Scholars Academic Journal of Biosciences (SAJB) **ISSN 2321-6883 (Online)**
Sch. Acad. J. Biosci., 2016; 4(4A):359-365 **ISSN 2347-9515 (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI : 10.36347/sajb.2016.v04i04.012

Original Research Article

Ethnomedicinal Study of Plants Sold in Quiapo, Manila, Philippines

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Abstract: The study was able to identify thirty-two (32) species of plants being sold in Quaipo, Manila, Philippines as herbal medicines. These plants were sourced from different locations in the Philippines such as Cavite, Batangas, Rizal, Nueva Ecija, Bicol, Pampanga, Cebu, Antipolo, Quezon and Bulacan. The availability of medicinal plants in Quiapo and the way some Filipinos are patrnonizing it are, to a certain extent, reflects the larger cultural dimension of the nation. The series of oral and written interviews that were conducted reveal, in a glimpse, the strong spiritual, economical and familial background of a typical Filipino.
Keywords: Ethnomedicine; Ethnobotany; Medicinal Plants; Quiapo; Philippines.

INTRODUCTION

The uses of herbal medicines have been an integral part of every country since the pre-historic times. “In the Philippines, knowledge on the use of plants as medicine was inherited from great ancestors through oral tradition [1].” The persistent presence of “albularyo” or faith healers in different places in the country is an indication of the continued patronage of Filipinos to traditional pratice of medicine. Herbal or Traditional medicine, as defined by the World Health Organization, is the “sum total of knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures that are used to maintain health, as well as to prevent, diagnose, improve or treat physical and mental illnesses.” Therefore, the use of herbal medicines can be linked into the prevailing culture or ethnicity of a particular place.

The District of Quiapo in Manila, Philippines is one of the busiest areas in the Capital Region. It is a “shopping hotspot” where different products are sold at cheaper prices. The area is also home to the popular Minor Basilica of the Black Nazarene, a Catholic Church where innumerable pilgrims are paying homage to the sacred image of Jesus Christ. Around the church, one can observe the many sellers of herbal medicines. It is noteworthy that in the midst of various medical technologies and the western way of curing diseases, the use of medicinal plants is still widespread throughout the country. The researchers think that the most common and quick assumption for this is the fact that significant portions of the populace consider themselves poor. Therefore, cheap yet, as they believe, effective medicines like the herbs sold in Quiapo are the way to go in matters of health-related concerns.

In this study, the researchers will identify the different medicinal plants sold in the District of Quiapo. The researchers will also attempt to link the informants’ profile or background in the use and sale of medicinal plants.

SIGNIFICANCE OF THE STUDY

The study will benefit future researchers who would like to conduct scientific testing to the different plants sold in Quiapo, Manila for their potency as medicines to cure specific diseases. In other words, this study will give them hints which plants are intended for a specified disease.

STATEMENT OF THE PROBLEM

This study sought to address the following problems:

1. What are demographic characteristics of medicinal plant sellers and buyers in Quiapo, Manila?
2. What are the different medicinal plants sold in the area?
3. What are the different ailments that can be treated by these medicinal plants?
4. What is/are the link/s of medicinal plants to the profile or background of the informants?

REVIEW OF RELATED LITERATURE

The use of medicinal plants is widespread across the globe. The uses of herbal medicine have an integral part

of every country since the pre-historic times. In fact, "the World Health Organization (WHO) mentioned that ethnomedicine has maintained its popularity in all regions of the developing world and its use is rapidly expanding in the industrialized countries [2]." The high demand for medicinal plants, in some extent, can be alarming. Researchers noted that "due to unscientific activities and over exploitation some plants are getting endangered. To overcome this problem or to meet the demand of medicinal plants in herbal preparations, conservation strategies are required to be implemented to protect his rich traditional ethnic plant diversity [3]."

The usage of herbal medicines also reflects the prevailing culture or economic condition of a particular place. In places where health care system is absent, "the local people are dependent on the medicinal herbs extracted from the forest [4]." People are using "these plants to cure many diseases like Cough, Diarrhea, Dysentery, Wound healing, Diabetes, Jaundice, Sunstroke, Fever, Vomiting, Skin diseases, Fatigue, Blood purifier, Antipreganancy, Urinogenital disorder, Toothache, Menstrual disorder, Hypertension, Headache etc. [5]." In some parts of the world, like India, "the most used plants were *Plantago ovata*, *Peganum harmala*, *Withania coagulans* and *Fagonia indica*. Informants demonstrated great consensus in the treatment of respiratory and otic problems, and Calotropis procera was declared the most preferred species for the treatment of dermatological, respiratory, inflammation/pain/fever and gastrointestinal disorders [6].

