



Ethnobotanical indigenous knowledge, systems and practices (IKSP) in Western Mindanao, Philippines: The sea nomads “Bajau” of Zamboanga City

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Abstract

Anchored on Republic Act No. 8371 that recognizes, promotes and preserves the indigenous knowledge, systems and practices (IKSP) and the government's Universal Health Care Law that guarantees quality health care of all Filipinos, this study documents the ethnobotanical practices of the sea nomads known as “Bajau” in Zamboanga City of Western Mindanao, Philippines. A total of 30 snowball-sampled key informants were interviewed using a semi-structured questionnaire. Key informants should have utilized medicinal plants for at least a year at the Ayuda Bajau Village, Maasin, Zamboanga City. Data were then categorized into 16 use categories and quantify the most frequently used species in each category. Plant relative importance was determined using quantitative ethnobotanical indices: use report (UR), use value (UV), fidelity level (FL), and informant consensus factor (ICF). Results enumerated 36 medicinal plant species in 35 genera and belonging to 27 families. The top medicinal plant used was *Caesalpinia sappan* “Sibukaw” in terms of UR, UV, FL, and ICF. Two medicinally important plants among the sea nomads were documented locally named as “Kayumanis” and “Kambal-simangko” which are commercially sold in Chinese drugstore and needs further molecular authentication. “Kamanyan” (incense) is used during their religious healing ritual “pag-omboh”. Literature review of these documented medicinal plants provides scientific support on their medicinal uses and applications. Although Bajau people have an intimate association with the sea, they still manage to preserve their ethnobotanical practices, which are being passed on by their ancestors.

Keywords: Bajau, ethnobotany, snowball sampling, Zamboanga city

Introduction

Philippines, as an archipelagic country, is comprised of existing indigenous tribes who have managed to keep their cultural identity and practices secluded and preserved. One of these is the sea nomads known as “Bajau”. Bajau remains some of the least privileged members of the society among the different ethnic tribes in the Philippines due to their inability to access government facilities such as health services because of their status, belief, and lifestyle^[1]. Due in part to their statelessness and topographical detachment, they have managed to utilize ethnobotanical practices in their primary health care even with their close association to the sea^[2]. A study conducted in Malaysia among the Bajau indigenous peoples revealed the use of medicinal plants in women during postpartum care and as herbal medicine in treating and preventing various diseases such as cough, diabetes, high blood pressure, cancer, flu, ringworms and fever^[2, 3]. Documenting Indigenous Knowledge, Systems, and Practices (IKSP) is part of the growing field of medical ethnobotany to preserve cultural heritage of the indigenous peoples since they only passed their knowledge and practices through oral communication or by observing cultural practices through generations. These traditional knowledge and practices have recently considered as the framework of most modern medicinal studies by evaluating

the practical uses and safety of plants^[4] which can be conducted through literature reviews^[5]. Dapar *et al.*^[6, 7] emphasized the need for more ethnobotanical documentation before this knowledge disappears and forgotten. Anchored on Republic Act No. 8371 that recognizes, promotes and preserves the indigenous knowledge, systems and practices (IKSP) and the government's Universal Health Care Law that guarantees quality health care of all Filipinos, this present study aims to document the ethnobotanical knowledge, systems, and practices of the Bajau indigenous people in Ayuda Bajau Village, Maasin, Zamboanga City, Mindanao, Philippines.

Materials and Methods

Study Site

The study was conducted at the Ayuda Bajau Village, Maasin, Zamboanga City, Mindanao, Philippines, an indigenous cultural community (ICC) which is officially declared by the National Commission on Indigenous Peoples (NCIP) as one of the Bajau communities in Zamboanga City and was purposively chosen for their unique indigenous knowledge, systems, and practices in ethnobotanical health care. Figure 1 shows the map of the study site and the actual village.

