

Ethnomedicinal Awareness Among Manobo Pupils Of Sinaka Elementary School, Philippines

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Abstract

This study aimed to determine the awareness of the pupils of Sinaka IPED on ethnomedicine. The study used descriptive research design and the research instrument used in data gathering was survey questionnaire that contained pupil's profile in terms of name and sex, checklist of the herbal medicine according to illnesses and focus group discussion on the preparation of the herbal plants.

The universal purposive sampling design was used in the study wherein the researchers include all the pupils in Sinaka IPED Elementary School. Weighted mean was used to determine the knowledge of the pupils in the Ethnomedicinal Practices of Sinaka IPED Elementary School. Frequency distribution and percentage with the estimated respondents of the pupils was utilized to determine the point of view of the pupils in treating illnesses. Percentage from the total number of participants was used to assess.

Based on the results it was found out that most of the illnesses were treated with the use of leaves of the plants. This can be applicable for teaching grades school with the used of instructional materials which play a vital role on pupils academic performance in the science subject. Proper presentation of good instructional materials and the methodology employ by the teacher will enhance good understanding of the subject matter.

Keywords: Ethnomedicinal practices, internal illnesses, external illnesses, manobo, instructional materials, herbal medicine

Introduction

Ethnomedicine is a study or comparison of the traditional medicine practiced by various ethnic groups and especially by indigenous people. Many people depend their healing through herbal medicine. It is a practiced that herbal medicines can cure some illnesses such as headache, stomach ache, cough, etc. Some of the herbal medicine has been experimented and tested as an effective in treating diseases and they are now used in medical aid (Waldstein and Adams, 2006).

As modernization progresses however, the use of traditional medicinal plants has been threatened in many parts of the world. One of the major threats to these plants is that of habitat destruction. Due to modernization, natural vegetation is destroyed for the building of infrastructures that caters to the industrialization needs of the locale. Other concerns are those of over-harvesting of the plant medicine since vital parts of the plants are those that are used extensively causing their death and decrease in population. (Hossan S, Hanif A, Agarwala B, Sarwar S, Karim M, et al., (2010)

The researches study in ethnomedicine practices of Manobo tribe will help in choosing the right herbal medicine that can be used in their tribe that is trustable in curing illnesses. In this way their community will be much more aware of the safeness of the herbal medicines. Through this study it will help them in teaching their young ones in their tribes.

Theoretical and Conceptual Framework

Theory of Herbalism, according to the World Health Organization (WHO) (1978), herbalism uses plants and foods for healing and for building and maintaining good health. Herbalism is the oldest known medical practice with an unbroken tradition that reaches back to the very beginning of recorded history. Other healing modalities such as conventional medicine, homeopathy, naturopathy, flower essences and food science have evolved from herbalism. In addition, professions such herbalists, healers, bonesetters, dentists, doctors, pharmacists, nurses, surgeons, and massage therapists all owe their origins to herbalism.

Thomsonianism of Samuel Thomson (1769-1843) is a very popular figure in early American medicine, who managed to combine native and settler folklore with a more specialized approach. It recognized and sought to treat an underlying, fundamental cause of illness. Moreover, in perceiving symptoms as an expression of the organism's defensive efforts, this theory implied that the

treatment of symptoms and illnesses, per se, might actually hinder the healing process. Thomsonianism became a potent influence on the development to two major streams of thought within American herbalism.

Research Methodology

This study employed a descriptive case study of the Manobo and procedures of research to identify ethnomedicinal awareness among Manobo pupils of Sinaka IPED Elementary School. This study was conducted in Sinaka IPED Elementary School. This school is located in Barangay Anticala, Agusan Del Norte where the researchers considered a suitable place for determining the awareness of the pupils regarding the ethnomedicinal awareness in their tribe. Majority of the people living in Sinaka were Manobo and the area where the school is located is owned by ancestral domain. The name of the school was given by the former superintendent of the DepEd Butuan Division Dr. Arsenio Cornites Jr. A total of fifty (50) pupils (28 female, 22 male) in the School of Sinaka IPED Elementary School wherein it encompasses the population and research participants of the study. The main instrument used in this study were questionnaires and Focus Group Discussion methods. Weighted mean was used to determine the Ethnomedicinal Awareness among Manobo pupils of Sinaka IPED Elementary School. Frequency distribution with the estimated participants of the pupils was utilized to determine the awareness of the pupils in treating illnesses.

