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The Identification of Floras Used as Traditional and Complementary Medicine: A Study in Ramsar Site, Sabah, Malaysia

Abstract—The practice of traditional medicine has been deduced based on available evidences from the Malay, Chinese and Indian communities in Malaysia. Based on extensive review of previous literature, the study discovered that there is limited empirical documentation on the types of floras used as Traditional and Complementary Medicine (TCM) by the rural communities in Sabah, especially those residing along the Ramsar site. Thus, this article aims to document the types of floras used in TCM by the rural communities in the Dagat village at the Lower Kinabatangan-Segama area. The data for the study were obtained from a series of in-depth interviews and field observations. The findings revealed that the rural communities in the Dagat village utilized floras available around the village as TCM in their daily lives. TCM using floras have helped to save lives in emergency cases, especially for pregnant women with high risks during pregnancy. This study is significant as it presents an empirical documentation of floras for TCM practices among the local community in Sabah, Malaysia

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1 INTRODUCTION

Over the years, the Traditional and Complementary Medicine (henceforth TCM) is a popular practice among the communities around the world [1]. The study of TCM is also gaining momentum in the academia. In Malaysia, the practice of traditional medicine among the dominant ethnic groups such as Malay, Chinese and Indians is significant since many decades are inherited from the ancestral. A plethora of traditional medicine practises of the ethnics group such as Ayurveda and Homeopathy are still widely practiced. Such practises are categorised as TCM with similar goal to cure illnesses faced by these ethnic groups. The popularity of TCM is increasing and many have opted for TCM because it is easily accessible in the market and is cheaper compared to conventional treatment [2]. Moreover, the traditional medicine practices are preferable comparative to modern medicine whereby the waiting time for patient to seek for treatment is limited, and reduces the fear of visiting the hospital. In addition, Othman and Farooqui [2] also noted, "The perception that TCM has minimum side effect on managing pain and to cure diseases makes TCM to be a significant contributor to treatment of diseases". However, about the practice of TCM often varies among the different communities and individuals.

Further research is necessary to document the knowledge on TCM by the community as well as to ensure the safety and efficacy of TCM [2].

The use of natural resources in TCM practises is common among the community in rural areas especially in Malaysia. However, it is observed that the documentation of on the use natural resources in TCM practises is scarce; hence, more studies must be conducted. The use of natural resources in TCM practice is significant as it is easily accessible such as herbs found by the rural community within their living areas. The use of herbal remedies in curing illnesses still persist in local communities especially in developing countries [3] including Malaysia, for instance ginseng, *Tongkat Ali* and Pennywort [2]. An in-depth literature review clearly revealed that there is insufficient data on the use of natural resources especially types of herbs used by the local community in rural areas especially in developing countries. Thus, this study was conducted to identify natural resources especially herbs utilized by the local community in Ramsar site, Lower Kinabatangan-Segama, Sabah, Malaysia. Majority of the studies have dealt with different issues pertaining to TCM such as perception or attitudes towards TCM [2-8], utilization of TCM to cure illness and its evolution

[9-11], and knowledge of medicinal plants in a rural community [12]. Yet, studies on the identification of floras (natural resources) in TCM are scarce except of a study by Othman and Farooqui (2015). However, in this study only several herbs from medicinal plants such as ginseng, *Tongkat Ali* and Pennywort are documented without focusing on other types of medicinal plants or floras, which have potential to cure illnesses. In the context of Malaysia, TCM is still practised by the rural communities especially by women who have vast experience in this field. As noted earlier, studies on the identification of floras used by local community in TCM literature are scarce in Malaysia and this study aims to fulfil the identified gap. Hence, this study was conducted to contribute to the current knowledge on TCM. This study is also significant to document the use of natural resources in TCM practice. It is hoped that this study will inspire the relevant stakeholders to formulate appropriate policies, which could benefit the healthcare industry as well as to provide a platform to acknowledge the traditional knowledge of local community in identifying the medicinal plants used in TCM.

2 MATERIALS AND METHODS

This research was based on qualitative research designed specifically on ethnography research (see Figure 1). An in-depth interview was conducted on two experienced traditional medicine practitioners (both women) from the Dagat village located within the Ramsar site, Lower Kinabatangan-Segama, Sabah. These two women were selected because they are experienced traditional medicine practitioners for decades and have a vital role as 'emergency doctors' for the fellow residents in Dagat village.