"In the Philippines, knowledge on the use of plants as medicine was inherited from great ancestors through oral tradition [1]." There are certain medicinal plant species in the country that gain the endorsement of the Department of Health (DOH). The "following ten species of medicinal plants has been endorsed by the DOH in its traditional health maintenance program: *Blumea balsamifera*, *Carmona retusa*, *Cassia alata*, *Psidium guajava*, *Allium sativum*, *Momordica charantia*, *Vitex negundo*, *Mentha sp.*, *Quisqualis indica*, and *Peperomia pellucida* [7]."

THE STUDY SITE

The Quiapo District in the City of Manila has been a vibrant trade spot where residents of the City and nearby areas can buy different products at cheaper rates. Among the products which are abundantly sold in the area are medicinal plants.

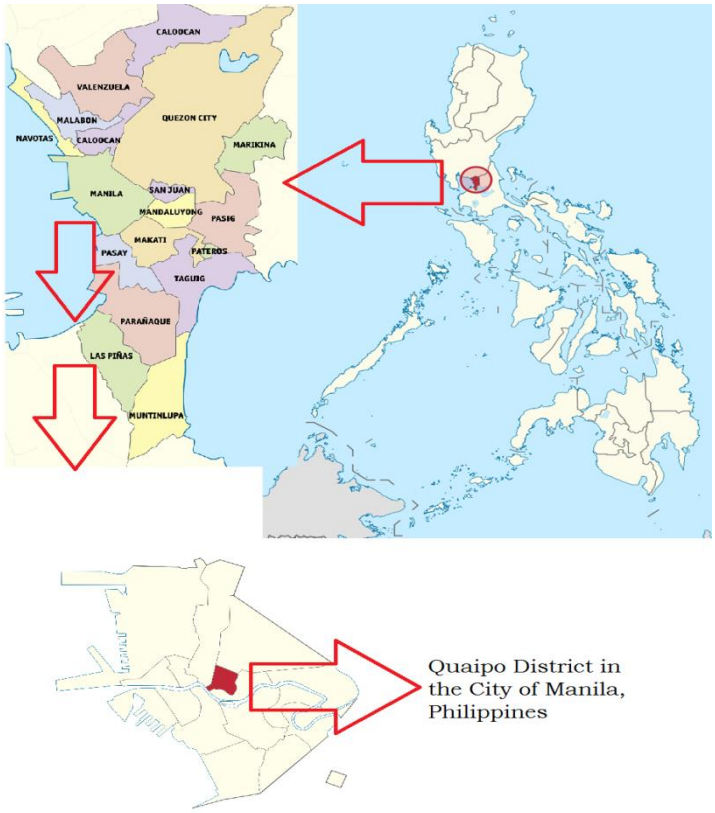

Fig-1: Map of Quaipo District (Wikipedia)

Fig-2: One of many sellers who took time to participate in the study

Fig-3: Sample Specimens that were collected on-site for Documentation

MATERIALS AND METHODOLOGY

The researchers conducted a survey among the sellers and buyers of medicinal plants in the area from April 4, 2016 to April 8, 2016 using a semi-structured interview method guided by a series of related questions. The sellers and buyers of medicinal plants served as informants and were profiled according to age, gender, educational attainment, location, etc. The informants, during the interview, were asked to identify, if possible, all the medicinal plants being sold in Quipo area to the best of their knowledge; the parts being used to produce a herbal medicine; its preparation techniques; its mode of application; dosage; and the ailments it supposed to cure. The collected specimens were also identified by their respective scientific names using different published literatures. Furthermore, the specimens were photographed for future reference purposes.

RESULTS AND DISCUSSIONS

In this study, two sets of informants were identified, the buyers and the sellers. The researchers could have opted to choose the sellers as the sole source of information about medicinal plants sold in Quiapo, Manila since, blatantly, they have the expertise more than any one else. However, the reseacrhers decided to include buyers as additional source of information to eliminate the fear that sellers might be hiding information about prohibited plant products such as those that can trigger abortion, those with extremely narcotic effects, etc.