Results and Discussions

Problem 1. What herbal medicines were used in treating common illness of the Manobo pupils in Sinaka IPED Elementary School?

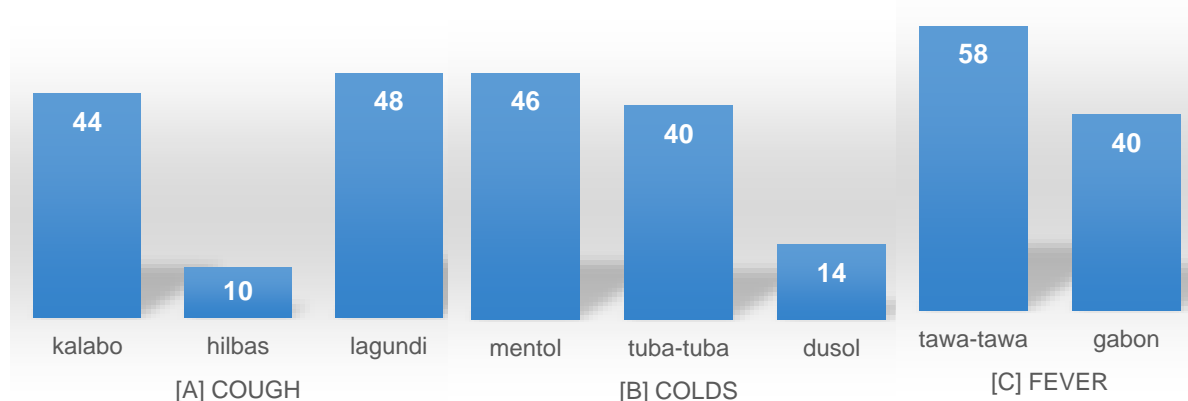
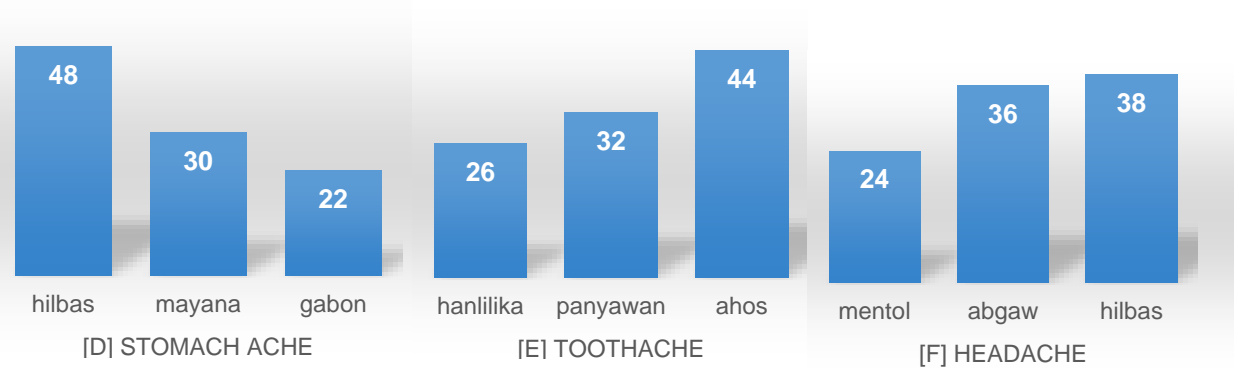


Figure 4. Frequency distribution (%) of herbal medicines used in treating internal illness among Manobo pupils.

In particular, in figure 4[A] cough was commonly treated with either lagundi (48.0%) or kalabo (44.0%). In fact, lagundi and kalabo are some of the identified herbal medicines that underwent laboratory tests. Lagundi is the first herbal medicine from the Philippine Council for Health Research and Development (PCHRD) from the Department of Science and Technology. According to Kilhan (2006) colds, cough, sinus congestion and the dullness that cold impart may occur during cold season. In preventing this illness Kilhan (2006) stated that spicy and bitter medicinal plants can cure cough and colds that aids to relieve sore throat and clogged nasal cavity. Oregano contains a rosmarinic acid compound, thymol, and carvacrol that are responsible for anti-bacterial properties. Anticala, Butuan City has good soil that can grow healthy plants such as lagundi and kalabo. Due to its abundance, it is easy for the participants to treat their illnesses such as cough.

