

INDIGENOUS KNOWLEDGE OF MEDICINAL PLANTS USED BY TRADITIONAL HEALERS IN ILOCOS SUR

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Abstract: This research documented local plant species with its botanical interest and scientific names used by the traditional healers in Ilocos Sur. In this study, the profile of the respondents who were Ilocano traditional healers were identified in terms of sex, age, serve as a healer, mentorship type of disease treated and specialization in the indigenous medicinal treatment. The indigenous knowledge of the Ilocano traditional healers was studied based on the botanical remedies and human ailments of the identified plant species in Ilocos Sur. It also included the methods of preparation of the medicinal plants used by the traditional healers. Fifty three (53) local traditional healers were interviewed to provide needed information.

Based on the findings of the study the traditional healer in Ilocos Sur possesses rich ethnic pharmacological knowledge. The study allows for identifying many high value medicinal plant species, indicating high potential for economic development through sustainable collection of their medical plan. It also showed that the study area has plenty of medicinal plants to treat a wide spectrum of human ailments.

Many people in the study areas of Ilocos Sur are still depending on medicinal plants, at least for the treatment of some simple diseases such as, cold, cough, fever, headache, poison bites, skin diseases and tooth infections. It is necessary to acquire and preserve this traditional system of medicine by proper documentation and identification of specimen. This traditional knowledge on the indigenous uses of the medicinal plants could boost new innovations in the pharmaceutical industry and have many beneficial applications such as new medicinal trials for some diseases like: malaria, Tuberculosis and AIDS, of which will develop the health care sector in Ilocos Sur. Knowledge sharing varied among the traditional healers. Some would freely share while others keep their techniques secret. Most of the healers do not follow rigid rules on dosage, but were practically strict to abstain or avoid some kind of food while their patients are under treatment. Many people in the study areas of Ilocos Sur are still depending on medicinal plants. The traditional healers in Ilocos Sur possess rich ethnic pharmacological knowledge on Medicinal plant. This allows the study for identifying many high value medicinal plant species, indicating high potential for economic development through sustainable collection of these.

Key words: Indigenous knowledge, traditional healers, medicinal plants, Ilocos Sur Philippines

1.1 INTRODUCTION

Background of the Study

Indigenous knowledge may be defined as knowledge that is unique to a given culture or society which provide the infrastructure for agriculture, health care, food prep, training, environmental conservation and other life process on the local level (Thomas, 1995). Any local community may have continuous old knowledge and traditional practices on

medicinal plants as a mechanism for survival.

Indigenous knowledge as a concept is baffling. Development institutions have not thus far gone to a unanimous perception of the concept. None of the definitions are essentially contradictory, but they overlap in many aspect. Warren (1991) and Flavier; (1995). Indigenous knowledge (IK) is the local knowledge –and is unique to a given

culture or society. IK contrasts with the international knowledge system generated by universities, research institutions and private firms. It is the basis for local-level decision making in a host of human activities in rural communities. (Warren 1991). It is the information base for a society, which facilitates communication and decision-making. Indigenous information systems are active, and are continually influenced by internal creativity and experimentation as well as by contact with outside organizations.. (Flavier et.al. 1995: 479) .

In the emerging global knowledge economy a country's ability to build and mobilize knowledge capital, is equally essential for sustainable development as the availability of physical and financial capital (World Bank, 1997) The basic component of any country's knowledge system is its indigenous knowledge. It encompasses the skills, experiences and insights of people, applied to maintain or improve their living.

Significant contributions to global knowledge have originated from indigenous people, i.e., in medicine and veterinary medicine with their intimate understanding of their environments. Indigenous knowledge is developed and adapted continuously to gradually changing environments and passed down from generation to generation and closely interwoven with people's cultural values. Indigenous knowledge is also the social capital of the poor, their main asset to invest in the struggle for survival, to produce food, to provide for shelter or to achieve control of

their own lives. (Indian Journal of Traditional Knowledge, Vol. 10(2), April 2011, pp. 281-286

Today, many indigenous knowledge systems are at risk of becoming extinct because of rapidly changing natural environments and fast pacing economic, political, and cultural changes on a global scale. Practices vanish, as they become inappropriate for new challenges or because they adapt too slowly. However, many practices disappear, only because of the intrusion of foreign technologies or development concepts that promise short-term gains or solutions to problems without being capable of sustaining them. The tragedy of the impending disappearance of indigenous knowledge is most obvious to those who have developed it and make a living through it. But the implication for others can be detrimental as well, when skills, technologies, art facts, problem solving strategies and expertise are lost.