The purpose of the semi-structured interviews with these informants were to gain information on types of natural resources used in traditional medicine practice and its benefits to livelihood of the local community. The practice of traditional medicine by the informants in Dagat village is widely accepted by the fellow villagers due to several reasons. First, the informants have vast experience in practicing traditional medicine especially in identifying the appropriate herbs or medicinal plants. Secondly, Dagat village is located in the interior part of Lower Kinabatangan-Segama where there is no hospital or clinic available. In order to receive proper medical treatment, the Dagat villagers have to travel by four wheelers and to carpool with other

villagers. The journey usually takes about 4 hours to reach the Sandakan town. Finally, the informants are related treat the elders with respect.

The fieldwork was conducted from August until September 2015 in Dagat village located near the Kuala Segama and Kuala Maruap Forest Reserve (See Figure 2). In order to collect the data for this study, the researcher stayed at the village homestay. Prior the initial interview, several questions were developed and asked regarding the natural resources used in TCM practices. The questions and answers during the interview were recorded. The respondents were informed that their views or opinions would be recorded. All respondents agreed to participate in the study and the in-depth interviews were conducted at the home of the respondents to ensure that respondents were comfortable and able to cooperate with the researcher. Each interview session lasted between 45 minutes to 1 hour. Throughout the interview, the Malay language was used, as it is a common communication language of the respondents. In this light, the researchers were guided by the themes of the interview. After the interviews, the raw data were analysed by using the thematic analysis technique [13]. The analysis comprised of six stages, which include familiarisation, generating initial codes, searching for themes, reviewing themes, defining and naming each theme, and writing reports. The identification of floras as TCM was identified as a main theme in this study and is presented in the next section.

3 RESULTS AND DISCUSSION

This study successfully identified several floras used in the TCM practise by the local community in Dagat village, Lower Kinabatangan-Segama, Sabah. The respondents revealed that almost all medicinal plants used in traditional medicine practices fully depending on the forests around their living area. It was clear that the forest is the main source for providing natural resources used in traditional medicine in the village. The sources can only be identified by experience practitioners. In the Dagat's case, two women were identified to be experienced practitioners in selecting and identifying appropriate medicinal plants for treating the patients in the village. In addition, their traditional knowledge on traditional medicine helped them to ensure sustainability of such practises in a long run. The sense of enthusiasm among them was high to help their fellow villagers to treat their illnesses in emergency cases, for

instance the potential risks that may occur during pregnancy by women in the village.

Through the in-depth interviews with the respondents, there are a number of floras used in traditional medicine practices in the villages such as *Pucuk Jambu*, *Daun Kusur*, *Daun Sirihdan*, *Akar Jelutung Kunyit*, *Akar Patawali*, *Daun Pendingin*, *Pucuk Pokok Apit-Apit*, *Tiram*, *Akar Kayu*, *Daun Pisana*, *Pucuk Pokok Bakawan*, *Akar Pokok Biruang*, *Daun Betik*, *Daun Tangan-Tangan*, *Misai Kucing*, *Daun Kagitun*, *Daun*

Lakum, *Daun Lahunai Kunyit*, *Daun Hempedu*, and *Akar Tongkat Ali*. Based on the interview with the respondents, most of these medicinal plants are user friendly and easy to be used to cure illnesses such as fever, headache, throat pain, minor injuries from accidents, and postpartum practises. For instance, *Daun Tangan-Tangan*, *Daun Lahunai Kunyit* and *Akar Tongkat Ali* only need to be boiled with hot water and drink after an hour.

