there was an opportunity to learn the royal family secrets of traditional medicine. One of the records is written in Arabic and is kept by an old man from the royal family.

The members of the royal family, especially women, are concerned about maintaining their health using various kinds of jamu, from the early onset of puberty to menopause. There are many kinds of jamu for women's health and beauty care, either for curing or preventing diseases.

In the course of our study on traditional medicine systems in Southeast Asia,¹⁻⁷⁾ we conducted a field investigation on the practice of health and beauty care among the Madurese royal family of the "Sumenep" Regency, Madura. We have focused our efforts on elaborating this medicine by directly interrogating and interviewing the practitioners in their hometowns.

2. Methodology

Field work was carried out during November 2005 and July 2006 in 5 districts of the "Sumenep" Regency: Bangselok, Kapanjin, Pajagalan, Pamolokan and Pangarangan where the royal family members live in "lima rumah besar". Information was collected during face to face interviews using guided questionnaires and direct observations. The information includes formulas of Madurese jamu for women of different life stages (childhood, puberty, after parturition), methods of preparation and usages of the medicine.

3. Interviews

Interviews were conducted with various informants, including jamu makers, consumers, and important figures such as representatives of the royal family members.

3.1. Representatives of royal family members

Mr. R.B. A. Rifai (61 years) is chairman of the Association of The Royal Family members (Fig. 1A). According to him, taking jamu for health and beauty care is

*To whom correspondence should be addressed. e-mail : kadota@inm.u-toyama.ac.jp

part of the life of women in the family. The once-secret original royal jamu formulas and knowledge of how to prepare them was later disseminated to common people who live around the “*lima rumah besar*”; this became possible through better communication among them after the end of the royal rule. But, he said that there is a decreasing number of women in the family who are still using jamu on a daily basis, especially young women who no longer live in “*Sumenep*”; they consider that preparing jamu in the traditional way is time consuming and impractical. He also mentioned 7 jamu makers who still survive by producing and selling various jamu products in “*lima rumah besar*”.

Mr. R.P. Mochamad Muchtar Mangkuadiningrat (61 years) and his wife are from the “*Sumenep Sultanate*” royal family (Fig. 1B). According to him, women started to drink jamu from their early childhood. Usually it started with certain kinds of herbs which are effective as an appetite stimulant. There are only a few kinds of jamu, such as jamu “*daun ketela*” (*daun* = leaves, *ketela* = sweet potato) and jamu “*daun pepaya*” (*daun* = leaves, *pepaya* = papaya), jamu “*temu ireng*” (the local name of the rhizome of *Curcuma aeruginosa*). Jamu “*daun pepaya*” and jamu “*temu ireng*” have a very bitter taste which is believed to improve eating habits.

3.2. Jamu makers

Mrs. R. A. Nikmah (53 years) is one of the jamu makers who started to make and sell Madurese traditional medicine for health and beauty care in her own house a few years ago, after her mother was no longer able to work hard to meet the demand of her consumers (Fig. 1C). She makes various products for women, including products for a bride-to-be, post natal care, pregnancy, jamu “*galian singset*” (for young women) and jamu “*galian rapet*” (for married women). Her mother, Mrs. R. A. Maryam (83 years) is the grand daughter of Pangeran Kolonel, the son of late Sultan Abdurrahman of “*Sumenep Sultanate*” (Fig. 1D F).

Both of them also expressed concern about the decreasing number of young girls and women taking Madurese jamu, especially those who live in places other than Madura Island. Those who still live in different places in Madura continue the old tradition in looking after their beauty and health using local jamu. However, they still have regular customers from outside Madura Island who order Madurese jamu for special purposes on a regular basis.

Mrs. Issa (70 years) is a blind woman who started making Madurese jamu when she was a little girl (Fig. 1 G). She got the knowledge of jamu from her mother who taught her all of the secrets and preparations of jamu formulas. Some of the formulas which she usually makes include jamu “*selokarang*”, “*bedhak so'oso*”, “*jamu galian singset*”, “*bedhak kamaridhan*”, “*lolor*” (Fig. 1.H). Her blindness did not stop her from producing jamu as she became experienced in determining the amount of each ingredient that should be added in each formula. This is like adding some ingredients in preparing food, she said. She often gets special orders from royal family members who no longer live in Madura. Her niece, Mrs. Min (35) helps her in making

some formulas, especially “*bedak lulur*”, “*so'oso*”, “*bedhak kamaridhan*”, “*bedak dingin*”. The only way for Mrs. Min to learn the skill of making jamu was from Mrs. Issa, and until now she has just followed all of the formulas of Mrs. Issa.

Generally all raw ingredients for jamu are available at the local marketplaces, and some herbs grow well in certain islands near Sumenep, such as turmeric, ginger, and a fruit of *Piper retrofractum* and other rhizomes of the Zingiberaceae Family.

3.3. Jamu practitioners

An interview was conducted with Siti Maryam (75 years), a midwife with 36 years experience of helping in the deliveries of newborn babies in the “*Sumenep*” Regency (Fig. 2A, B). She only uses herbal medicines for pregnancy and post-natal care. In the interview she described her success in conducting post natal care using Madurese traditional medicine recipes (Fig. 2C). She said that most mothers will regain their health within 40 days after giving birth to their babies and have enough milk supply for the babies. The babies are also healthy. Every day she helps 3-8 patients with the delivery of babies and prepares all necessary jamu for post-natal care.

3.4. Jamu consumers

Interviews with jamu consumers were conducted with 100 respondents of royal family members who live in “*lima rumah besar*”, located in five different districts which are close to each other: Bangselok, Kapanjin, Pajagalan, Pamolokan, Pangarangan in “*Sumenep*” Regency (Fig. 2D, E).

4. Commonly used Jamu medicines in Madura island:

Based on the interviews and discussion with Madurese peoples, information regarding some commonly used jamu medicines was gathered.

4.1. Jamu for puberty.

According to all informants, when a girl reaches puberty, she has to be more concerned about the importance of taking good care of her health using traditional medicine. This period is so important that traditional ceremonies are held to congratulate and welcome her, and also to inform all of the relatives. Generally, girls follow the pattern of using jamu for internal and external applications from their parents, for example by drinking certain jamu medicine on a certain day in a week. Jamu “*selokarang*”, jamu “*galian singset*” and jamu “*pakak*” are for internal use during puberty (Fig. 3A C).

