

Chapter I

Introduction

1.1 Background of the study

These days the term “Alternative Medicine” became very common in western culture, it focus on the idea of using the plants for medicinal purpose. But the current belief that medicines which come in capsules or pills are the only medicines that we can trust and use. Even so most of the pills and capsules we take and use during our daily life came from plants. Medicinal plants frequently used as raw materials for extraction of active ingredients which used in the synthesis of different drugs. Like in case of laxatives, blood thinners, antibiotics and anti-malaria medications, contain ingredients from plants. Moreover the active ingredients of Taxol, vincristine, and morphine isolated from foxglove, periwinkle, yew, and opium poppy, respectively. (Rasool Hassan, 2012)

The problem is not all places is occupied by an expert in herbalism that can help the individuals. We Filipinos really like on believing “hear says” that this kind of plant and that kind of plant can treat this kind of disease without any medical support. Not knowing that this kind of plant is not suitable in this kind of blood type. There are four known clinics in the Philippines that provides herbalism and per clinic there is one herbalist namely: Philippine General Hospital, Gensens Diagnostics, Acu Chiro Wellness Center, Ferros Bel-air (herbalists, 2015).

Due to the scarcity of herbalist in the Philippines, this expert system can act like an herbalist but not replace it. An expert system is a computer system that imitates the decision-making ability of an expert ^[19]. The knowledge base contains the domain knowledge useful for problem solving. In a rule-based expert system, the knowledge is represented as a set of rules. This knowledge based expert system will act like an herbalist but it will not replace the herbalists. Although we know there are herbal plants around us we don’t know how to administer it. Also we want to know that herbal plants are not good for a certain element. Not all herbal plants are good for one person. Blood typing is another concern. However, we have to recommend some precautions.

To achieve this herbalist like study, the constraints will design an expert system on recommending herbal plants for a certain disease. But first the constraints must gather the data of herbal plants and study it. It is not an easy research to study the diseases, herbs, and blood types. It's not all about studying the herbal plants but also constraints must study the blood type of a person to avoid some allergies from this plants.

The purpose of this study is the development of a rule based expert system in recommending herbal plants on common diseases. It starts with the collection of information of herbal plants then recommending it to cure a certain disease. It will also consider a blood typing.

1.2 Statement of the problem

A rule based expert system is necessary in recommending herbal plants as alternative medicine or supplement for common diseases based on blood types.

1.3 Research objective

1.3.1 General Objectives

This study aims to develop a rule-based expert system for recommending herbal plants that considers blood types.

1.3.2 Specific Objectives

In order to achieve the general objective of this study, the researchers need:

- To study the different kinds of herbal plants that found in the Philippines, the common diseases like abdominal pain, boils, cough, diabetes, diarrhea, high blood, measles, pneumonia, scabies, and wounds, and the allergies of the four blood types.
- To understand the process done by herbalist in preparing remedies or treatment in a disease.
- To analyze and design rules for the processes done by the experts in

order to recommend medicinal plants for a given disease.

- To create a test model to verify the reliability of the designed rules.
- To design and implement RBESReco
- To evaluate the performance of RBESReco in recommending herbal plants based on the designed rules.

1.4 Scope and Limitations

This study will address the problems of that were encountered by typical people regarding to their health. The expert system will recommend herbal plants for diseases and it will consider blood types. These disease but are not limited to abdominal pain, boils, cough, diabetes, diarrhea, high blood, measles, pneumonia, scabies, and wounds. Thus, the corresponding herbal plant are found in the Philippines. It will also consider the four blood types in order to avoid some allergy reaction. This will be done with use of an expert system that is capable of recommending best possible medicinal plants with blood type consideration.

1.5 Significance of the study

This study aims to contribute to the society to help them find medicinal plants that is suitable for them. It will also help them prevent some allergies in taking medicinal plants for the proper disease. By providing alternative solution to the lack of expert in the field of herbal plants, developer may create this system to exist.