Indigenous knowledge is part of the life of the rural poor; their livelihood depends almost entirely on specific skills and knowledge essential for their survival. Accordingly, for the development process, indigenous knowledge is of particular relevance for the following sectors and strategies: agriculture, animal husbandry and ethnic veterinary medicine, use and management of natural resources, primary health care (PHC), preventive medicine and psychosocial care, saving and lending, community development, poverty alleviation.

The rural communities depend heavily on plant diversity for the fulfilment of their basic needs and conservation of other natural resources. They collect useful plant resources from various habitats and utilize them using indigenous knowledge and practices. The vast store of information on indigenous knowledge, practices, and technologies is being eroded as a result of fast urbanization, over-exploitation of resources, unscientific land use, change of lifestyles and behaviour. Hence, priority ought to be given to document the useful plants with indigenous knowledge, practices as well as technologies from the area before the inhabitants shift over to modern lifestyle use to improve livelihoods, and their roles in conservation and sustainable management of environmental resources have been carried out.

There are still gaps in the comprehensive study and documentation relating to the ethno botanically useful species and indigenous knowledge, practices and perception of the local people for sustainable resource management. Moreover, as Nepal is also one of the signatories of the conventions (Ramsar Convention, the Biodiversity Convention, and the Convention on International Trade in Endangered Species), priority should be given to the documentation the useful species with their sustainable uses, and existing local level indigenous knowledge, techniques and practices. The study is designed to fill up the gaps and to recommend some strategies for sustainable management of the resources. (Indian

Journal Traditional Knowledge, Vol. 10, No.2 April: 2011, 282)

Traditional healers are found in most societies. They are part of a local community, culture, tradition and continue to have high social standing in many places, exerting influence on the local health practice as most people still rely heavily on traditional medicine. Traditional medicines are often the first and last line of defense against most common ailments such as headaches, coughs, diarrheal, wound healing and skin diseases. One advantage in preferring traditional medicine is that healer's services are more affordable as they only charge negligible fees, highly accessible, are familiar with patients, and operate within the ambit of culture and environment. They work on the body and mind together to help cure an illness. Traditional medicinal knowledge of medicinal plants by Ilocano traditional healers is not only useful for conservation of cultural traditions and biodiversity, but also community health cure at present and drug development in the future.

According to the WHO (2001) report, traditional healers such as herbalist, midwives and spiritual healers constitute the main source of assistance with health problems for at least 80% of rural population of developing countries. This unquestionably shows that the population of developing countries relies heavily on traditional medicine to cope with their health problems (Bannerman, 1983)

The distribution of knowledge and services of medicinal plants is hierarchically

placed. Services are obtained from the family, neighbourhood, and village or beyond. Furthermore, there is very little ethno-botanical documentation on the most medicinal plant in the country. The status of phytochemical preparation of crude extracts and isolation of active ingredients is very minimal. The data base for the recorded species of medicinal plants also needs special attention.

In Ilocos Sur, medicinal plants have been used as a traditional medicine to treat different human ailments by the local people from the immemorial. Even though there is a high expectation of enormous traditional knowledge and use of medicinal plant species, it is not widely used as it could because the skills are fragile and easily forgotten as most of the medicinal plants are in the hands of a handful and kept as a secret. Therefore, the present study was carried out to assess and document the original knowledge and use of medicinal plant species by traditional healers to treat human ailments in the study area. The study concentrated in identifying the plant parts used for medicinal purpose, document indigenous knowledge of the people on the use of medicinal plants and investigate plant species that are used as medicines for the treatment of human health problems.