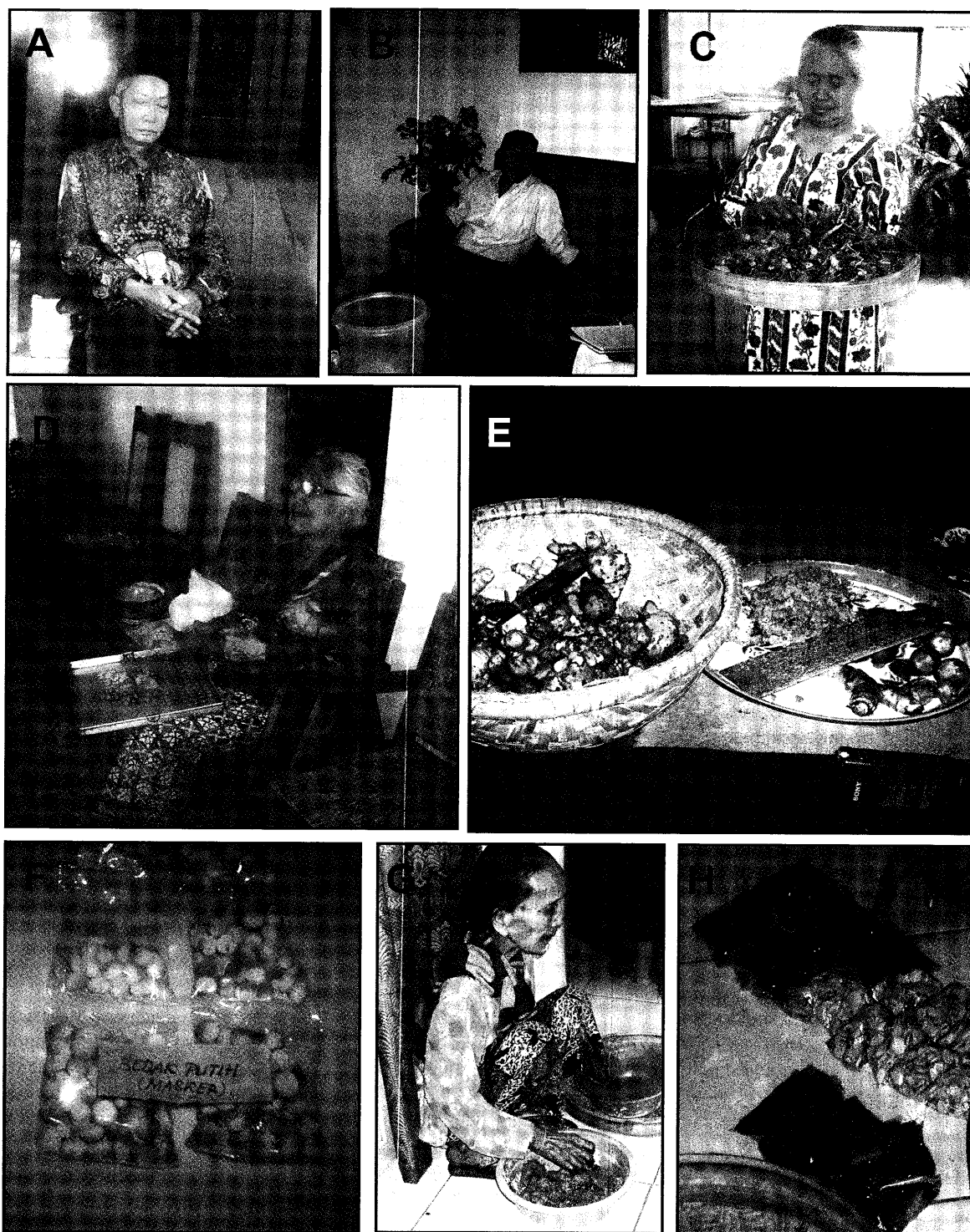


Figure 1. Royal family members, Mr. R.B. A. Rifai (A), Mr. R.P. M.M. Mangkuadiningrat (B), Mrs. R.A. Nikmah (C) and her mother, Mrs. R.A. Maryam (D). The raw materials used in their Jamu (E) and one of their products (F). Mrs. Issa (G) and some of her ready to use jamu (H).