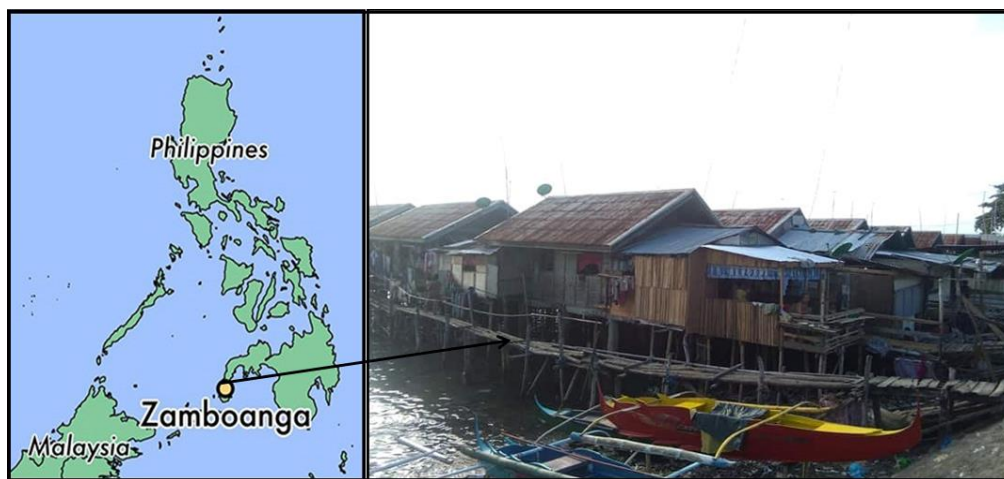


Fig 1: Map of the study site and the actual Ayuda Bajau Village in Maasin, Zamboanga City, Philippines. (Left photo adapted from google.com.images)

Ayuda Bajau Village (6.9751N, 122.0071E; 6mASL) in Maasin, Zamboanga City is comprised of 302 individuals in 144 families. Houses on stilts replaced their “lepa” or houseboats; however, most of their occupation relies on fishing and fish vending.

Study Design

This study employed both qualitative and quantitative research design. The qualitative part employed a descriptive research survey design analyzed through thematic analysis. It also includes the documentation of the Bajau indigenous healing practices and ethnopharmacological knowledge in the form of a semi-structured questionnaire with three major parts (general information of the community, demographic profile and medicinal plant use). The quantitative section involved ethnobotanical data such as use report, use value, fidelity level, and informant consensus factor.

Ethical Considerations

Since this study involves interviews among indigenous people, requirements related to NCIP clearance were strictly followed. NCIP is the government agency in charge of the welfare and protection of indigenous peoples, which in this case on IKSP [8]. Through the assistance of the IKSP team as organized by the NCIP Regional Office after complying with all the mandated requirements, community conferences and consultation meetings were conducted. The resolution of consent from the Indigenous Political Structure (the Council of Elders/Tribal leaders) of the Bajau ICC was then respectfully sought. A Memorandum of Agreement (MOA) which was later translated to their language was also inked between the research proponents, NCIP and the ICC.

Sampling and Sample Size

A snowball sampling method was employed to 30 key respondents of legal age (about 10% of the entire Ayuda Bajau population) who have utilized medicinal plants in treating diseases for a year. The field work and interview, including the community forum, consultation meetings, and data validation, were conducted from June 2019 to October 2019.

Survey Questionnaire

A survey questionnaire comprising questions on the traditional healing practices and types of the medicinal plant

used was administered among the respondents during the interview of Bajau in the study site.

In-depth interviews

Three in-depth interviews were conducted to obtain a deeper insight into medicinal plant use in each village among the key informants, which are composed of a traditional healer (*bidan*), a local herbalist (*panday*), and medicinal plants’ user. Confidentiality of information was observed during the interview, and the survey varied according to the convenience of informants selected.

Collection of Voucher Specimen

Sample medicinal plants were collected with the assistance of the village experts. These were then pressed and mounted on herbarium sheets. Collected medicinal plants of Bajau will serve as vouchers specimens deposited at the WMSU Herbarium. All field data and labels, *i.e.*, spatial data (latitude, longitude, and elevation,) were recorded in a field record sheet. Identification was done based on comparative morphology in various herbaria and online databases before the consultation of an expert.