As shown in Table 1, there were total of 39 informants who voluntariliy participated in the study. Out of the total 39 informants, 22 were sellers (56.41%) and 17 were buyers (43.59%).

Table 1: Informant's Distribution

Informants	No. Of Informants	Percentage
Buyer	17	43.59%
Seller	22	56.41%
TOTAL	**39**	**100.00%**

It is not surprising that majority of the informants who volunteered for this study are women as shown in Table 2. While the perception of Filipino Women among themselves are shifting from being a plain housekeeper [8] to someone who also works for a living, it is interesting to note that their innate calling of building homes are not neglected. In fact, some gender-related rights advocates recognized the need for employers to provide facilities and some considerations to women employees in order for them to combine work and family responsibilities [10]. This is supported by a recent findings by the Women's World Banking [9] in which they said, "women's success in the workplace, in particular, is shaped by an array of factors including cultural expectations, family responsibilities, and self-perception. To build the most effective and diverse leadership and staff, an institution must develop women's skills in ways which take their circumstances into account." In short, work and home-building responsibilites of women are inseparable, and this reflects the kind of culture that we have in terms of gender roles in the family. Men and women have different, yet complimentary roles to play in their family life.

As far as common knowledge is concern, part of every women's family responsibility, especially mothers, is budgeting. Most of the buyers who participated in this study have clearly mentioned in the interviews that shortage of money, or the lack of it, is a major factor why they turn to medicinal plants for the cure of diseases. The practicality of women and their expertise in budgeting, somehow, based on their answers in the interviews, are leading them to find cheaper ways and means of providing health care for themselves and their families.

Table 2: Buyer's Gender Distribution

Buyer's Gender	No. Of Buyers	Percentage
Male	3	17.65%
Female	14	82.35%
TOTAL	**17**	**100.00%**

The use of medicinal plants, as shown in Table 3, is independent of educational achievements contrary to the popular belief that under educated people tend to use medicinal or traditional medicines. According to Abe and Othani [7], "differences in educational background do not influence the reported knowledge of medicinal plants" in present time.

The high number of educated (college graduate) informants suggests a cultural change in terms of how people view health and medicine. More and more people, nowadays, are going "natural" in terms of their lifestyles. People are becoming conscious with what they eat and drink; and this is very evident in different new products that are out in the market. Most of them, as advertised, contains natural and organic herbs. It is probable that people's growing perception about herbal plants are not just mere medicines to cure, but also as preventive agents to avoid acquiring diseases. As a matter of fact, there is a "growing role of traditional medicine practice in the health care delivery system of most countries of the world [11]. Meaning, there is an increasing demand for medicinal plants throughout the globe brought, in part, by the increasing awareness of its effectiveness.

On another view point, the link of education and the use of medicinal plants are non-issue since, according to the buyers' answers to the interviews, the use of medicinal plants are already part of their respective families' culture and tradition. The knowledge of medicinal plants, according to most of them, were transferred from generation to generation.

Table 3: Buyer's Educational Achievements

Buyer's Educational Achievement	No. Of Informants	Percentage
Elementary	2	11.77%
High School	5	29.41%
College	10	58.82%
TOTAL	**17**	**100.00%**

As revealed in Table 4, majority of medicinal plant buyers were under the age group 21 to 30. It is surprising to note that a relatively young group of people are patronizing the use of herbal medicines. It is probable that this observable result can be attributed to the fact that, again, people, especially the young, are going "natural" in terms of their lifestyles.

On another view point, we cannot also dismiss the possibility that these group of young buyers are just buyers-in-behalf of their sick or frail family members who can no longer have the means or energy to walk just to buy herbal medicines. In other words, these young buyers can be caregivers of their sick relatives. This can probably be attributed to the traditional values commonly observed among Filipino Families. A study conducted by Morrillo *et al.* [12] reveals that "closeness in the kinship ties of the Filipino family is also observed in the reciprocity that are sustained between the child(ren) and parent(s), even when they are not in a common living arrangement. Examples of this are when an offspring takes care of an elderly parent, the parent keeping responsibility of household management even

ifthey are abroad to work, and continuing parental responsibilities to the offspring even if they are of age and stable status already."