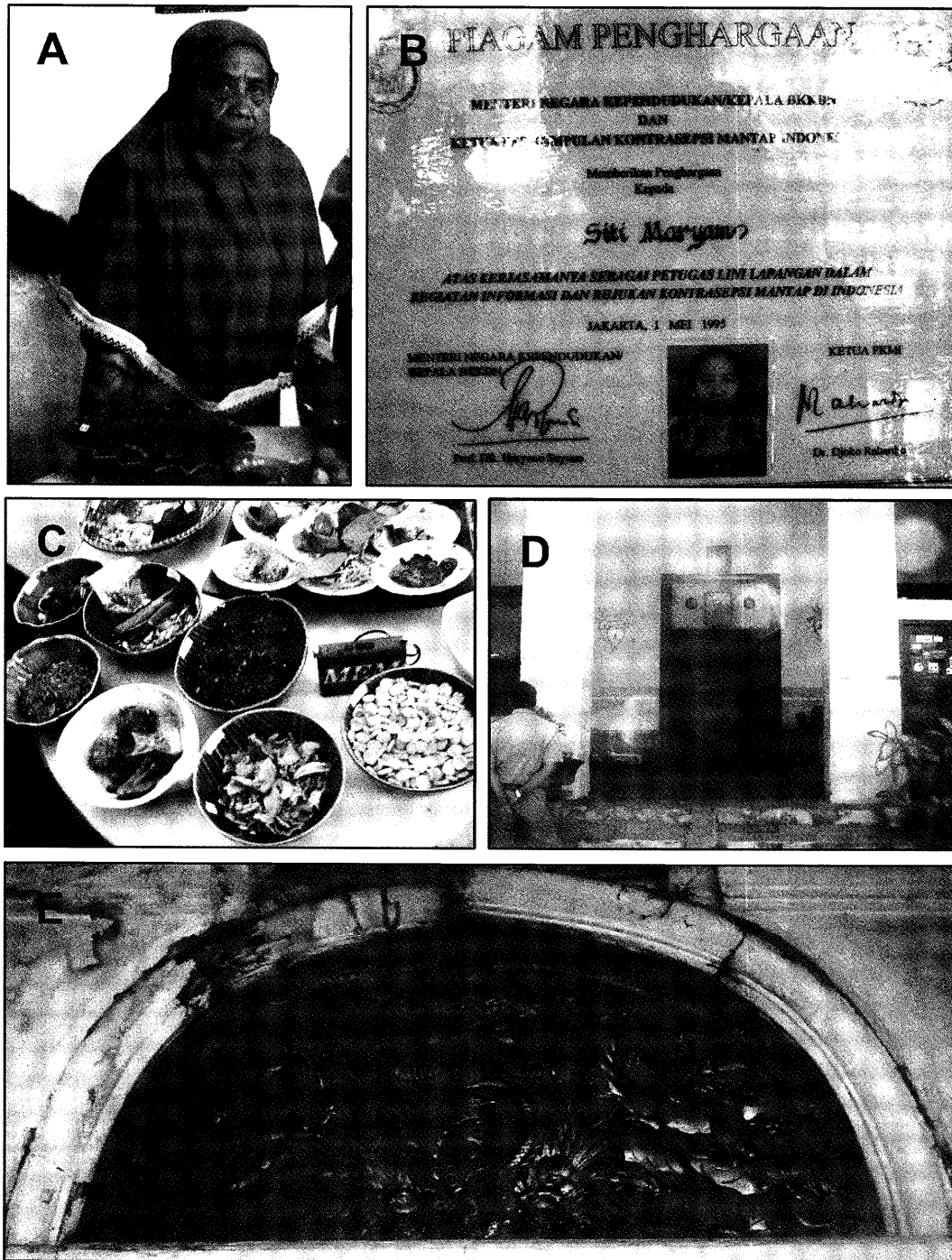


Figure 2. Mrs. Siti Maryam (A), her certificate from the government (B) and some of her formulas used for women health and beauty care (C), one of the “lima rumah besar” (D) and the part of “lima rumah besar” showed the symbol of the royal family handed down from generation to generation in the gate of house (E).

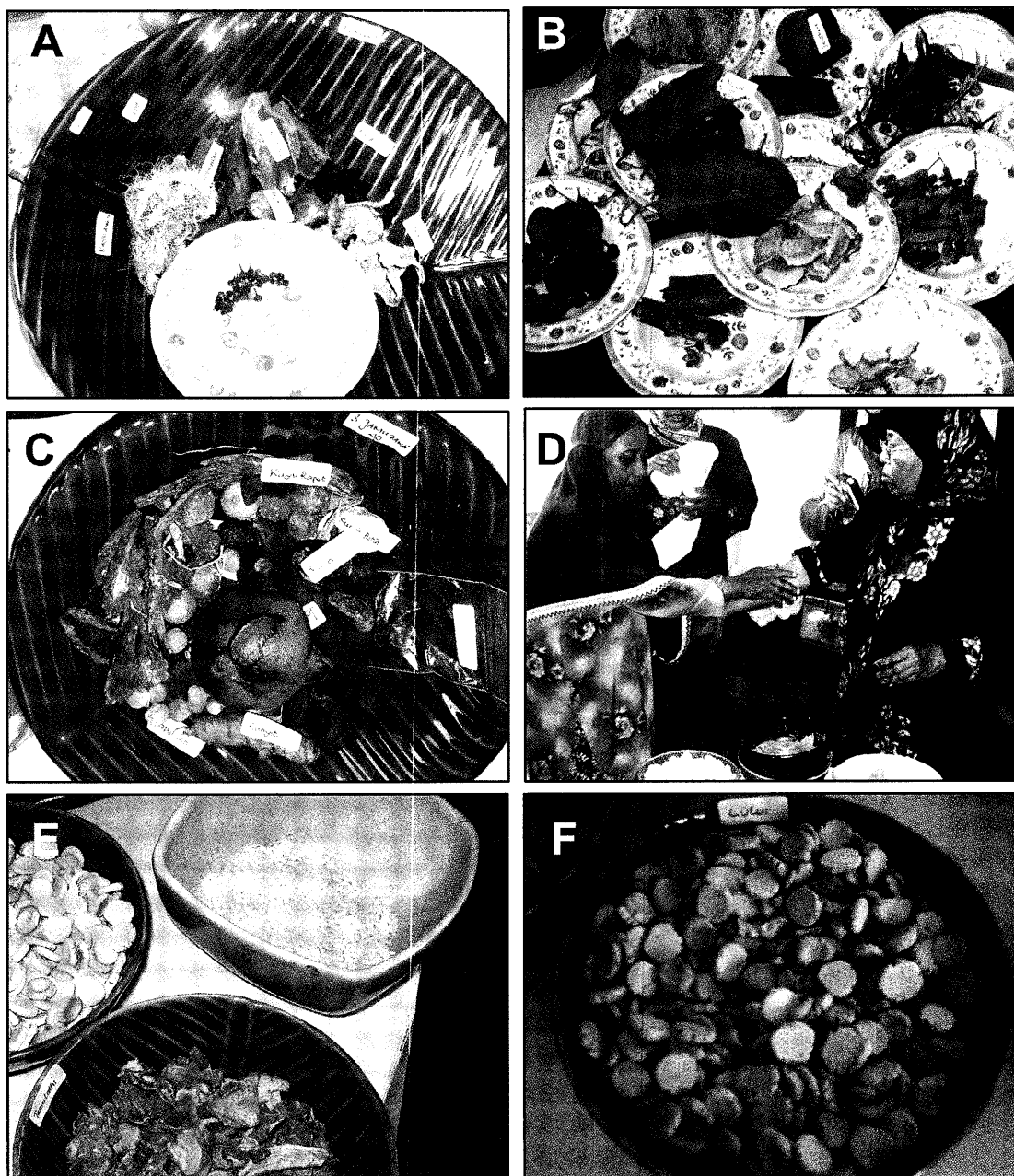


Figure 3. The raw materials used in the Jamu for puberty; jamu selokarang (A), jamu galian singset (B), and jamu pakak (C) and for skin care, Soo'so (D), Soo'so celleng (E), and bedak putih/lolor (F).

4.1.1. "Jamu selokarang": Taken regularly for health maintenance and fertility.

