

LANDSCAPE ETHNOBOTANICAL STUDY OF MALAY MIDWIFERY PLANT SPECIES: CASE STUDY OF KELANTAN

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ABSTRACT

Traditional Malay midwifery practices in Kelantan exhibit a wide variation in plant materials selection. This study established that plant materials composition selection differs greatly with respect to stage of midwifery practices, locality, environmental factors and culture. A total of 6 types of Malay midwifery practices using plants were observed in 5 different localities in Kelantan. Lenggang perut practice was performed during prenatal treatment whereas another five practices (bertangas, bertungku, berparam, berpilis and mandi serom) were performed during postnatal treatment. In relation of creating Malay garden identity, the findings established that the most influential factor appeared to be stage of Malay midwifery practices. Each practice has specific purposes and functions which later determine the accumulation of plant materials selection. Of all the Malay midwifery practices studied in this research we found that mandi serom is the most diverse plant species used which portray the habitat or type of environments in which these plant species origins or found. There may be similarities of some species due to similar knowledge, culture or environment; however, the magnitude of these effects is not as great as plant materials composition selection and usage. By identifying the key factors controlling plant materials selection and usage a greater understanding of how certain midwifery practices influence plant species selection and composition in response to interactions with environmental factors as well as culture, belief and taboos will emerge as potential softscape elements tools and indicator in creating identity of Malay landscape for specific culture and locality.

Keywords: Malay midwifery, Malay culture, ethnobotany, Malay landscape

INTRODUCTION

Relationship between man and plants had been an interesting discussion and debating ever since the beginning of the man civilization. Nevertheless, plants have plays such an important role in every aspect of human life. From the revealed usage of plants in medicinal field, plants also have its significance in the human built environment (Coe and Anderson, 1997). Especially in enhancing the identity of a space and beautify the distinctive landscape. Ethno-botany might be the suitable words to describe the roles of plants in relationship with daily human life and activities (Coe, 2008; Cunningham, 2001). Ford (1994) described that ethno botany is the study of the relationship between humans and plants including the way plants is manipulated for the usage in the human local environment and in the spiritual world of the community. Ethno-botany can be classified into utilitarian, food/ dietary, cosmetic or dye, medicinal and ritual. There are approximately 300 000 species of higher plants in the world today (Cotton, 1996). Over 30% of which has been estimated been used in plant based remedies for some time (Weston, 1994). In fact, in Malaysia, about one-third of the world's flowering plants including at least 25 000 species of flowering trees are found and abound in botanical riches in peninsular Malaysia, Sabah and Sarawak (Soepadmo, 1999). Today, millions of traditional people still use plants as a source of food, clothing, shelter, fuel and medicine. This exciting diversity of plants and vegetation provide us with not only timber, food and medicine but a variety of other useful products.

The rapid growth of urban populations not only required economic and social adjustment and transformation but also a change in the way of landscape setting and design character. As they increase to benefit mankind, they have at the same time come to threaten the environment (Mayer, 1986). The globalization and socio-behavior changes in Malaysia might be driven to refurbishment of the valuable cultural performances and in result, affected the Malay

originality and formation. Concurrent with the modern trend of increasing urbanization, there is a general awareness of the Malay communities that they need to protect the biodiversity and well being of their local ecosystems. These studies are important in order to explore and create an identity of Malay cultural landscape through the uniqueness of the Malay nusantara elements (Malay Archipelago) focusing particularly on beliefs, rituals and also customary practices of Malay midwifery in birth (delivery) during pre and post natal stages.

Malay midwifery

Traditional midwives have been involved in delivering babies, and providing a broad range of other services to women for hundreds of years. They are usually local women with little formal education. As they are well known in their communities they are often called to assist women at the time of delivery. It is well-known that traditional midwives or *bidan kampung* normally comes from a family whose ancestors were also *bidan kampung*. It is an acquired skill and the knowledge can be acquired even without any direct association with the ancestors. It is more like a talent or gift which is bestowed to a particular individual. As a matter of fact, not everyone in the family has the ability to be *bidan kampung*. In the older days, *bidan kampung* were available in almost every village and they were sought after for all women-related problems including confirmation of pregnancy, monitoring the condition of the fetus, deliveries, gynecological diseases and postnatal care. Usually a pregnant mother will go and see a *bidan kampung* as soon as she misses her period to confirm her pregnancy. Regular visits to *bidan kampung* are done throughout her pregnancy to ensure the health of both baby and mother. *bidan kampung* also helps in cases of difficulty to conceive. This is normally solved through massage and intake of herbal.