Qualitative Data Analysis

Data were filled in the tabular format of the Department of Science and Technology – Philippine Council for Health Research Development [8]. Data were systematically categorized by family in alphabetical order containing the valid scientific name as checked in the Co’s Digital Flora of the Philippines [9]. Other labels such as the common name in English and vernacular terms, parts used, folkloric use, preparation, and the mode of application are also included.

Quantitative Data Analysis

Quantitative indices were obtained and calculated, such as Use Report (UR), Use Value (UV), Fidelity Level (FL), and Informant Consensus Factor (ICF). Medicinal plants documented in this study were categorized based on the 16-category of uses or diseases validated by Dapar *et al.* [6] among Filipino physicians and medical experts based on the reported cases and diagnosis among the locals in Mindanao, Philippines. The 16 disease categories based on the ICD by the World Health Organization [10] as classification system reference is highly dependent on a precise diagnosis done by physicians with accurate diagnostic tools. Thus, this

category reference does not permit to post-hoc classify diseases or therapeutic uses while on the field.

a. Use-report (UR)

Every time a plant was mentioned as being used for a particular purpose, it was considered to be one use-report. However, if an informant used a plant in more than one purpose under the same category, it was still regarded as a single use-report [11]. A multiple use-report was considered when at least two informants mentioned the same plant for the same purpose.

b. Use Value (UV)

Use Value (UV), developed by Phillips and Gentry [12], is computed to provide a quantitative measure for the relative importance of species. UV, which is based on the number of uses and the number of people that cite a given plant, is used to indicate the species that are considered most important by a given population. UV is calculated using the following formula: $UV = (\sum U_i)/N$ where U_i is the number of use-reports cited by each informant for a given species, and N is the total number of informants. This indicates that the plant is important when UVs are high with many use-reports. However, UV does not distinguish whether a plant is used for single or multiple purposes.

c. Informant Consensus Factor (ICF)

Informant Consensus Factor (ICF) was used to analyze the agreement degree of the informants' medicinal plant knowledge about each category. This quantitative method was adapted from Trotter and Logan [13], who introduced the Informant Agreement Ratio (IAR), which has come to be called as the Informant Consensus Factor. ICF is computed using the following formula: $ICF = (N_{ur} - N_t) / (N_{ur} - 1)$ where N_{ur} is the number of use-report of informants in each category, and N_t is the number of taxa used for a particular category. High ICF values (approach to 1.00) are obtained when only one or a few plant species are reported to be used by a high proportion of informants for a particular category. In contrast, low ICF values indicate that informants disagree

over which plant to use [14]. ICF can thus be used to pinpoint particularly interesting species for the search of bioactive compounds [15].

d. Fidelity Level (FL)

Fidelity Level (FL) is the ratio between the number of informants who mentioned the plant's use for a specific purpose and the total number of informants who stated the plant's use for any purpose (regardless the category). This is developed by Friedman *et al.* [16] and calculated using the following formula: $FL(\%) = (I_p/I_u) \times 100$, where I_p is the number of informants who independently suggested the use of a plant for a particular purpose, and I_u refers to the total number of informants who specified a specific plant for any use or purpose. High FL values (near 100%) are obtained for plants for which almost all use-mentions refer to the same purpose. The highest FL values are plants mostly preferred for a particular use. In contrast, low FLs are generally obtained for plants that are used for many different purposes.

Results and Discussion

Thirty key informants from Ayuda Bajau Village, Maasin, Zamboanga City were surveyed in terms of their indigenous ethnobotanical knowledge, systems, and practices. More than fifty percent of the key informants belong to middle adulthood (age range of 41-60 years old) and mostly, more than 10 years on their utilization of medicinal plants in treating diseases (63.33 %). Out of the 30 participants, majority were females (56.67%). Most of the respondents are already married (73.33%) and with no formal education attended (63.33%). All males are involved in fishing and fish trading as their occupation, while most of the females engaged in mat weaving. As stated by Navarro [17], they are the most sea-oriented people of a larger Sama-speaking group and experts in boatbuilding and fishing. Table 1 shows the ethnobotanical knowledge, systems, and practices among the Bajau tribe in Ayuda Bajau Village, Maasin, Zamboanga City.