No.	Composition	Family	Parts used
1.	<i>Abrus precatorius</i> L.	Leguminosae	Leaf
2.	<i>Paederia foetida</i> L.	Rubiaceae	Leaf
3.	<i>Alyxia reinwardtii</i> Bl.	Apocynaceae	Bark
4.	<i>Cinnamomum burmani</i> Nees ex. Bl.	Lauraceae	Bark
5.	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Fruit
6.	<i>Parkia biglobosa</i> Benth.	Mimosaceae	Seed
7.	<i>Phyllanthus niruri</i> L.	Euphorbiaceae	Aboveground
8.	<i>Usnea barbata</i> Fries.	Usneaceae	Thallus
9.	<i>Strychnos ligustrina</i> Bl.	Loganiaceae	Wood
10.	<i>Caesalpinia sappan</i> L.	Leguminosae	Wood
11.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
12.	<i>Curcuma heyneana</i> Val. & V.Zijp	Zingiberaceae	Rhizome
13.	<i>Curcuma aeruginosa</i> Roxb.	Zingiberaceae	Rhizome
14.	<i>Momordica charantia</i> L.	Cucurbitaceae	Leaf
15.	<i>Curcuma xanthorrhiza</i> D.Dietr.	Zingiberaceae	Rhizome

Preparation method: Mix all dried powdered ingredients. Take some powder, add boiled water and drink all at once.

4.1.2. Jamu "galian singset": For women's body fitness.

No.	Composition	Family	Parts used
1.	<i>Boesenbergia pandurata</i> Roxb.	Zingiberaceae	Rhizome
2.	<i>Coriandrum sativum</i> L.	Apiaceae	Fruit
3.	<i>Litsea odorifera</i> Val.	Lauraceae	Leaf
4.	<i>Cinnamomum burmani</i> Nees ex. Bl.	Lauraceae	Bark
5.	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Fruit
6.	<i>Parkia biglobosa</i> Benth.	Leguminosae	Seed
7.	<i>Phyllanthus niruri</i> L.	Euphorbiaceae	Aboveground
8.	<i>Usnea barbata</i> Fries.	Usneaceae	Thallus
9.	<i>Strychnos ligustrina</i> Bl.	Loganiaceae	Wood
10.	<i>Caesalpinia sappan</i> L.	Leguminosae	Wood
11.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
12.	<i>Curcuma heyneana</i> Val. & V.Zijp	Zingiberaceae	Rhizome
13.	<i>Curcuma aeruginosa</i> Roxb.	Zingiberaceae	Rhizome
14.	<i>Curcuma xanthorrhiza</i> Roxb.	Zingiberaceae	Rhizome

Preparation method: Mix all dried powdered ingredients. Take some powder, add boiled water and drink all at once.

4.1.3. Jamu "pakak": Strengthening muscles of internal reproductive organ.

No.	Composition	Family	Parts used
1.	<i>Rheum officinale</i> Baill.	Polygonaceae	Root
2.	<i>Boesenbergia pandurata</i> Roxb.	Zingiberaceae	Rhizome
3.	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit pulp
4.	<i>Quercus infectoria</i> Oliv.	Fagaceae	Gall
5.	<i>Amomum cardamomum</i> Willd.	Zingiberaceae	Fruit
6.	<i>Parameria barbata</i> Schum.	Apocynaceae	Bark
7.	<i>Kaempferia angustifolia</i> Rosc.	Zingiberaceae	Rhizome
8.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
9.	<i>Piper cubeba</i> Vahl.	Piperaceae	Fruit
10.	<i>Eugenia caryophyllata</i> Thunb.	Myrtaceae	Flower bud
11.	<i>Myristica fragrans</i> Houtt.	Myristicaceae	Seed
12.	<i>Punica granatum</i> L.	Punicaceae	Fruit peel

Preparation method: boil all ingredients in water. Stand to cool, strain and drink the concoction.

4.2. Jamu for skin care

From the onset of puberty, a girl also has to start taking care of her skin as part of her daily routine. There are a number of skin care formulas, locally known as “soo’so”, “so’oso celleng” (“bedhak kamoridhan”), “bedhak putih” (“mangir”) and “beddha’temmo” (“lolor”). School girls spend their time on skin care after having lunch and performing afternoon prayer (for Muslims). Housewives scrub their skin and apply masks before engaging in their daily house chores. Then they take a bath and perform afternoon prayer after preparing lunch for the family and washing the dishes (Fig. 3D, E, F).

4.3. Jamu for a bride-to-be

When a girl is ready for a marriage, it is customary that she undergo a special treatment to prepare her for a new life as a wife and mother. Taking various kinds of traditional jamu formulas internally and externally is the most important part in the treatment. Aside from the formulas which she starts taking in her early puberty, there are special formulas known locally as jamu “calon pengantin”, jamu “rebusan pengantin”, aromatic steam bath and jamu “sirih”.

4.2.1. “Soo’so”: Rubbed on the skin every day sometime before taking a bath

No.	Composition	Family	Parts used
1.	Chicken egg		Shell
2.	<i>Tamarindus indica</i> L.	Caesalpiniaceae	fruit rind
3.	<i>Vitex trifolia</i> L.	Lamiaceae	Leaf
4.	<i>Oryza sativa</i> L.	Poaceae	Grain
5.	<i>Curcuma heyneana</i> Val. & V.Zijp	Zingiberaceae	Rhizome

Preparation method: Pound all ingredients, add water to make dough, cut in slices to make granules and sun-dry. Dissolve granules in water and juice of *Citrus aurantifolia* upon application.

4.2.2. “So’oso celleng” (“bedhak kamoridhan”): Skin scrub while taking a bath. It removes foul body odor, cleanse and smoothen skin

No.	Composition	Family	Parts used
1.	<i>Oryza sativa</i> L.	Poaceae	grain, stalk
2.	<i>Citrus hystrix</i> DC.	Rutaceae	Leave
3.	<i>Curcuma xanthorrhiza</i> D.Dietr.	Zingiberaceae	Rhizome

Preparation method: Stir-fried rice grains until dry and burned, mixed with grated rhizomes and peeled fruit peels, add water extract of paddy straws and sun-dry. Add fruit juice of *Citrus aurantifolia* to the dried powder before use.

4.2.3. “Bedhak putih” (“mangir”): As a face powder every day after rubbing and scrubbing with “so’oso” and “so’oso celleng”. It smoothen skin and eliminates dead cells.