This study intends to document the indigenous plant species; the methods of preparation, the particular ailments remedied, and possibly categorize the healing modes of such traditional healers. This study forms part of an initiative to document baseline data for pharmacological

studies in line with the general intent of biodiversity conservation.

Objectives

The study was conducted to determine the local plant species used by the traditional healers in Ilocos Sur.

Specifically, it sought to answer the following questions:

1. What is the profile of the Ilocano Traditional Healers in terms of the following?

- a. sex
- b. age
- c. length of time as healers
- d. mentorship
- c. type of disease treated
- d. specialization

2. What are the identified local plants by the traditional healers and scientific name?

3. What are the botanical remedies and human ailments of the identified plant species used by the traditional healers Ilocos Sur?

4. How are the plant species prepared and what are the methods of extraction as medicinal plants?

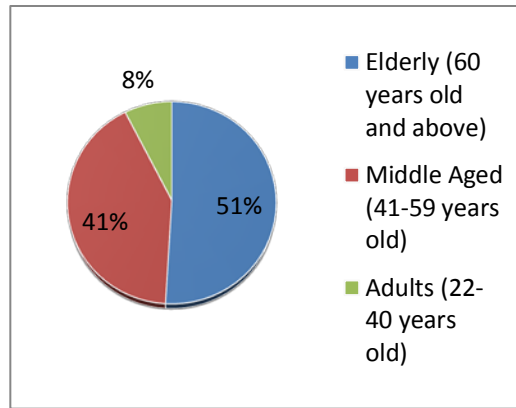
1.2 METHODOLOGY

Study Area

This study was conducted in the selected areas of Ilocos Sur where the traditional healers operate from September 2013 to October 2014. Qualitative case analysis intertwined with ethnomethodology strategies were used to unravel the answers for the research questions raised in this study area.

Data Collection

Descriptive and quantitative survey methods were used in this study to reveal the medicinal plants and how people are using them in and data were collected from 53 traditional healers



using semi-structured interview, followed by participant observations. Sample informants were selected based on recommendations from elders and local authorities of the study area. The interviews were conducted using the local dialect.

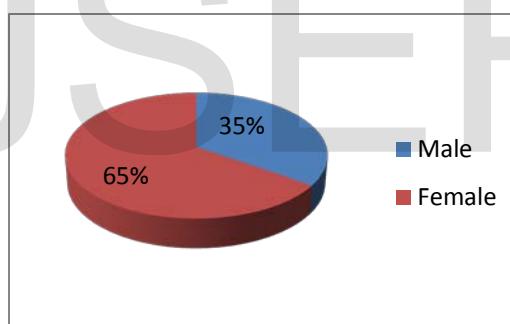
Data on human ailments treated, the local name of plants used, growth form, degree of management (wild/cultivated), parts used, methods of preparation, route of

administration and application, added value of medicinal plants, existing threats to medicinal species and indigenous knowledge transfer were recorded. Data were analysed using descriptive statistics.

1.3 RESULTS AND DISCUSSIONS

I. Profile of the traditional healers

On Sex. Generally, traditional healing is a gender-based practice; although in some

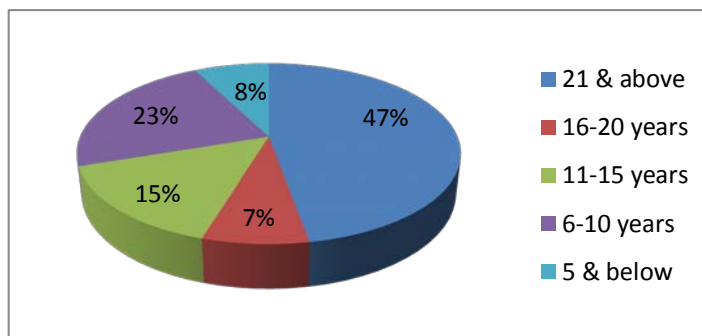


communities, both men and women perform this practice. It was found that among 53 respondents interviewed, 64.15% were women healers compared to only 35.80% of men.