Table 4: Age Group of Buyers

Age Group of Buyers	No. Of Buyers	Percentage
21 to 30	9	52.94%
31 to 40	4	23.53%
41 to 50	0	0.00%
51 to 60	1	5.88%
61 to 70	2	11.77%
71 to 80	1	5.88%
TOTAL	**17**	**100.00%**

The data in Table 5 shows the different medicinal plants that are being sold in Quiapo, Manila, Philippines. The reseachers were able to identify Thirty-two (32) different species of medicinal plants in which, according to interviews to different sellers, were sourced from different locations in the Philippines such as Cavite, Batangas, Rizal, Nueva Ecija, Bicol, Pampanga, Cebu, Antipolo, Quezon and Bulacan. These identified areas are mostly agricultural sites where soils are conducive for plant growth and development.

Of all the plant parts, the leaves are the widely used organ to treat certain kind of diseases. Majority of them are to be administered orally; while, some, topically. Almost all the plants are prepared to medicine by boiling. The most common symptoms and/or diseases believed-to-be cured by these medicinal plants are Headache, Stomachache, Stomach-related ailments, Urinary Tract Infection (UTI), Diabetes, Cough, Colds, Fever, Cancer, Rheumatic Diseases, Ulcer, Asthma, Eczema, Open Wounds, Dengue, Heart-related problems; Anemia, Kidney Stones, Metabolic Imbalances (High Creatinine, etc.), Infestation and Digestion-related ailments.

According to most of the sellers, the peak season where sales for medicinal plants are high are during the months of December, January, February, March, April and May. It is probable that the sales are at peak on these specified months because, (1) these period falls under the Dry Season which can be divided into Dry Cool Months and Dry Summer Months where cases of Influenza or Flu are high, specifically on the months of Janaury, February and March [13]; and, (2) these months also falls during the Christmas Season, Feast of the Black Nazarene and Holy Week where Quiapo is considered as one of the "melting pot" in the Philippines in terms of spirituality and economics.

All of them also agreed that the top grossing medicinal plant is Sambong, scientifically known as *Blumea balsamifera.* Sambong according to the data given by the informants can be used to treat inflammation, fever, UTI, heart ailments, diabetes, skin Asthma and cough. It can also serve as antioxidant.

Table 5: List of Medicinal Plants Sold in Quiapo, Manila

	Local Name of the Plant	Scientific Name	Part of the Plant being used as medicine	Name of ailment/s treated	Preparation of Herbal Medicine	Mode of Adminis-tration	Dose
1	Alagaw	*Premna curranii* H. Lam	Leaves	Phlegm; Headache; Stomachache; Infection	Boiling	Oral	Once to Twice a Day
2	Aloe Vera	*Aloe barbadensis*	Succulent Parts	Receding hairlines	Pinch the succulent part and retrieve the gel-like substance.	Topical	Once a day before taking a bath
3	Anis	*Pimpinella anisum*	Fruits, Seeds	Gases in the stomach; Stomach ache	Dried fruits and seeds, boil and create tea.	Oral	3 times a day
4	Ashitaba	*Angelica keiskei*	Leaves	Stomachache; Cancer	Boiling	Oral	Three times a day
5	Atis	*Anona squamosa L.*	Leaves	Fever; Rheumatic Pain; Head Lice	For Oral, Boiling. For Topical, pounding the leaves to retrieve the paste-like substance.	Oral and Topical	Once a Day for both oral and topical
6	Avocado	*Persea americana*	Leaves	Pain reliever	Boil for 30 minutes under low fire	Oral	Frequent
7	Banaba	*Lagerstroemia speciosa*	Leaves	UTI, Ulcer	Boil for 30 minutes under low fire	Oral	Frequent
8	Bayabas	*Psidium guajava*	Leaves	Open Wounds	Boiling	Topical	Twice a day to wash wounds
9	Camias	*Averrhoa bilimbi*	Fruits	Cough; Fever	Extracting the Fruit Juice	Oral	Once to Twice a Day
10	Coconut	*Cocos nucifera*	Coconut Oil	Skin Moisturizer; Protection against colds; Good	Coconut Oil	Oral and Topical	For topical, before taking a bath. For oral, once a day