No.	Composition	Family	Parts used
1.	<i>Calophyllum inophyllum</i> L.	Clusiaceae	Flower
2.	<i>Rheum officinale</i> Baill.	Polygonaceae	Root
3.	<i>Alyxia reinwardti</i> Bl.	Apocynaceae	Bark
4.	<i>Santalum album</i> L.	Santalaceae	Wood
5.	<i>Oryza sativa</i> L.	Poaceae	Grain
6.	<i>Massoia aromatica</i> Becc.	Lauraceae	Bark

Preparation method: Pound all ingredients, add water to make dough, cut in slices to make granules and sun-dry. Dissolve granules in rose water upon application.

4.2.4. “Lolor” comprises the same ingredients as “bedhak putih”. It is applied once a day before taking a bath. The granules are dissolved in water and rubbed on the face, neck, arms and legs; it is washed off thoroughly after a complete drying.

4.3.1. “Jamu calon pengantin”: For stomach problems, irregular menstruation, and excessive leukorrheal discharge.

No.	Composition	Family	Parts used
1.	<i>Boesenbergia pandurata</i> Schltr.	Zingiberaceae	Rhizome
2.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
3.	<i>Rhus semialata</i> Murr.	Anacardiaceae	Gall
4.	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Fruit
5.	<i>Alyxia reindwardti</i> Bl.	Apocynaceae	Bark

Preparation method: Mix dried powdered ingredients and keep in a dry jar. Boil powder, strain and drink every day.

4.3.2. "Jamu rebusan untuk pengantin": To eliminate foul body odor and reduce sweat.

No.	Composition	Family	Parts used
1.	<i>Piper betle</i> L.	Piperaceae	Leaf
2.	<i>Kaempferia angustifolia</i> Rosc.	Zingiberaceae	Rhizome
3.	<i>Eugenia caryophyllata</i> Thunb.	Myrtaceae	Flower bud

Preparation method: Mix dried powdered ingredients and keep in a dry jar. Boil powder, strain and drink every day for 7 days prior to the wedding day.

4.3.3. Aromatic steam bath: To eliminate foul body odor, prevent excessive leukorrheal discharge, treat dandruff, perfume skin and hair.

No.	Composition	Family	Parts used
1.	<i>Styrax benzoin</i> Dryand.	Styracaceae	Resin
2.	<i>Saussurea lappa</i> Clarke.	Compositae	Root
3.	<i>Aquilaria malaccensis</i> Lamk.	Thymelaceae	Wood
4.	<i>Citrus hystrix</i> DC.	Rutaceae	fruit rind
5.	<i>Mossoia aromatica</i> Becc.	Lauraceae	Bark
6.	<i>Abelmoschus moschatus</i> Medic.	Malvaceae	Seed

Preparation method: Mixed all dried ingredients and powdered. Sprinkle powder on the fire upon using it.

4.3.4. Jamu "sirih": To wash internal reproductive organ for curing excessive leukorrheal discharge

No.	Composition	Family	Parts used
1.	<i>Piper betle</i> L.	Piperaceae	Leaf
2.	<i>Kaempferia angustifolia</i> Rosc.	Zingiberaceae	Rhizome

Preparation method: Boil all ingredients in water and use the warm concoction as a wash.

4.4. Jamu for pregnancy and post-natal care

Pregnancy is an important step and demands serious attention from an expectant mother among Madurese women,

so strenuous efforts are made in order to be able to bear the responsibility. Certain jamu formulas are prepared by a woman from her early pregnancy, before and after parturi-

4.4.1. Jamu "untuk orang hamil": For maintenance of health.

No.	Composition	Family	Parts used
1.	<i>Curcuma aeruginosa</i> Roxb.	Zingiberaceae	Rhizome
2.	<i>Acorus calamus</i> L.	Acoraceae	Rhizome
3.	<i>Allium sativum</i> L.	Alliaceae	Bulb

Preparation method: Boil all ingredients in water. Stand to cool, strain and drink the concoction.

4.4.2. Jamu "papeja I": Taken every afternoon from the 1st to the 7th day after parturition against rheumatic pain, indigestion, irregular menstruation, as a blood cleanser and fat removal, eliminate foul breath and offensive perspiration odor.

No.	Composition	Family	Parts used
1.	<i>Citrus aurantifolia</i> Swingle	Rutaceae	Leaf
2.	<i>Averrhoa bilimbi</i> L.	Oxalidaceae	Leaf
3.	<i>Carica papaya</i> L.	Caricaceae	Leaf
4.	<i>Pluchea indica</i> (L.) Less	Asteraceae	Leaf
5.	<i>Piper betle</i> L.	Piperaceae	Leaf
6.	<i>Paederia foetida</i> L.	Rubiaceae	Leaf
7.	<i>Curcuma xanthorrhiza</i> Roxb.	Zingiberaceae	Rhizome
8.	<i>Allium sativum</i> L. (onion)	Alliaceae	Bulb
9.	<i>Momordica charantia</i> L.	Cucurbitaceae	Leaf
10.	<i>Allium sativum</i> L. (garlic)	Alliaceae	Bulb
11.	<i>Allium sativum</i> L. (bawang timur)	Alliaceae	Bulb
12.	<i>Tamarindus indica</i> L.	Leguminosae	Fruit
13.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
14.	Sodium chloride	-	-

Preparation method: Boil all ingredients in water. Stand to cool, strain and drink the concoction.

tion. The locally named Jamu “*untuk orang hamil*” is taken during pregnancy. Some important jamu that should be taken internally for post-natal care are jamu “*papeja*”, jamu “*pakak*”, jamu “*bengkes*”, jamu “*hangat*”, jamu “*sari rapet*” and jamu “*selokarang*”. Other formulas used exter-

nally for the maintenance of hair, skin, and eyes are “*bengkes powder*”, “*palapana*”, a special poultice for abdomen, “*parem atas*”, “*parem bawah*”, “*lulur*” and aromatic steam bath (Fig. 4). The formula for steam bathing is as in the formula for the bride-to-be.