Profile of the Ilocano Traditional Healers

On Age. Indigenous knowledge (IK) is acquired through time in which it takes from the traditional to acquire the indigenous knowledge. Most of the people, who were known to have substantive knowledge and were practicing, were mostly

older than 60 years of age. Bearing in mind the fact that IKS is passed on from one generation to another over time. Figure 3 indicated that the respondents became healers when they were teenagers and 7.50% when they were in their thirties.



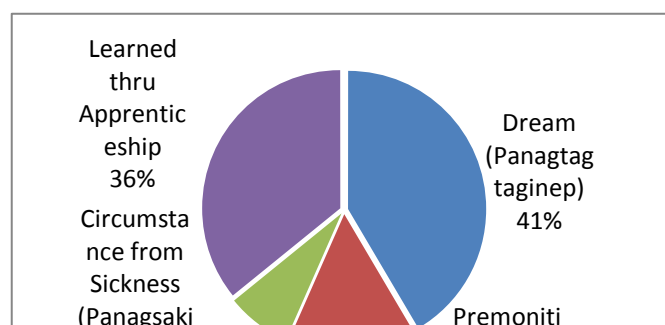
Percentage of healer by age category

It was observed that the elderly people have more knowledge than the younger people. The main reason for this is the superstitious nature of local people. They do not reveal the methods used to prepare “magic” herbal medicines to anyone, even their family members, because they think if they do, the effective medicinal plants of the herbs will be lost. With the death of the elderly knowledgeable persons these interactions, the children become knowledgeable, interested and may be motivated to also exercise this profession. However, this survey shows big numbers of respondents indicated that they became healers through apprenticeship with another healer, an indication that some course of initiation took place. However 19 respondents indicated that they became

in these remote rural areas, this traditional knowledge could be lost forever.

On mentorship. Generally in many cases skills and knowledge are usually transferred to their grandparents and their children. It is common practice for grandchildren to accompany their grandparents during the medicinal plant collection and during the process of treating patients.

Through healers by inheritance from their grandmother healer, while 4 respondents claimed that they became healers by circumstances from sickness, while 8 respondents stated that they were healers because of premonition. Twenty two respondents claimed to become healers by dreams.

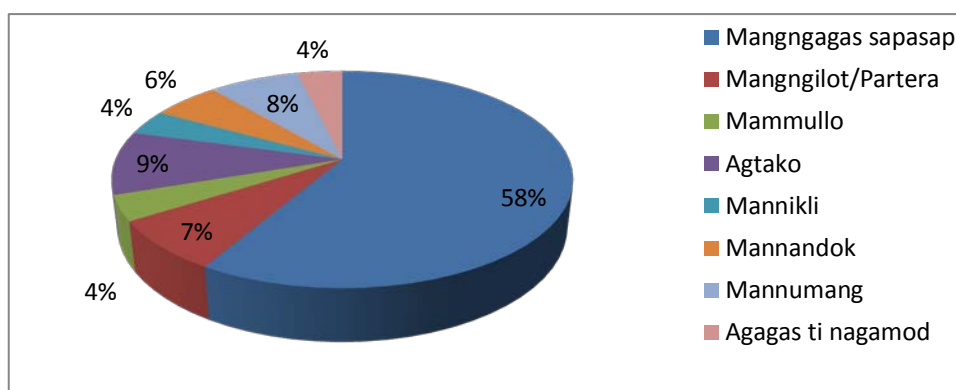


Various methods and people who played mentorship in passing Indigenous knowledge in Ilocos Sur

On Types of Diseases Treated. The traditional healing system in Ilocano is well established. Fifty three (53) respondents reported 43 medicinal plants that are used to treat 19 types of ailments and diseases in both man and animals (Table 1). Several common health problems and ailments such as colds, fever, burn, sore eyes, boils, diarrheal, wound healing and skin diseases were reported to be among the illnesses that traditional healers can treat. This result is in agreement with the traditional healers in Ilocos Sur who reported such as headaches

or coughs are considered to be diseases with natural causes and hence their symptoms are treated at the household level. Various studies have reported on the indigenous use of medicinal plants in the treatment of oral diseases, wound healing and skin diseases gastrointestinal disorders. Many of the cures which are prescribed by traditional healers can be viewed as general health tonics, used to treat problems of the stomach kidneys, bladder and other small complaints. The respondent's infection, on the other side some ailments take up to one year like.