Table 1: Ethnobotanical knowledge, systems and practices among the Bajau tribe in Ayuda Bajau Village, Maasin, Zamboanga City.

Scientific Name	Common Name (Local/English/ Bajau)	Plant Part Used	Preparation/ Mode of Application	Folkloric Use
Anacardiaceae				
<i>Spondias purpurea</i> L.	Sineguelas/ Spanish plum/ Sirigwelas	Stem, bark	Steam	Mouth sore, diarrhea
Annonaceae				
<i>Annona muricata</i> L.	Guyabano/ Soursop/Labanos	Young leaves	Pound seven leaves and Direct application	Tetanus, arthritis
Apocynaceae				
<i>Rauvolfia serpentina</i> (L.) Kurz	Serpentina/Snakeroot/Pait-pait	Leaves	Decoction	Hypertension
Araliaceae				
<i>Panax ginseng</i> C.A. Mey.	Ginseng/Korean ginseng/ Langkawas	Fruits	Decoction	Muscle Pain
Arecaceae				
<i>Cocos nucifera</i> L.	Niyog/ Coconut/ Coco	Fruit oil	Oil extraction	Muscle pain
Asphodelaceae				
<i>Aloe vera</i> L.	Aloe vera	Leaves	Extraction	Burns
Asteraceae				
<i>Blumea balsamifera</i> (L.) DC.	Sambong/Blumea camphor/ Sambon	Leaves Roots	Decoction then bathe Decoction	Post-partum care Bleeding
Brassicaceae				
<i>Brassica rapa</i> subsp. <i>chinensis</i>	Pechay	Leaves	Direct Cooking	Overall Health
<i>Opuntia cochenillifera</i>	Cactus/ Cochineal	Leaves	Grilled	Tetanus

(L.) Mill.	nopal cactus/ Busay-busay			
Cactaceae				
<i>Carica papaya</i> L.	Papaya/ Papaya/ Kapaya	Fruit Leaves	Direct Eating Extract juice then drink	LBM, constipation Dengue
Clusiaceae/Guttiferae				
<i>Garcinia mangostana</i> L.	Mangostan Mangosteen/ Mangis	Fruit peels	Decoction	Tuberculosis
Convolvulaceae				
<i>Ipomea aquatica</i> Forssk.	Kangkong/ Water spinach/ Kangkong	Leaves	Decoction & mixed with <i>kayumanis & kambal- simangko</i>	Fever; Overall Health
<i>Ipomoea batatas</i> (L.) Poir	Camote tops/ Sweet potato/ Talbos ng kamote	Leaves	Decoction through cooking	Fever, anemia
Cucurbitaceae				
<i>Momordica charantia</i> L.	Ampalaya/Bitter gourd/Paliya	Leaves Leaves Fruits	Decoction and drink Wash in hygienic part Cooking	Diabetes, fever Post-Partum care Anemia
Euphorbiaceae				
<i>Euphorbia hirta</i> L.	Gatas-gatas/ Asthma weed	Whole Plant Leaves	Decoction Extraction	Dengue, cough, stomachache, wounds, tumor, pus
<i>Manihot esculenta</i> Crantz	Kamoteng-kahoy/ Cassava/ Kamanting	Leaves	Decoction	Swelling
<i>Ricinus communis</i> L.	Tangan-tangan/ Castor bean/ Tangan-tangan	Leaves	Steam	Injuries
Fabaceae				
<i>Caesalpinia sappan</i> L.	Sibukaw/Sappan wood/Sibukaw	Roots Bark	Decoction then drink as needed Decoction and infused with coconut oil	Rheumatism arthritis, cough, tuberculosis, fractures, muscle pain, physical relapse, flu
<i>Mimosa pudica</i> L.	Makahiya/ Sensitive plant/ Makahiya	Roots	Decoction	Fertility
<i>Vigna radiate</i> (L.) Wilczek	Monggo/ Mongo bean/ Monggo	Fruits	Cooking	Anemia
Lamiaceae				
<i>Ocimum africanum</i> Lour.	Sangig/ Lemon basil/ Sulase	Leaves	Extraction	Fever, polio, newborn care, asthma
<i>Vitex negundo</i> L.	Lagundi/ Five-leaved chaste tree/ Lagundi	Leaves	Decoction	Cough
Lauraceae				
<i>Persea americana</i> Mill.	Abokado/Alligator pear/Abokado	Leaves	Decoction	LBM
Malvaceae				
<i>Abelmoschus esculentus</i> (L.) Moench.	Okra/ Lady's fingers/ Okra	Fruits Leaves	Decoction Decoction	Stomachache, LBM
<i>Hibiscus rosa-sinensis</i> L.	Gumamela China rose/ Gumamela	Flower	Pounding	Wounds Boils
Menispermaceae				
<i>Tinospora rumphii</i> Boerl	Makabuhay/ Heavenly elixir/ Pitawali	Stem	Decoction	Diabetes, fever, physical relapse, birth control, hepatitis
Moringaceae				
<i>Moringa oleifera</i> Lam.	Malunggay Horse radish tree/ Malunggay	Bark Leaves Fruits	Pounding Decoction Extraction Decoction	Dog bites, wounds Fever, hypertension Diabetes
Muntingiaceae				
<i>Muntingia calabura</i> L.	Aratiles/ Cherry tree/ Datiles	Leaves Fruits	Decoction Direct Eating	Tuberculosis, bleeding Diabetes
Myrtaceae				
<i>Psidium guajava</i> L.	Bayabas/ Guava/ Bayabas	Leaves	Decoction	Post-Partum care, LBM, arthritis
Oleaceae				
<i>Jasminum sambac</i> (L.) Aiton	Sampaguita/ Arabian jasmine/ Sampaguita	Stem	Decoction	Birth contro l
Pedaliaceae				
<i>Sesamum indicum</i> L.	Linga/ Sesame/Lunga	Seeds	Extraction and applied as poultice	Skin itch, wounds
Poaceae				
<i>Cymbopogon citratatus</i> (DC.) Stapf	Tanglad/ Lemon grass/ Saiy	Leaves & Stem	Boiling	Hypertension, fever
<i>Zea mays</i> L.	Mais/ Corn/ Mais bigas	Fruit grains	Direct Cooking	Diabetes
Rubiaceae				
<i>Morinda citrifolia</i> L.	Apatot/ Noni fruit/ Bangkoro	Leaves, fruit	Decoction	Fracture, cancer
Solanaceae				