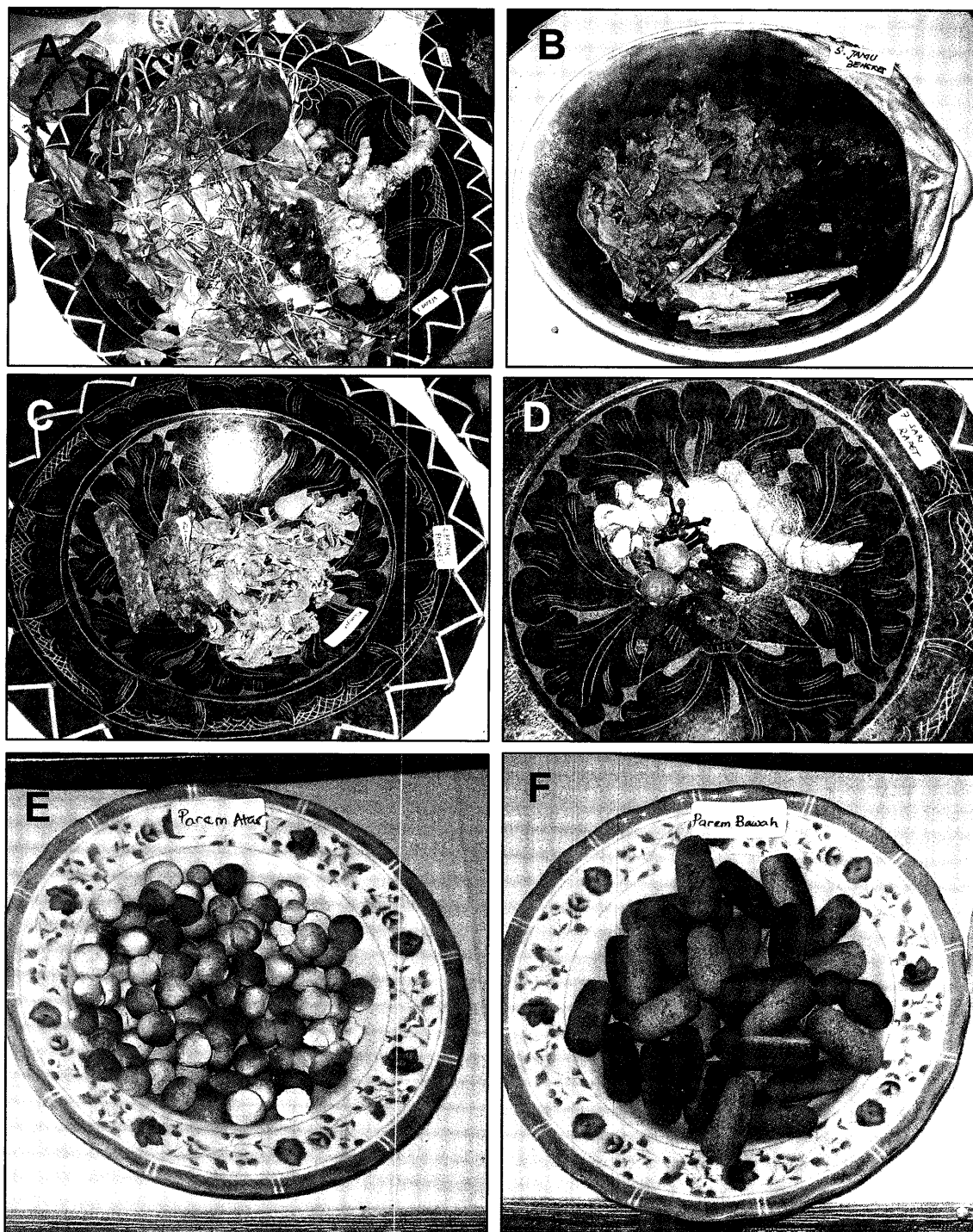


Figure 4. The raw materials of the jamu used for pregnancy and post-natal care, papeja (A), jamu bengkes (B), bedak bengkes (C), and sari repet (D) and jamu parem atas (E), parem bawah (F).

4.4.3. Jamu “papeja 2”: Taken twice a day from the 7th to the 40th day after parturition for promoting milk supply.

No.	Composition	Family	Parts used
1.	<i>Usnea barbata</i> Fries	Usneaceae	Aerial part
2.	<i>Cinnamomum sintok</i> Bl.	Lauraceae	Bark
3.	<i>Litsea odorifera</i> Val.	Lauraceae	Leaf
4.	<i>Caesalpinia sappan</i> L.	Leguminosae	Wood
5.	<i>Curcuma xanthorrhiza</i> Roxb.	Zingiberaceae	Rhizome
6.	<i>Glycyrrhiza glabra</i> L.	Leguminosae	Root
7.	<i>Piper retrofractum</i> Vahl.	Piperaceae	Fruit
8.	<i>Andrographis paniculata</i> Nees.	Acanthaceae	Leaf
9.	<i>Parkia biglobosa</i> Benth.	Leguminosae	Seed
10.	<i>Coriandrum sativum</i> L.	Apiaceae	Fruit
11.	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Fruit
12.	<i>Merremia mammosa</i> Hall.f.	Convolvulaceae	Tuber
13.	<i>Sterculia foetida</i> L.	Sterculiaceae	Fruit
14.	<i>Sindora sumatrana</i> Miq.	Leguminosae	Fruit

Preparation method: Stir-fry all ingredients and pound to make a fine powder. Boil the powder in water, strain and drink the concoction.

4.4.4. Jamu “pakak”: Taken from the 40th day after childbirth onward for strengthening muscles of the internal reproductive organ.

No.	Composition	Family	Parts used
1.	<i>Rheum officinale</i> Baill.	Polygonaceae	Root
2.	<i>Boesenbergia pandurata</i> Schltr.	Zingiberaceae	Rhizome
3.	<i>Terminalia chebula</i> Retz.	Combretaceae	Gall
4.	<i>Quercus infectoria</i> Oliv.	Fagaceae	Gall
5.	<i>Anomum cardamomum</i> Willd.	Zingiberaceae	Fruit
6.	<i>Parameria barbata</i> Schum.	Apocynaceae	Bark
7.	<i>Kaempferia angustifolia</i> Rosc.	Zingiberaceae	Rhizome
8.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
9.	<i>Piper cubeba</i> Vahl.	Piperaceae	Fruit
10.	<i>Eugenia caryophyllata</i> Thunb.	Myrtaceae	Flower bud
11.	<i>Myristica fragrans</i> Houtt.	Myristicaceae	Seed
12.	<i>Punica granatum</i> L.	Punicaceae	Fruit peel

Preparation method: Boil all ingredients in water. Stand to cool, strain and drink the concoction.

4.4.5. Jamu “bengkes”: To prevent abdominal complaints after parturition.

No.	Composition	Family	Parts used
1.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
2.	<i>Alyxia reinwardtii</i> Bl.	Apocynaceae	Bark

Preparation method: Boil all ingredients in water. Stand to cool, strain and drink the concoction.