Similarly, her advice is sought after in cases of pregnancy planning. This again is done through massage and herbal intake. In cases of gynecological problems the treatments would vary from case to case. *bidan kampung* was once also involved in home-made herbal products for the women. This knowledge has been passed down from generation to generation and has been kept within the family. In cases of delivery, *bidan kampung* is brought to the pregnant mother's house to help in her delivery as well as new mother's caretaker. She will come to the house every morning for a few hours to help the new mother with her massage, *tungku* (point massage), herbal bath, herbal treatments and *bengkung* (body girdle). She will also bathe the baby and treat him or her with warm herbs or *tuam* to tone the stomach muscles and reduce the chances of flatulence. For babies (boy), this treatment is particularly concentrated around the sex organs to prevent hernia (*angin pasang*). This normally goes on for about a week. After the first week, when the mother is expected to have recovered to a certain degree, she will have to perform *tungku*, herbal treatments and *bengkung* itself.

The *bidan kampung* will only come back at the end of the confinement period (after 44 days) to give the new mother her final three days of massage, thus marking the end of her confinement. In those days, according to Barakbah (2007) *bidan kampung* were offered maternity courses at local hospitals and they were given certificates to enable them to serve hand in hand with hospital midwives. However, with development and modernization, the villages are now well equipped with maternity clinics, with hospital midwives on duty round the clock. The *bidan kampung* is no longer allowed to handle deliveries, and all the general check-ups are done at the government clinics. As a result, the role of *bidan kampung* is becoming less and less important, and is mainly concentrated on care during confinement. The number of *bidan kampung* has greatly decreased over the last few years. The demand for *bidan kampung* is still very high, especially in postnatal care. However, their scarcity allows them to

be involved only in body massage. Thus, many are also losing their traditional skills in herbal treatments and production. These traditional treatments are now only available within the family and are limited to practices that are known to the immediate parents.

The use of plants as ethno-botanical uses such as food, utility and herbal medicine has a long tradition amongst Malay community in Malaysia. It involves a diversity of indigenous knowledge and cultural beliefs and constitutes an important basis for the development of Malay society. Due to rapid changes in socio-economic, environmental and cultural beliefs in Malaysia, the use of ethno-botanical plant species as herbal medicine is in transformation (Hamilton, 1997). Ethno-botany can make a positive contribution to alternative treatment in modern medical practices by identifying locally available plant resources, indigenous knowledge and traditional healers (Schultes and Reis, 2003). Development activities which put indigenous knowledge into the context of natural resource management are particularly important. Therefore, future studies are needed in order to establish a medicinal plant information database in order to educate young people especially and Malaysian about the importance of ethno-botany functions and uses and to prevent this knowledge to become history. According to Martin et al. (2002), the impact on societies of traditional medicines and modern medical systems has varied, but the facts are:

1. Traditional knowledge of herbal medicine is disappearing
2. Traditional healers are becoming rare and less respected
3. Medicinal plants are over-harvested

Therefore the conservation of medicinal plants and traditional medicinal knowledge must run in parallel because these two factors are important and interrelated.

METHODOLOGY

Survey

The survey questions were prepared according to the issues or problems that need a feedback from the users or respondents. In addition, the question can be either multiple choice questions or the trick question by the researchers based on the issues or the problem that need further responds from the respondents.

Interview

There are three types of interview which are structured, semi- structured and unstructured interview. The method to analyze the data is by transfer the recorded data to writing or verbatim which mean take the word as it is.

Observation

Observation means the involvement of systematic recording of observable phenomena or behavior in a natural setting. There are two types of observation which are participant and non-participant observation. Basically it relates the involvement of the observer in the observation session. The time, location and day of doing the observation need to be set up earlier in order to know the limit of investigation.

Ethnobotanical data

Ethnobotanical data were collected according to the methodology suggested by Jain (1996). A semi-structured questionnaire will be used to extract information on the ethno-botanical uses of plants. To facilitate cross-checking of plant species, the specimens will be identified through various floristic records or secondary data such as sources from books, internet, Rimba Ilmu, University of Malaya; Taman Pertanian Universiti, UPM; Makmal Herbarium, UKM; Taman

Botani, Putrajaya; Forest Research Institute of Malaysia (FRIM), Kepong; and also from previous research studies and journals as described by Cotton (1996) to ascertain the nomenclature. Primary data was collected by questionnaires, observation and interviews as described in detail by Etkin (1993).