<i>Capsicum frutescens</i> L.	Sili/ Red pepper/ Sili	Fruits	Pounding	Toothache
<i>Lycopersicon esculentum</i> Mill.	Kamatis/ Tomato/ Kamatis	Leaves	Direct Chewing	Cough

Results revealed 36 medicinal plant species belonging to 35 genera and 27 families. Family Euphorbiaceae and Fabaceae are the most represented. Family Euphorbiaceae is used all over the world in traditional medicine, especially in the traditional Chinese medicine. *Euphorbia* extracts contain secondary metabolites such as sesquiterpenes, diterpenes, sterols, flavonoids, and other polyphenols. These bioisolates may act as active components for the treatment of many human ailments, mainly inflammation, cancer, and microbial infections [18].

In like manner, Family Fabaceae possesses important biomolecules with pharmacological importance which is mainly flavonoids and accounting for its important bioactivities such as analgesic activities [19]. Aside from these medicinal plants, an algae known as sea lettuce (*Ulva lactuca*) of the Family Ulvaceae is being utilized as one of the medicinal sources of Bajaus to cure contagion and rheumatism through decoction.

Two other medicinally important plants were documented locally named as “kayumanis” and “kambal-simangko” which are sold in Chinese drugstore and needs further authentication. “Kamanyan” (incense) was accordingly used in conjunction with “kambal-simangko”, “kayumanis” and certain medicinal plants in treating common illnesses coupled with traditional ritual “omboh” (prayers). “Kayumanis”, a certain tree bark, is utilized for fever and mouth sore by soaking it in a glass of hot water while “kambal-simangko” is a type of dried seeds soak in hot water for fever and loose bowel movement. These two are the most frequently utilized practices by the Bajau indigenous peoples of Ayuda Bajau Village, Maasin, Zamboanga City.