Figure 4[B], colds was commonly treated with either mentol (46.0%) or tuba-tuba (40.0%). Menthol is used in treating colds, flu and bronchitis. Its expectorant actions, which involves thinning and loosening mucous congestion, as it provides a cooling sensation. Mint is acknowledge by the Department of Health (DOH) as one of the primary source in treating colds in the Philippines. Sinaka has a moist soil so, mint grow abundantly.

Figure 4[C], fever was commonly treated either tawa-tawa (58%) or gabon (40%). Tawa-tawa is a traditional medicine in Sinaka for treating fever. This indigenous plant is considered as one of the most popular folkloric treatment for fever in the Philippines. Gabon leaves are used as herbal treatment for fever. Gabon is one herbal medicine approved by the Philippine Department of Health (DOH) as an alternative medicine in treating fever. Gabon can easily grow in the tropical climate.



In figure 4[D], stomach ache was commonly treated either hilbas (48%) or mayana (30%). Hilbas contains substances than can remove bloating and any gas formed in the stomach. It grows in all warm countries like Philippines. Meanwhile, mayana is one of the popular herbal medicine in the Philippines and acknowledge by the Department of Health.

Figure 4[E], toothache was commonly treated either ahos (44%) or panyawan (32%). Ahos herb is one of the most widely used herbal medicines in the Philippines. The Philippine Department of Health has endorsed Bawang as an alternative herbal medicine for its anti-bacterial properties. Panyawan is natural and indigenous medicinal plant and it can be found commonly in forest. It is use to promote longevity, prevent diseases and to treat various illness. It has inflammatory properties that relieves pain or swelling. Makabuhay (Panyawan) was recognized as Philippine herbal alternative medicine.

Figure 4[F], headache was commonly treated either hilbas (38%) or abgaw (36%). Pounded leaves of hilbas can relieve headache. Taste bitter, spicy and warm that eliminates pain. Abgaw is a plant that grows in wild, all over the Philippines you can see its abundance. Pounded leaves applied for relieving pain like headache.

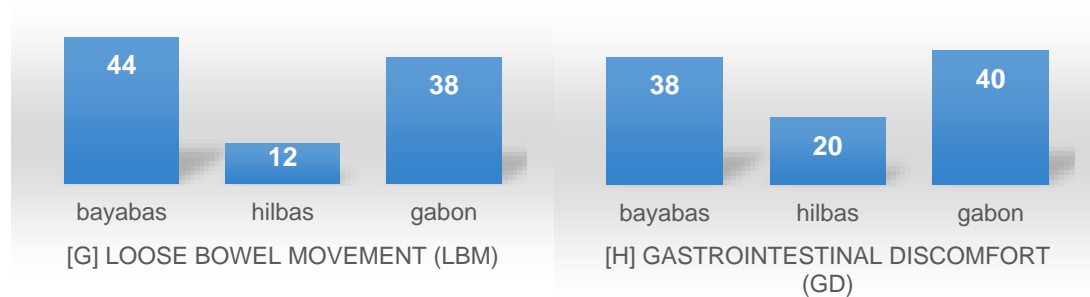


Figure 4[G] LBM was commonly treated either bayabas (40%) or gabon (38%). Bayabas has value in herbal medicine for its antiseptic activity in treating wounds, ulcers, bacterial infections and LBM recognized by the Philippine Department of Health. As shown by many research studies, almost all of the parts of this plant have medicinal qualities and value, and thus, making it as one of the most popular therapeutic plants in the Philippines.

Figure 4[H], gastrointestinal discomfort is commonly treated either bayabas (40%) or gabon (38%). Bayabas is widely used in the Philippines as herbal medicine in gastroenteritis and child diarrhea. Gabon is used as herbal medicine and is a shrub that grows wild in the tropical climate countries such as Philippines. Sambong is widely used in the Philippines as herbal medicine. Sambong leaves are known for its or Blumea camphor that is used as herbal medicine to treat anti-diarrhea.