RESULTS AND DISCUSSION

Information on the Malay midwifery practices stages and plant materials used were collected from 5 traditional Malay midwives at two different localities of Kg. Panji and Kg. Bandar at Kota Bharu and Pulau Chondong, Kelantan. In general, there are four major features in Malay midwifery practices which are the use of herbs, the use of heat, massage and abstinence or pantang. In our case 6 midwifery process practices were observed which are lenggang perut (swinging the tummy), bertangas (vaginal heat), bertungku (point massage), berparam (body spread), berpilis (forehead treatment) and mandi serom (traditional bath). The knowledge of midwifery mainly based on the informal knowledge that have been passed from generation to generation, either in direct way such as from great-grandmother to her great-grandchildren or from dreams, for those who are selected. Body spread, forehead treatment and traditional bath were identified under herbs treatment whereas vaginal heat and point massage were classified under heat treatment. The process of lenggang perut is held at 7 month of pregnancy. Every midwife has their own style of lenggang perut. Different approaches and believes have been practiced during this ceremony and it was practiced to ensure the safety of a baby and to check and adjust the position and sex of a baby.

There were 3 species (*Areca catechu*, *Cocos nucifera* and *Piper betle*) used by Malay midwives during lenggang perut which can be divided into palm and climber. In general the *lenggang perut* ceremony started with preparation of ceremony materials such as *tepung tawar* or rice flour mixed with betel leaves, pounded into flour; limes, coconut, *mayang pinang* or betel nut palm inflorescence. The coconut without husk will be rolled gently three or seven times onto prospective mother stomach towards toes before she kicks the coconut towards the wall to check for the baby's sex. A jagged-cut coconut shell indicates a girl, whereas a clean-cut coconut shell indicates a boy or if the eyes of the coconut turn upwards when the coconut stops rolling, the baby will be a boy and vice versa.

As for bertungku and bertangas there were 5 species used by Malay midwives during bertungku (*Morinda citrifolia*, *Cocos nucifera*, *Melastoma malabathricum*, *Cymbipogon nardus* and *Elephantopus scaber*) and 6 species during bertangas (*Alstonia angustiloba*, *Morinda citrifolia*, *Vitex trifolia*, *Alpinia galangal*, *Curcuma longa* and *Musa paradisiaca*). Bertungku is a form of point massage using heated stones wrapped with a few layers of rags lined with leaves of some selected herbs. Normally this process applied at all parts of the body especially front and back, abdomen and thigh and special care need to be taken when performing point massage around the uterus. Point massage are important to enhance the healing process of the uterus, to break up and release blood clots, to cleanse up the newborn mother's uterus, to break up fats, to tone the stomach, to improve blood flow and rejuvenate the body healing (Zaharah, 2007; Barakbah, 2007). Tangas refers to the use of plants to dry and tighten the vagina. According to Zaharah (2007) the purpose of tangas in Malay cultures are to reduce uterus swelling, eliminate foul odour, enhance healing of cuts and wounds and tighten the pelvic floor muscles.

Table 1: List of plant materials used in traditional Malay midwifery during lenggang perut, bertangas, bertungku, berparam, berpilis and mandi serom in Kelantan

SCIENTIFIC NAME	FAMILY	LOCAL NAME	TYPES OF PLANT
<i>Lenggang perut</i>			
<i>Areca catechu</i>	Arecaceae	Mayang pinang	Palm
<i>Cocos nucifera</i>	Arecaceae	Kelapa	Palm
<i>Piper betle</i>	Piperaceae	Sireh	Climber
<i>Bertangas</i>			
<i>Morinda citrifolia</i>	Rubiaceae	Mengkudu	Tree
<i>Cocos nucifera</i>	Arecaceae	Kelapa	Palm
<i>Melastoma malabathricum</i>	Melastomaceae	Senduduk	Shrub
<i>Cymbipogon nardus</i>	Poaceae	Serai Wangi	Herbaceous
<i>Elephantopus scaber</i>	Asteraceae	Tapak Sulaiman	Herbaceous
<i>Bertungku</i>			
<i>Alstonia angustiloba</i>	Apocynaceae	Pulai	Tree
<i>Morinda citrifolia</i>	Rubiaceae	Mengkudu	Tree
<i>Vitex trifolia</i>	Lamiaceae	Lemuni	Tree
<i>Alpinia galangal</i>	Zingiberaceae	Lengkuas	Zingiber
<i>Curcuma longa</i>	Zingiberaceae	Kunyit	Zingiber
<i>Musa paradisiaca</i>	Musaceae	Pisang	Zingiber
<i>Berparam</i>			
<i>Garcinia atroviridis</i>	Clusiaceae	Asam Gelugur	Tree
<i>Citrus aurantifolia</i>	Rutaceae	Limau	Shrub
<i>Curcuma longa</i>	Zingiberaceae	Kunyit	Zingiber
<i>Kaempferia galanga</i>	Zingiberaceae	Cekur	Zingiber
<i>Zingiber officinale var rubrum</i>	Zingiberaceae	Halia Bara	Zingiber
<i>Eupatorium odoratum</i>	Asteraceae	Kapal Terbang	Herbaceous
<i>Berpilis</i>			
<i>Baccaurea motleyana</i>	Euphorbiaceae	Kulit Pokok Rambai	Tree
<i>Curcuma longa</i>	Zingiberaceae	Kunyit	Zingiber
<i>Mandi Serom</i>			