Leaf parts are the most commonly utilized plant part through various methods in treating different illnesses. According to Morilla *et al.* [20], leaves contain important phytochemicals and secondary metabolites that have significant bioactivities such as analgesic and cytotoxic

properties. Decoction is the most frequently used mode of preparation through boiling the materials and extracting essences or active ingredients [21].

Common disorders recorded are cough, wounds, fractures and fever while some lifestyle-related diseases include hypertension, cancer and diabetes. They also utilized extracts from medicinal plants in their post-partum care as well as a means of birth control and to alleviate menstrual pain which agrees with similar studies in Malaysia among Bajau indigenous peoples [2, 3]. Locally-termed disease “bughat” or physical relapse emerged which refers to the feeling of weakness, tiredness and flu-like symptoms experienced by women after giving birth [22].

Even with their little association to agriculture due to their intimate association to the sea, the Bajau exhibits ethnobotanical practices since they believed that it is effective in treating their diseases. According to a local Bajau herbalist, the knowledge of utilizing medicinal herbs is passed down from ancestors.

Based on the categorization of diseases and ethnobotanical indices, the top three medicinal plants utilized are “kayumanis”, *C. sappan* (sibukaw) and “kambal-simangko” in terms of Use Report UR, Use Value (UV), Informant Consensus Factor (ICF) and Fidelity Level (FL). These ethnobotanical indices indicate that majority of the respondents use it to cure diseases, notes the species relative importance, and pinpoints particularly interesting species for further search of bioactive phytochemicals. While “kayumanis” and “kambal-simangko” are bought at a Chinese drugstore, *C. sappan* is just around the locality. *C. sappan* has been known in tropical countries, as one of herbal plant use in rural areas [23]. The Bajaus discovered its medicinal use since time immemorial through utilizing the stem as joints for boats instead of nails.

Table 2 shows the disease categories with quantitative data on ethnobotanical indices (Use Report, Use Value, Fidelity Level and Informant Consensus Factor).

Table 2. Disease categories with quantitative data on ethnobotanical indices (use report, use value, fidelity level and informant consensus factor).

Cate-gory No.	Use Categories and Abbreviations (adapted from Dapar <i>et al.</i> [6, 7])	Reported Diseases or Uses under each Category	Frequently Used Species	UR	No. of Taxa	UV	FL (%)	ICF
1	Diseases caused by bacterial, viral, and parasitic infections (BVP)	Dengue fever	<i>Euphorbia hirta</i> (tawa-tawa)	10	2	0.33	77	0.9
2	Tissue growth problems (TGP)	Cancer	<i>Morinda citrifolia</i> (apatot)	2	1	0.06	100	1.0
3	Endocrine, nutritional, and metabolic (ENM)	Diabetes	<i>Tinospora rumphii</i> Boerl (makabuhay)	9	2	0.3	100	0.9
4	Diseases of the nervous system (DNS)	Migraine, nervous break-down	-	-	-	-	-	-
5	Diseases of the eye (EYE)	Sore eyes	-	-	-	-	-	-
6	Diseases of the ear (EAR)	Dischar-ging ear	-	-	-	-	-	-
7	Diseases of the circulatory system (DCS)	Anemia, high blood pressure	<i>Cymbopogon citratus</i> (tanglad)	10	2	0.33	100	0.9
8	Diseases of the respiratory system (DRS)	Asthma, cough with phlegm	<i>Vitex negundo</i> (lagundi)	5	2	0.167	100	0.8
9	Diseases of the digestive system (DDS)	Constipa-tion, diarrhea, mouth sore, toothache	“Kambal-simangko”	15*	2	0.5*	100*	0.9*
10	Diseases of the skin (DOS)	Boils	<i>Hibiscus rosa-sinensis</i> (gumamela)	4	2	0.13	100	0.8
11	Musculoskeletal system and connective tissue problems (MCP)	Arthritis, rheuma-tism	<i>Caesalpinia sappan</i> (sibukaw)	16*	2	0.53*	100	0.93*
12	Genito-urinary problems (GUP)	Menstruation, urinary tract infection	<i>Rauvolfia serpentina</i> (pait-pait)	4	2	0.13	100%	0.67
13	Uses in pregnancy to delivery, maternal and infant care (PMI)	Maternal care, postpartum care and recovery, newborn baby care	<i>Psidium guajava</i> (guava)	12	4	0.4	77.8%	0.73