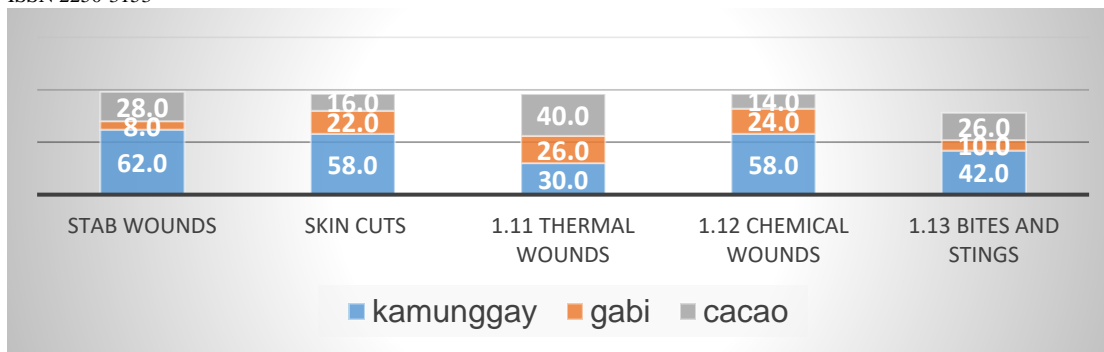


Figure 5. Frequency distribution (%) of herbal medicines used in treating external illness among Manobo pupils

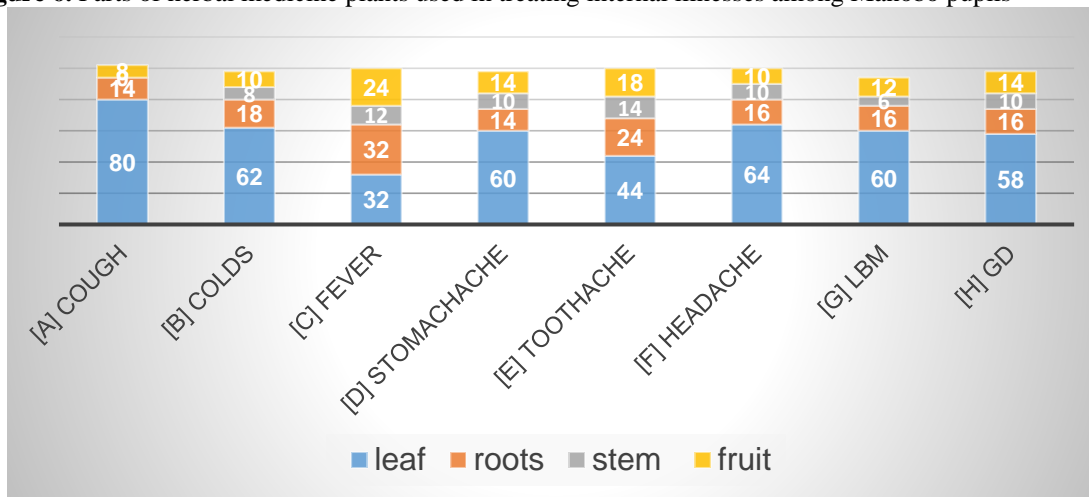
In figure 5, kamunggay is commonly used in treating external illnesses. Mostly, it has the highest percentage for stab wounds (62%), skin cuts (58%), thermal wounds (30%), chemical wounds (58%) and bites and stings (42%). Kamunggay is a plant that grows in the tropical climates such as the Philippines. It contains antibiotic that help inhibit the growth of microorganism that was tested by (Department of Science and Technology, 2013).

Gabi is commonly used in treating skin cuts (22%), thermal wounds (26%), and chemical wounds (24%). It has antimicrobial that helps inhibit the growth of microorganism tested by (International Biological Sciences, 2013). It heals burns, boils, skin rashes, insect bites, and even wounds. It is a long-stalked herbaceous plant with huge leaves.

Cacao is commonly used in treating thermal wounds (40%), stab wounds (28%) and bites and stings (26%). The cacao has anti-inflammatory use to treat wounds, skin conditions, burns, split lip, and fatigue. A study conducted in Spain by the Institute of Agricultural Chemistry and Food Technology showed that a flavonoids rich extract from cacao had a significant bactericidal effect on *Bacillus cereus* (Harney N, 2013).

Problem 2. What part of the plant used as a medicine?

Figure 6. Parts of herbal medicine plants used in treating internal illnesses among Manobo pupils



In figure 6, leaf used in treating internal illnesses among Manobo pupils such as cough (80%), colds (62%), fever (32%), stomachache (60%), toothache (44%), headache (64%), loss bowel movement (60%) and gastrointestinal discomfort (58%) were treated with leaves of the herbal plants which have the highest percentage in treating internal illnesses. Leaf of plants such as kalabo, lagundi, mentol, tuba-tuba, tawa-tawa, hilbas, mayana, hanlilika, panyawan, abgaw, and bayabas were commonly used among Manobo pupils.