				Digestion			using a single spoon.
11	Damong Maria	*Artemisia vulgaris* Linn.	Leaves	Headache and Stomach ache	Boil for 30 minutes under low fire or pulverized by pounding	Oral and Topical	For Oral, twice a day. For topical, twice a day.
12	Guyabano	*Anona muricata L.*	Leaves	Highblood, Pain reliever, Fever, Diabetes; Cough; Antioxidant	Boil for 30 minutes under low fire; 33 leaves in 1 liter of water	Oral	Frequent
13	Kataka-taka	*Kalanchoe pinnata*	Leaves	Eczema, Skin Infection	Pounding the Leaves	Topical	Once a Day
14	Lagundi	*Vitex Negundo*	Leaves	Cough and Colds	Boil for 30 minutes under low fire	Oral	Frequent until signs and symptoms are no longer seen.
15	Luyang Dilaw	*Curcuma longa*	Roots	Kidney Stones	Boiling	Oral	10 times a day
16	Madre Cacao	*Gliricidia sepium*	Leaves	Rheumatic pain; Wounds	Pounding the Leaves	Topical	Once a day
17	Makabuhay	*Tinospora cordifolia*	Twig	Open Wounds and Anemia; Ulcer; Relapse (Binat)	Boil for 30 minutes under low fire	Oral for anemia and Topical for open wounds	For Oral, twice a day. For topical, twice a day.
18	Mango	*Mangifera indica*	Leaves	Colds; Fever; Ashtma	Boiling	Oral	Once to Twice a Day
19	Nganga or Ikmo	*Piper betle*	Leaves	To stay warm and alert; Gastric Ailments	Direct chewing in the mouth	Oral	Frequent
20	Oregano	*Origanum vulgare*	Leaves	UTI, Fever	Boiling	Oral	Once or Twice a day
21	Pandakaki	*Tabernaemontana pandacaqui*	Leaves	Eczema; Wound Healing	Boiling	Topical	Once to Twice a Day
22	Pandan	*Pandanus sp.*	Leaves	UTI; Headache; Vomitting	Boiling	Oral	Three times a day
23	Sambong	*Blumea balsamifera*	Leaves	Inflammation, Fever and UTI; heart ailments, Diabetes; Skin Asthma; Cough; Antioxidant	Boil for 30 minutes under low fire	Oral and Topical	For Oral, frequent. For topical, once a day during bath time.
24	Serpentina	*Rauvolfia serpentina*	Leaves	HighBlood; Fever due to Infection; Diabetes	Boiling	Oral	Once a Day
25	Suha	*Citrus maxima*	Leaves	Cough; Ulcer; Diabetes	Boiling	Oral	Three times a day
26	Tabaco	*Nicotiana tabacum*	Leaves	Headache and Stomach ache	Pounding the Leaves	Topical	As long as symptoms persists
27	Tahibo	*Tabebuia avellanedae*	Leaves	Diabetes	Boiling	Oral	Not mentioned
28	Tanglad	*Cymbopogon citratus*	Leaves	UTI; Stoamch-related ailments	Boiling	Oral	Three times a day
29	Tawa-tawa	*Euphorbia hirta L.*	Leaves	Dengue	Boiling	Oral	3 times a day
30	Tuba-tuba	*Jatropha curcas*	Leaves	Stomachache; Headache	Pounding the Leaves	Topical	As long as symptoms persists
31	Ugat ng Cogon	*Imperata cylindrica*	Roots	Heart Problems	Boiling	Oral	Frequent
32	Wansoy	*Coriandrum sativum*	Leaves	High Creatinine Level	Boiling	Oral	10 times a day

CONCLUSION AND RECOMMENDATION

The following are hereby concluded and recommended:

1. The medicinal plants sold in Quiapo, Manila and the people who patrnonizes it serves as a microcosm of the Filipinos deep spirituality, practical economics and strong family bonds.
2. There are thirty-two (32) identified species of plants sold in Quiapo, Manila. Sambong, scientifically known as *Blumea balsamifera*, is the top grossing plant among other species.

3. If not properly regulated by the government, there is clear danger in the misuse of these medicinal plants. Therefore, proper guidance and education must be provided among the buyers and sellers in order to avoid the occasion of drug misuse.

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