Table 1 Summarizes the ailments and IKS plant-based medicinal plant therapies in Ilocos Sur.



Percentage Distribution of Healer According to their Expertise

It is evident from the figure that 58.5% of the traditional healers indicated that “Mangngagasasapasap

(general/versatile healer), 9.4% agtako (local pediatric), 7.50% Mannumang (anti-witch craft), 7.50 % Mangngilot/Partera (local

midwife), 3,80% Mammulo (bone expert), 5.70% Mannandok(anti-venom services) and 3.80% Aggagastinagamod(Spiritist), Mannikli(Pediatrician)and Mammullo(bone specialist) respectively. It is clear that this traditional Phyto - therapeutic remedy were more popular and widespread in the past, when medicines were not easily available.

Rituals for Practicing as a Healer

One has to get through the traditional ritual that will permit you to practice as to qualify a healer .It is loosely conceived that to become as acclaimed healer one has to prosper in this field that the respondents showed that they worked through the process before they become traditional healer. This is a sign that signifies the importance of indigenous knowledge in the sensation that the community tends to see that at one time someone gives way through that ritual she or he can be trusted as someone who knows he or she considerably .Some applications noted in some areas are not compatible with medical tradition as local traditional have different understanding of how certain diseases are caused. This is largely because traditional healing is a very complex issue involving rituals as spiritual aspects far more than just the use of plants.

Knowledge of the traditional names of plants was heterogeneous and evenly distributed among the informants.

Plants of ethno botanical interest were collected in different environments, marginal areas, courtyards and non siders. Many of the plants gathered in distributed

environments may also behave like weeds in different agricultural practices. It is possible that some species of ethno botanical interest more cultivated in the past and became wild afterwards.

The IK took into consideration only the knowledge of useful plants, i.e. the no. of information who mentioned then is being useful. At first, people started recognizing and unify these plants that were easier to gather, such as those growing near to homes, roads, cultivated as fallow fields and subject boundaries.

Knowledge of the traditional names was given by informants seems to be confusing because there is no standard of these names and no floral keys that take you step by step in the common name for the identification of the plant.

The most cited medicinal plants belong to different plant type categories, mostly are grasses, trees and bushes.

Plants of these ethnic botanical interests were gathered to give standard names (scientific names) to avoid confusion, so that these plants have somehow been used or can be suggested as being a possible explanation in the future for documenting and safeguarding their plants and many natural resources. It is too important to record this knowledge before it vanished.

There were forty three (43) plant species were commonly applied to treat 19 human ailments (Table 1). Most of these species were wild and harvested mainly for their leaves and the remedies were

administered through none detailed explanation.

Informants reported various skills concerning the preparation of medicines. These include plant composition (whether single or combines), the condition of the plant used (raw or cooked) and methods of preparation such as crushing and pounding.

The people of the study area used various units of measurement and the duration of the administration to determine the dosage. Local units such as finger length (for bark, root and stem), pinch (for powder) and numbers (for leaves, seeds and fruits) were used to estimate and fix the amount of medicine. The traditional healers are not strict on dosage. They administered the same amount of medicine to people who have the same disease regardless of age, body weight or sex.

Different parts of medicinal plants are used as medicine by the traditional healers. Among the different plant parts, the roots are most frequently used for the treatment of diseases followed by leaves, whole plant parts, barks, tubers, seeds, fruits, pods, and stems.

Regarding to the preparation method (fresh and dry) of use medicinal plants, the traditional healers prescribed their treatment either on single plant use like the prescriptions for chicken pox, diarrheal, ear infection and headache, or using a combination of different parts as it was prescribed for leg pains, bleeding, stroke and tetanus.