Roots used in treating internal illnesses such as cough (14%), colds (18%), fever (32%), stomachache (14%), toothache (24%), headache (16%), loss bowel movement (16%) and gastrointestinal discomfort (16%). Roots of plants such as kalabo, lagundi, mentol, tuba-tuba, tawa-tawa, hilbas, mayana, hanlilika, panyawan, abgaw, and bayabas were commonly used among Manobo pupils.

Stem used in treating internal illnesses such as colds (8%), fever (12%), stomachache (10%), toothache (14%), headache (10%), loss bowel movement (6%) and gastrointestinal discomfort (10%). Mostly, stem has the lowest percentage thus, some of the Manobo pupils only used this part of the plant in treating illnesses. Stem of the plant such as kalabo, lagundi, mentol, tuba-tuba, tawa-tawa, hilbas, mayana, hanlilika, panyawan, abgaw, and bayabas were commonly used among Manobo pupils.

Fruit used in treating internal illnesses such as cough (8%), colds (10%), fever (24%), stomachache (14%), toothache (18%), headache (10%), loss bowel movement (12%) and gastrointestinal discomfort (14%). Fruit of the plant such as panyawan, ahos and bayabas were commonly used among Manobo pupils.

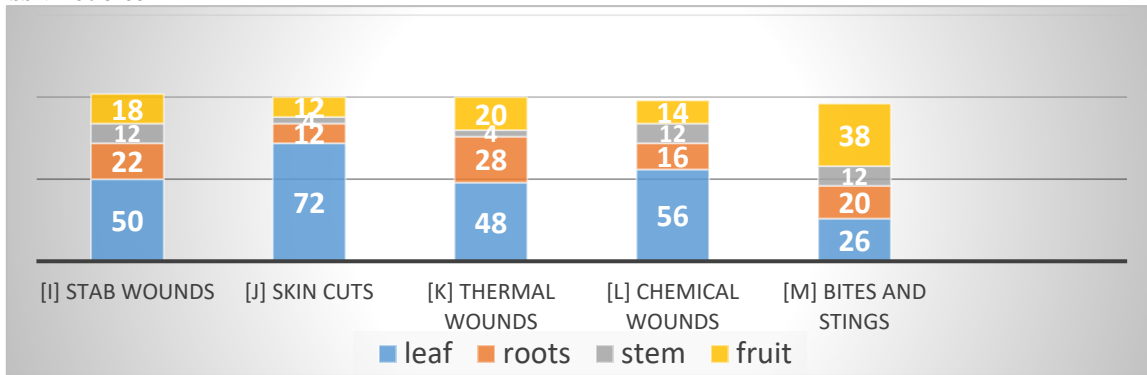


Figure 7. Parts of herbal medicine plant used in treating external illnesses among Manobo pupils

In figure 7, leaf of the plant were commonly used among Manobo pupils in treating illness such as stab wounds (50%), skin cuts (72%), thermal wounds (48%), chemical wounds (56%) and bites and stings (26%). Mostly it has the highest percentage thus leaf of the plants such as kamunggay, gabi and cacao were used among Manobo pupils.

Roots were commonly used among Manobo pupils in treating illness such as stab wounds (50%), skin cuts (72%), thermal wounds (48%), chemical wounds (56%) and bites and stings (26%). Roots of the plants such as kamunggay, gabi and cacao were used among Manobo pupils.

Stem were commonly used among Manobo pupils in treating illness such as stab wounds (12%), skin cuts (4%), thermal wounds (4%), chemical wounds (12%) and bites and stings (12%). Mostly, it has the lowest percentage. Stem of the plants such as kamunggay and gabi were used among Manobo pupils.

Problem 3. How did the IPed pupils prepare these herbal medicines according to the common identified illnesses?



Fig.8 Herbal medicine used for treating cough calabo (left side), lagundi (right side).



Fig. 9 Herbal medicine used for treating colds mentol (left side), tuba-tuba (right side).



Fig.10 Herbal medicine used for treating fever tawa-tawa (left side), gabon (right side)

Lagundi, concoction (Humulan og init nga tubig) 1-2 glass of water. Do these 3 times a day. Calabo, concoction (Humulan og init nga tubig) 1-2 glass of water, decoction (Pabukalan) 3-4 glass of water, searing (I-hawob). Do these 3 times a day. Mentol, pounding (Duk-dukon) and chewing (Usapon). Pound the leaves until it releases its juice and extract the leaves until no more juice come out. Tuba-tuba, decoction (Pabukalan) 3-4 glass of water. Do these 2 times a day. Tawa-tawa, decoction (Pabukalan) 3-4 glass of water.