<i>Morinda citrifolia</i>	Rubiaceae	Mengkudu	Tree
<i>Psidium guajava</i>	Myrtaceae	Jmbu Batu	Tree
<i>Syzygium polyanthum</i>	Myrtaceae	Serai Kayu	Tree
<i>Vitex trifolia</i>	Lamiaceae	Daun Lemuni	Tree
<i>Citrus aurantifolia</i>	Rutaceae	Limau Nipis	Shrub
<i>Citrus hystrix</i>	Rutaceae	Limau Purut	Shrub
<i>Jasminum sambac</i>	Oleaceae	Bunga Melor	Shrub
<i>Alpinia galangal</i>	Zingiberaceae	Lengkuas	Shrub
<i>Curcuma aeruginosa</i>	Zingiberaceae	Kunyit Hitam	Zingiber
<i>Curcuma longa</i>	Zingiberaceae	Kunyit	Zingiber
<i>Curcuma xanthorrhiza</i>	Zingiberaceae	Temu Lawak	Zingiber
<i>Kaempferia galangal</i>	Zingiberaceae	Cekur	Zingiber
<i>Zingiber cassumunar</i>	Zingiberaceae	Bonglai	Zingiber
<i>Zingiber officinale</i>	Zingiberaceae	Halia Putih	Zingiber
<i>Blumea balsamifera</i>	Asteraceae	Sembong/Capor	Herbaceous
<i>Cymbopogon nardus</i>	Gramineae	Serai Wangi	Herbaceous
<i>Pandanus amaryllifolius</i>	Pandanaceae	Pandan	Herbaceous

Instead of practicing inner treatment, the newborn mother also needs to practice the outer body treatment known as ‘param’ or forehead treatment. Param needs to be practiced after baths twice a day; morning or during evening for 44 days. Param will be applied to the whole body and around the neck till foot to avoid ‘wind’. The reason of param is to heat up the newborn mother’s body, to release blood circulation and to firm the body to the original forms (rashidi et al., 2014). Pilis is another form of forehead treatment for postnatal confinement to avoid newborn mother from meroyan or suffered from stress and misery especially during the pregnancy. Table 1 established that 6 species were identified during berparam (*Garcinia atroviridis*, *Citrus aurantifolia*, *Curcuma longa*, *Kaempferia galangal*, *Zingiber officinale* var *rubrum* and *Eupatorium odoratum*) process and 2 species were used during berpilis (*Baccaurea motleyana* and *Curcuma longa*).

Rashidi et al. (2014) stated that, during the postnatal treatment and care, the newborn mother are encourage to performed mandi serom or traditional herbal bath, right after labor with lukewarm water during day and evening. The newborn mother is encouraged to practice this traditional herbal bath during end of the week of postnatal confinement, continuously for seven days. The purpose of this traditional herbal bath is to release unwanted wind and to refresh the newborn mother’s body. In Kelantan, mandi serom practice accumulated 17 species which predominated by trees, zingibers and herbaceous as detailed in Tab 1.

This study revealed that there were significant differences between plant materials used, locality, stages of midwifery practices and all combinations of interactions. The importance of the interaction components emphasises that the changes in plant materials composition in

traditional Malay midwifery practices are complex and the selection to every stages or processes are not consistent. The results from this study also suggest that the selection of plant materials composition for different process in traditional Malay midwifery practices is mediated by the availability of plant materials at that particular environment versus the origin of the knowledge was transferred. Therefore this findings can be an effective tool for investigating the environmental or localities and culture factors as potential softscape elements to be introduced and integrated in creating or designing Malay Garden identity.

CONCLUSION

The influence of stages in traditional Malay midwifery practices, locations and environment interactions have been studied on wide range of plant materials composition selection and usage. Despite significant results in our understanding of traditional Malay midwifery practices knowledge and plant species used, the mechanisms in determining or selecting specific plant species for specific purposes still remain an enigma. Each factor had an effect on the composition of plant materials selection; however the most influential factor appeared to be stage of Malay midwifery practices. Each practice has specific purposes and functions which later determine the accumulation of plant materials selection. Of all the Malay midwifery practices studied in this research we found that mandi serom is the most diverse plant species used which portray the habitat or type of environments in which these plant species origin or found. There may be similarities of some species due to similar knowledge, culture or environment; however the magnitude of these effects is not as great as plant materials composition selection and usage. By identifying the key factors controlling plant materials selection and usage a greater understanding of how certain midwifery practices influence plant species selection and composition in response to interactions with environmental factors as well as culture, belief and taboos will emerge as potential softscape elements tool and indicator in creating identity of Malay landscape for specific culture and locality.

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