Regarding to the life form of the reported medicinal plants by the

respondents; the study showed that herbs (42 species) were found to be the most used plants followed by trees (35 species), shrubs (22 species), weed (21), and grain (3) in descending order.

Summary

Traditional healers were found to work as an important role in the primary health care system of the local people as they treat resource people who had little access and could not pay the cost of modern medication.

Since medicinal plants are the main, often the only source of traditional medicine for the rural population and, are in high demand in the health care systems of this population when compared to modern medicine, ethno-medicine activities need special consideration and back-up.

This is partly because modern medical services are either unaffordable or unavailable to the immense majority of local people due to their skyrocketing cost coupled with the lack of transport to and from health center.

It was observed that the local healers did not have enough awareness about the cleanness of the equipment which is used to prepare the medicines. Also, their storage facilities were not entirely clean, thus, exposing the environment to various communicable diseases. The healers did not have certificates for their medicines and they did not work in cooperation with therapeutic professionals in the preparation of their medicine.

The informants' responses indicated that there were variations in the unit of

measurement, duration and the time at which remedies are taken and described by healers for the same kind of health problems.

The materials and instruments that are traditional healers used to treat patients may become a means of spreading different diseases, especially when they are administering medicines by syringes. The traditional healers had no any sophisticated materials like stethoscopes and thermometers to diagnose their patients. They only test their patients verbally and prescribe medication. One of the major setbacks with verbal diagnosis is that the patient might have diseases other than the prescribed ones as different diseases, demonstrate similar symptoms. And then the patient might be rendered a wrong medication that may adversely affect him.

The indigenous knowledge among traditional healers with regard to their age and educational level was different. This could be attributed to equal access of their family members to the existing indigenous knowledge regardless of age and educational story. This reveals that some of the traditional healers might have devoted much care to the indigenous knowledge transfer while most of them prevented the knowledge secret.

The mode of administration is mainly through oral and dermal. The traditional medicinal plants are harvested mostly from wild stands followed by home gardens. The leaves were found to be the most frequently used plant parts, followed by roots and fruits for the preparation of human remedies. The

indigenous knowledge and skill traditional medical practitioners must be encouraged and protected. This could be the way through which such people could practice their knowledge boldly. Encouraging people to grow medicinal plants in the home gardens, mixing with crops in farmlands and live fences is paramount important.

1.4 CONCLUSIONS

1. The traditional healers in Ilocos region possess rich ethnic pharmacological knowledge. The study allows for identifying many high value medicinal plant species, indicating high potential for economic development through sustainable collection of their medical plan.
2. This work demonstrated that the survey area receives lot of medicinal plants to treat a broad spectrum of human ills. Many people in the work areas of Ilocos region are still depending on medicinal plants, at least for the discourse of some simple diseases such as, cold, cough, fever, headache, poison bites, skin diseases and tooth infections. It is necessary to gain and preserve this traditional system of medicine by proper documentation and designation of specimens. A nationwide database is in the operation of being built by gathering up all conceivable IKS plants-based nationwide medical, therapeutic data as presently given by traditional

therapists. This traditional knowledge along the indigenous uses of the medicinal plants could boost new innovations in the pharmaceutical industry and have many beneficial applications such as new medicinal trials for some diseases like: malaria, Tuberculosis and AIDS, of which will develop the health care sector in the community.

1.5 RECOMMENDATIONS

1. Traditional medicine had minimal adverse effects with the exception of vomiting and inflammations, since the dosage not fixed (in most cases unknown). Thus, there is a need for traditional healers undergo training in basic health care delivery.
2. Traditional healers should be encouraged to transmit their knowledge to interested individuals in their residential areas. Equally most of the medicinal plants are wild and harvested for their roots to prepare remedies, the healers in consultation with government officials should take care not to eradicate the medicinal plant species altogether. It is advisable to replace these plants with common medicinal plants as oil fertility.
3. Many medicinal plant species were also reported to be rare.

These demand an urgent attention to conserve such resources in order to optimize their function in the primary health care system.

4. Awareness among the traditional healers and community is also important in parliamentary procedure to keep the indigenous medicinal plant species.

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