4.4.6. Jamu “hangat”: Taken every day after parturition to keep the body warm, prevent flu and wind.

No.	Composition	Family	Parts used
1.	<i>Parkia biglobosa</i> Benth.	Mimosaceae	Seed
2.	<i>Sindora sumatrana</i> Miq.	Leguminosae	Fruit
3.	<i>Alyxia reinwardtii</i> Bl.	Apocynaceae	Bark
4.	<i>Coriandrum sativum</i> L.	Apiaceae	Fruit
5.	<i>Massoia aromatica</i> Becc.	Lauraceae	Bark
6.	<i>Piper nigrum</i> L.	Piperaceae	Fruit
7.	<i>Litsea odorifera</i> Val.	Lauraceae	Leaf
8.	<i>Usnea barbata</i> Fries.	Usneaceae	Thallus
9.	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Rhizome

Preparation method: All ingredients are mixed and pounded to make a fine powder. Add hot water to the powder, stir and drink.

4.4.7. Jamu "sari rapet": After parturition to improve the muscle tone of the internal reproductive organ.

No.	Composition	Family	Parts used
1.	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit pulp
2.	<i>Kaempferia angustifolia</i> Rosc.	Zingiberaceae	Rhizome
3.	<i>Quercus infectoria</i> Oliv.	Fagaceae	Resin
4.	<i>Myristica fragrans</i> Houtt.	Myristicaceae	Seed
5.	<i>Eugenia caryophyllata</i> Thunb.	Myrtaceae	Flower bud
6.	<i>Curcuma zedoaria</i> Rosc.	Zingiberaceae	Rhizome
7.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome

Preparation method: Mix all ingredients and pound to make a fine powder. Add hot water to the powder, stir and drink.

4.4.8. Parem "bengkes": Taken from the 35th to 45th day after parturition to eliminate fatigue.

No.	Composition	Family	Parts used
1.	<i>Rheum officinale</i> Baill.	Polygonaceae	Root
2.	<i>Curcuma domestica</i> Val.	Zingiberaceae	Rhizome
3.	<i>Oryza sativa</i> L.	Poaceae	Grain

Preparation method: Pound all ingredients, add water to make dough, cut in slices to make granules and sun-dry. Dissolve granules in water, rub on the body.

4.4.9. "Palapana": Taken from the 1st to 15th day after parturition as skin freshener.

No.	Composition	Family	Parts used
1.	<i>Zingiber cassumunar</i> Roxb.	Zingiberaceae	Rhizome
2.	<i>Allium sativum</i> L.(garlic)	Alliaceae	Bulb
3.	<i>Acorus calamus</i> L.	Acoraceae	Rhizome
4.	<i>Tamarindus indica</i> L.	Leguminosae	Fruit Rind
5.	<i>Curcuma xanthorrhiza</i> Roxb.	Zingiberaceae	Rhizome

Preparation method: Pound all ingredients, add glacial acetic acid and water to make dough, cut in slices to make granules and sun-dry. Dissolve granules in water and apply on the skin.

4.4.10. "Tapel perut": Taken from the 1st to 40th day after parturition as a poultice rubbed on the stomach. The stomach is covered with cloth afterward. It gives a warm sensation, and facilitates the recovery of internal reproductive organ.

No.	Composition	Family	Parts used
1.	<i>Citrus aurantifolia</i> Swingle	Rutaceae	Fruit (juice)
2.	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Leaf (oil)

Preparation method: Mix all ingredients to make a fine poultice

4.4.11. "Parem atas": Taken from the 1st day after parturition for 40 days to warm the skin and treat bruises.

No.	Composition	Family	Parts used
1.	<i>Cananga odorata</i> Hook.f. & Thoms.	Annonaceae	Flower
2.	<i>Jasminum sambac</i> Soland.	Oleaceae	Flower
3.	<i>Oryza sativa</i> L.	Poaceae	Grain
4.	<i>Kaempferia galanga</i> L.	Zingiberaceae	Rhizome

Preparation method: Mix all ingredients, pound to make fine powder. Add some water to the powder and apply to upper part of the body.

4.4.12. "Parem bawah": Apply on the lower part of the body to promote healthy skin and keep the body warm after parturition.

No.	Composition	Family	Parts used
1.	<i>Kaempferia galanga</i> L.	Zingiberaceae	Rhizome
2.	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Rhizome
3.	<i>Curcuma xanthorrhiza</i> D.Dietr.	Zingiberaceae	Rhizome
4.	<i>Oryza sativa</i> L.	Poaceae	Grain

Preparation method: Stir-fry all ingredients and pound to make powder. Add *Eucalyptus* oil to the powder and rub in after taking a bath.

5. Result and Discussion

Women of the royal family members who are still living in "lima rumah besar" in the Sumenep District use various jamu throughout their lives from early childhood, puberty, up to menopause for health purpose. They usually prepare it by themselves or buy the products from jamu makers who prepare and sell their products in the area of the "five big houses". Their knowledge and skill of traditional medicine are passed-down from earlier generations through direct observation without any additional knowledge. Young girls also follow the pattern of using jamu from their parents.

All jamu makers run a family businesses, where knowledge on traditional medicine is also passed down through generations. All of them are still producing jamu in a traditional way without any improvement in their performances. They are not aware of the high competitiveness with other traditional jamu manufacturers.

Generally each Madurese jamu formula consists of 3-12 ingredients and is believed to be effective for curing and preventing various health problems including those affecting the respiratory, reproductive and digestive tracts. Almost all jamu for internal use are made by boiling the mixtures with water, straining and drinking on a regular basis for a certain period of time. The formulas for internal use are comprised of raw materials of plant origin, some of which contains various kinds of essential oils as their main active components. This could explain their effectiveness in combating disorders such as stomach and respiratory problems.

Rhizomes of ginger, turmeric, *Kaempferia angustifolia* Rosc., bark of *Cinnamomum burmani* Nees ex.Bl., flower buds of *Eugenia caryophyllata* Thunb., seeds of *Myristica fragrans* Houtt. and fruits of *Piper cubeba* L. contain essential oils and are useful for stomach disorders, such as stomach cramps, indigestion and flatulence, and as anti-bacterial agents.⁸⁻¹¹⁾ They also help in the elimination of foul mouth and body odor. Such health benefits are also obtained through steam bathing using a combination of fragrant herbs which contain essential oils. The fruits of *Foeniculum vulgare* Mill. contain an essential oil which is effective against respiratory problems.¹¹⁾

Madurese women rely heavily upon the effectiveness of some herbs for eliminating symptoms of menstruation, curing vaginal infections and excessive leukorrheal discharge, and improving the muscle tone of the reproductive organ. They believe that satisfactory sexual intercourse can be maintained through a healthy reproductive organ.