14	Abnormal signs and symptoms (ASS)	Abdominal pain, body aches, headache, fever, malaise and fatigue	“Kayumanis”	18*	2	0.6*	100%*	0.94*
15	Other problems of external causes (OEC)	Cuts and wounds, fracture, poisoning	Tangan-Tangan	6	3	0.2	80%	0.6
16	Other uses (OTU)	Circum-cision, antiseptic	<i>Moringa oleifera</i> (malunggay)	6	3	0.2	75%	0.6

Legend: *with asterisks – top 3 medicinal plants utilized

The majority of the respondents (76.67 %) revealed that the effectiveness of the treatment based on their personal experiences influenced their health-seeking practices to medicinal plants. Effectiveness refers to the extent to which specific treatments able to relieve or cure certain ailments. However, some of these practices have not really undergone rigorous study to make definitive comments about efficacy. Testimonies from other Bajau users follow this information being passed to generation to generation. In the case of the Bajau’s traditional healing practices, users usually share their experience with family members, neighbors, and friends on the usefulness and effectiveness of the treatment, as well as their own experiences relating to the use particular in healing practice also provide recognition on the possible benefits that they gain from using it. While accessibility and affordability also play a role in their health-seeking behavior on medicinal plants (30%), this is true as every coin for them matters, as they are more focused on search for food or ways just to eat. Accessibility refers to the distance, which also involves time and expenses for the villagers to reach the nearest hospital or clinics for treatments. They will prefer to see remedies from local “bidan” or herbalist and find cures from plants that can be easily obtained from forest or home gardens than to spend a great distance to seek for medical treatments. The government’s move to recognize the rights of Indigenous People has been in place, especially in their right to health. One of its main programs to address the right to health of indigenous peoples is the Modified Conditional Cash Transfer (MCCT) or *Pantawid Pamilyang Pilipino Program* (4Ps) of the Department of Social Work and Development (DSWD). This aims to address cultural and language needs, as well as the geographical remoteness and lack of education and health infrastructure in indigenous peoples’ communities. For instance, on child and maternal health, even with the “No Home Birthing Policy” being issued by the Department of Health, this policy puts additional strain on indigenous women, given the lack of essential social services and inaccessibility of health centers for remote indigenous communities. Pregnant indigenous women are now forced to hike for long distances just to get to the nearest health facility. Those who opted to give birth at home are penalized, thus worsening the problem of the low rate of birth registration of indigenous children^[24]. This is supported in this study wherein key informants stated that they preferred “panday” and giving birth at home since they performed religious rituals “pag-omboh”. Having documented these ethnobotanical knowledge, systems, and practices (IKSP) of the Bajau indigenous people, this may pave the way for a more scientific study of the plants and its practices.

Conclusion and Recommendation

This present study documents the ethnobotanical knowledge, systems, and practices of the Bajau indigenous people in Ayuda Bajau Village, Maasin, Zamboanga City,

Philippines. Results revealed 36 medicinal plant species belonging to 35 genera, 27 families utilized by Bajaus in treating diseases and used for women’s post-partum care. The top three medicinal plants used are “kayumanis”, *Caesalpinia sappan* (sibukaw) and “kambal-simangko” in terms of Use Report (UR), Use Value (UV), Informant Consensus Factor (ICF) and Fidelity Level (FL). “Kamanyan” is used in conjunction with medicinal plants and coupled with their traditional ritual termed as “pag-omboh”. Even with their little association to agriculture due to their intimate association to the sea, they have managed to preserve their ethnobotanical practices which are being passed on orally by their ancestors. A safety characterization of these ethnobotanical practices and scientific validation of the medicinal plant’s bioactivities are recommended as it plays a role in primary health care of the Bajau’s indigenous cultural community. Further, phytochemical and molecular analyses of the commercially bought medicinal plants, should be considered.

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