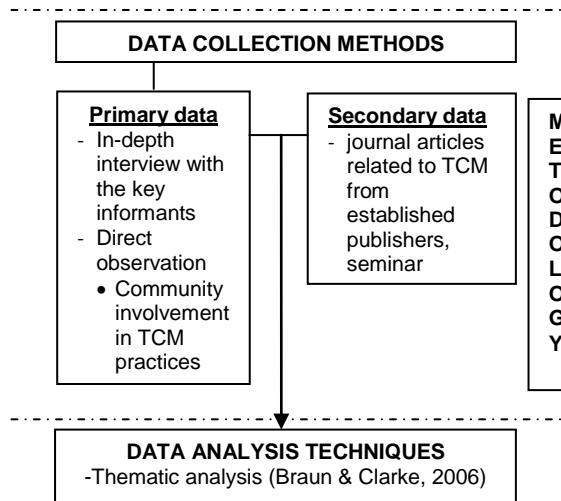
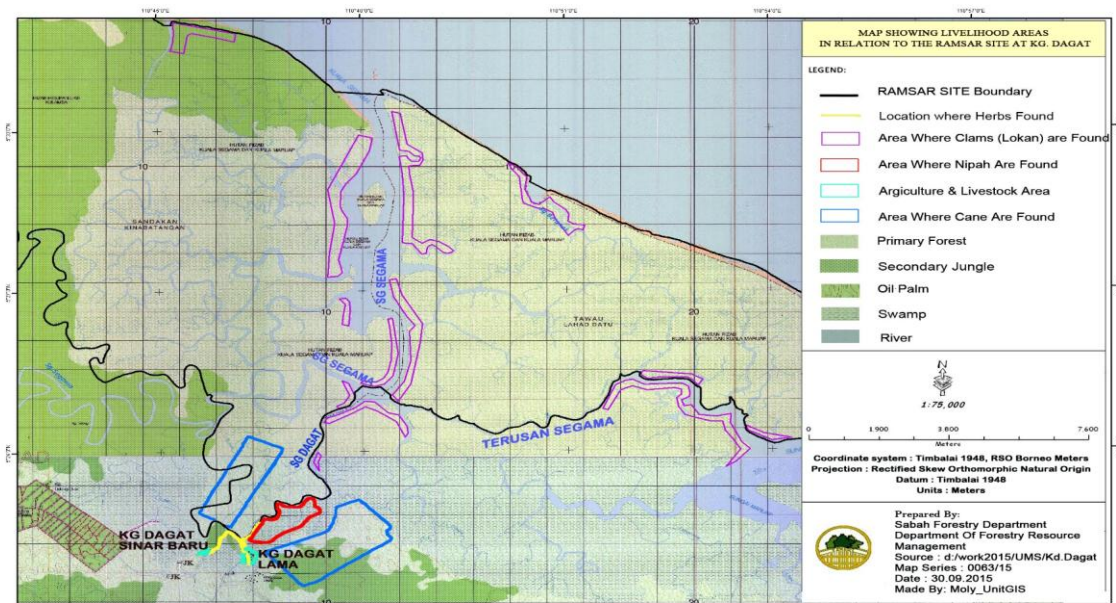


Figure 1: Research process



Source: Sabah Forestry Department, 2016

Note: *Kg Dagat Baru* refers to New Dagat Village and *Kg Dagat Lama* refers to Old Dagat Village

Figure 2: Livelihood Areas in Relation to the Lower Kinabatangan – Segama Wetlands, Ramsar Site at Dagat Village

This is an easy method and the respondents noted that such medicinal plants are better in curing illnesses such as fever, headache and postpartum practises compared to modern medicines. They truly believed that medicinal plants found around Dagat village and nearby forests are free from toxic and protected as forest reserve. Thus, the villagers believe to and continue the practise of TCM using sources especially floras found in their living areas.

On the other hand, the respondents also revealed that floras are priceless for the villagers and they were urged that they should preserve and protect such sources from depleting. They also noted that the preservation and conservation of forests within their living area is always a main priority in order to sustain the natural resources in the near future which is in line with the sustainable development paradigm.

4 CONCLUSION

This study identified that the local community in Ramsar site particularly in Dagat village is highly dependent on natural resources (floras) to manage their health related issues. In fact, that. The traditional medicine practices by the experienced people in the village are vital because the Dagat village is located too far away from the Sandakan town. Moreover, the identification of those floras from the forests can be identified by the practitioners to treat for illnesses. This study is conducted to identify and document several floras used by the traditional medicine practitioners of Dagat village. The documentation of those floras used in traditional medicine practices could help to sustain the traditional knowledge and able to complement the use of conventional medicine in Malaysia. It is also a believe that such floras have significant therapeutic values perceived by the study's informants. It is also hoped that the findings from this study could be guided the relevant stakeholders in acknowledging the identified floras as TCM and contributing new inquiry in the current body of knowledge on TCM. However, more research is required to identify the safety and efficacy or dosage of each plant to treat certain diseases.

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CONFLICTS OF INTEREST

The authors report no conflicts of interest. The authors are responsible for the content and writing of the paper.

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