Herbs such as *Alyxia stellata* barks, galls of *Quercus infectoria* Lamk., *Rhus semialata* Murr., fruit pulp of *Terminalia chebula* Retz. are known to contain tannins and therefore have an astringent property which can help in cell shrinkening.^{12,13)} In Indonesian traditional medicine, the gall of *Quercus infectoria* is often used against haemorrhage and menstrual disorders. Turmeric, *Paederia foetida* L. and *Caesalpinia sappan* L., are used to promote regular menstruation, and as an analgesic to reduce cramping during

menstruation.¹⁴⁻¹⁶⁾ *Massoia aromatica* Becc. is also applied for leukorrheal discharge.

Taking care of the skin is important in the life of a Madurese woman as mentioned by all informants. They do it on a regular basis as part of their daily chores with the definite goal of a healthy, smooth and radiant skin. There are many kinds of products used as skin cleansers which exert their effects by absorbing skin dirt and removing dead cells, brightening the skin color through the yellow pigment content, and keeping a warm body temperature to facilitate good blood circulation. Powdered burnt rice in beddhak kamoridhan is as effective as charcoal in absorbing skin impurities. Starches of rice (*Oryza sativa* L.) are a good absorbent and are often mixed with other ingredients in scrub and mask products. Other ingredients in skin care formulas, such as the fruit peels of *Citrus hystrix* DC. contain fragrant essential oils which are good astringents and help in odor elimination. The rhizome of *Curcuma xanthorrhiza* Roxb. also contains an essential oil with a warming property.

Rhizomes of *Curcuma heyneana* Val. & V. Zijp. contain a yellow pigment which is effective in brightening the skin color and therefore is often used in skin scrub paste. It also contains essential oils with a good antibacterial properties. The leaf of *Vitex trifolia* L. is fragrant; it contains essential oils and is traditionally used for skin care to treat itches.¹⁷⁻¹⁸⁾ Tamarind fruit is very popular in Indonesia and is used for various purposes, such as a food condiment. The fruit pulp is traditionally used to cleanse the body and head scalp, but there is no information concerning the application of the rind. Ground egg shells can be used as a food additive to deliver calcium, but their usage in the scrub product of Madurese jamu remains unclear. There is a possibility that it is also applied for the same purpose.

Some ingredients are used in skin care products because of their fragrance, such as the bark of *Alyxia reinwardtii* Bl., flowers of *Calophyllum inophyllum* L., roots of *Rheum palmatum* L. and wood of *Santalum album* Linn. and often used as one of the ingredients of a cosmetic product for its fragrant, cooling property and skin disorders.¹⁹⁾ The fragrant bark of *Massoia aromatica* Becc. and *Alyxia reinwardtii* Bl. are usually made into a paste rubbed on the whole body for their warming property.

Post natal care formulas using various herbs are also present in Madurese traditional medicine. These are effective in helping a woman regaining their health after parturition. Some popular herbs with lactagogue property, such as *Momordica charantia* L., *Curcuma xanthorrhiza* Roxb., *Foeniculum vulgare* Mill., leaves of *Litsea odorifera* Vahl. *Merremia mammosa* Hall.f. are often used as lactagogue in other Indonesian traditional medicines.^{13,20,21)}

Some herbs which help in reducing fat or weight are turmeric, rhizomes of *Curcuma xanthorrhiza* Roxb., and *Curcuma heyneana* Val. & V. Zijp.^{22,23)} Turmeric is used in the formulas as blood cleanser and is believed to be effective as an analgesic.^{20,24,25)} *Caesalpinia sappan* L., *Curcuma xanthorrhiza* Roxb., *Piper retrofractum* Vahl, *Sindora sumatrana* Miq., and *Usnea barbata* Fries. are used to promote the cleansing and recovery of the womb.^{12,13,14,16)}

Aside from taking jamu internally, nursing mothers have to continue taking care of their skin with some special formulas. It is for that reason a nursing mother is usually helped by a midwife or other members of the family in preparing jamu.

All of the above formulas are used internally and externally with a definite purpose that is to promote the recovery of a woman after childbirth. They cover every requirement from radiant complexion, slimming, rejuvenation, post-natal and hair treatments, to poultices and compresses that cleanse and deodorize. Madurese women believe that by following the tradition in the application of traditional medicine, they are able to look fresh, neat, vivacious, healthy, charming and fascinating, even though blessed with many children. Even though some women are reluctant to prepare the formula by themselves, one can easily buy ready-made jamu packed in the form of powder, pills, capsules, drinking liquid and ointments. Married women have a moral obligation to drink jamu as an effort to keep their beauty, and have no excuse to avoid this obligation.

6. Conclusion

In conclusion, we presented a brief overview of the art of traditional medicine (Indonesia) among women of "Sumenep" royal family members for health and beauty care. It is indicated from the study that the knowledge is a genuine science inherited from their past generation. Women of the royal family benefit from the usage of original formulas. There is no doubt that they realize the importance of being healthy throughout their lives. They strongly believe that taking jamu is the most effective way to stay healthy. Therefore, an effort to conserve the knowledge as a national heritage has to be conducted. Scientific research which gives a strong basis to the application of jamu for health purposes has to be conducted soon for maximum benefit.

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Japanese abstract

インドネシアのジャワ島の東部に位置するマドゥラ島は、マドゥラジャムウと呼ばれ、その土地だけの伝統薬で有名な島である。マドゥラの婦人は、日々の健康のため島の東部にある昔の Sumenep 王国の一族から伝承されているジャムウを使用している。王室の一族は、伝統薬についての知識を代々継承し、書物として記録されている。本論文は、マドゥラの

Sumenep 王族による婦人の健康とビューティケアに使用された伝統薬の処方、材料、方剤の作製、投与方法等について伝統薬を使用するための技術、情報を網羅したハイライトである。

*〒930-0194 富山市杉谷 2630

富山大学和漢医薬学総合研究所 門田重利