Gabon, concoction (Humulan og init nga tubig) 1-2 glass of water, searing (I-hawob) and decoction (Pabukalan) 3-4 glass of water.



Fig.11 Herbal medicine used in treating stomachache mayana (left side), helbas (right side).



Fig.12 Herbal medicine used for treating toothache panyawan (left side), ahos (right side).



Fig.13 Herbal medicine used in treating Loose Bowel movement and Gastrointestinal discomfort gabon (left side), bayabas (right side).

Helbas, searing (I-hawob) and pounding (Duk-dukon). Pound the leaves until it releases its juice and extract the leaves until no more juice come out. Mayana, concoction (Humulan og init nga tubig) 1-2 glass of water. Panyawan, chewing (Usapon). Ahos, peeling (Panitan). Put it in the affected tooth. Bayabas, concoction (Humulan og init nga tubig) 1-2 glass of water and decoction (Pabukalan) 3-4 glass of water. Gabon, concoction (Humulan og init nga tubig) 1-2 glass of water, searing (I-hawob) and decoction (Pabukalan) 3-4 glass of water.



Fig.14 Herbal
medicine used in treating
headache helbas (left side),
abgaw (right side).



Fig.15 Herbal
medicine used for treating
external wounds kamunggay
(left side), cacao (right side).

Helbas, searing (I-hawob) and pounding (Duk-dukon). Pound the leaves until it releases its juice and extract the leaves until no more juice come out. Abgaw, searing (i-hawob). Malunggay, pounding (Duk-dukon). Pound the leaves until it releases its juice and extract the leaves until no more juice come out. Cacao, peeling (Panitan). Peel the fruit and apply to the wounds. Do it 3 times a day.

In preparing the herbal plants in treating illnesses. Decoction, concoction, pounding, steaming, searing, peeling, and mix with rice soup are used among IPEd Manobo pupils. In the study of science in extracting the plant there are different solvents that can have a good dosage of chemical for treating illnesses. Some solvents are specified to treat some illnesses. According to the book of Principles and Practice of Phytotherapy (2013) the disadvantage of decoction is that water is not a good solvent for many of the active components in herbs. This problem is compounded by the relatively short extraction time used in their preparation (usually 5 to 10 minutes). In addition, the large volume of hot liquid usually means that exposure to any unpleasant taste is considerably prolonged. The higher doses of herb often used in decoctions can sometimes compensate for the limitations of hot water as a solvent. Concoction, concoction, pounding, steaming, searing, peeling, and mix with rice soup is used for delicate herbs, leaves and fresh tender leaves. There are plants that have active chemical compounds that are not soluble in water. The biological or therapeutic activity of a medicinal plant is closely related to the plant chemicals in it. These chemicals can be classified into major groups of chemicals such as essential oils, alkaloids, acids, steroids, tannins, saponins and so forth. Each one of these classes of chemicals may have a preferred effective method of extraction which facilitates getting the chemicals out of the plant and into the herbal remedy that is being prepared. Generally, if they aren't water soluble, they won't be broken down in the digestive process then it probably won't provide any benefits that are attributed to these chemicals. When the same plant is prepared in alcohol as a tincture, the delicate steroids are degraded or burned-up in the alcohol but different antibacterial alkaloids which are only soluble in alcohol are extracted instead.

Summary

The main purpose of the study was to determine the ethnomedicinal practices of Manobo pupils and their uses of medicinal plants in treating illnesses. The study used the descriptive method of research comprising the information gathered and the significant different of Manobo using their own way of treating their illnesses using medicinal plants that they get in their own place.

This study aimed to understand how Manobo gives learning about their own tribe on how they improve and develop their culture. In today's generation, the 21st century all things are already modernized and civilized by the other country but despite of that, the Manobo never adapted any culture. Manobo culture must be shared to every Filipino to understand and respect their culture. This study can be applied in teaching pupils in grade 1 to 6 for their science subject.

Conclusions

The Manobo pupils have their own unique ways in terms of treating illnesses. Manobo pupils used odd number of leaves since it is the traditional count. Except for bites and stings, all of the common illnesses in internal and external, used the leaves of the herbal plant in treating their illnesses.

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