### UNIVERSITI TEKNOLOGI MARA

## HEALTH SUPPLEMENTS: USAGE, INDICATIONS AND EXPECTATIONS ON PHARMACIST'S ROLE IN SARAWAK

### DAYANG NORSAHILAH BINTI ABANG SAFRI

Dissertation submitted in partial fulfilment of the requirements for the Bachelor of Pharmacy (Hons.)

Faculty of Pharmacy

JULY 2016

### **ACKNOWLEDGEMENTS**

All praise to Almighty ALLAH who blessed me with good health, strength and peaceful mind to complete this final research project successfully. I would like to express my deepest gratitude to my supervisor, Madam Ezlina Usir, for her excellent commitment, guidance, caring, patience, providing me suggestion, tips and encouragement throughout the completion of this final year project.

Special thanks to my close friends, Syarafina Binti Izahar, Nurul'Afifah Binti Sulaiman, Victoria Laput Anthony, Samantha Sangie, Ajibah Binti Muhammad and Rhohasnida Amika for helping me distribute my questionnaire to different divisions of Sarawak and my group mates Siti Anis Afiqah Bux Binti Sheikh Munir Bux and Siti Nur Hafizah Binti Anawi who have always helpèd me by sharing information and suggestion along with encouraging me with their best wishes. Special thanks to my parents Abang Safri Bin Abang Julai and for their non-stop support in terms of financial and emotional together with love.

I would also like to thank the people of Sarawak who have been very responsive and supportive by lending their times filling the questionnaire despite their busy schedule. I would never have been able to finish my dissertation without the guidance of my supervisor, help from lecturers and friends, as well as support from my family.

# **Table of Contents**

| ACKNOWLEDGEMENTS   | i    |
|--|------|
| List of Tables   |      |
| List of Figure   |      |
| List of Abbreviations  | vi   |
| Abstract   | viii |
| CHAPTER 1: INTRODUCTION  |      |
| 1.1 Introduction   |      |
| 1.2 Problem statement  | 2    |
| 1.3 Aim of study   | 3    |
| 1.4 Specific objectives  | 3    |
| 1.5 Significance of study  | 3    |
| 1.6 Research question  | 4    |
| 1.7 Research hypothesis  | 4    |
| CHAPTER 2: LITERATURE REVIEW   | 5    |
| 2.1 Introduction   | 5    |
| 2.2 Sources of literature review                                     | 5    |
| 2.3 Definitions  | 5    |
| 2.4 Classification of supplements                                    |      |
| 2.5 Usage of herbal and dietary supplements                          |      |
| 2.5.1 Annual sales   |      |
| 2.5.2Gender  |      |
| 2.5.3Age   |      |
| 2.5.4Ethnic group  |      |
| 2.6 Usage of herbal and dietary supplements in diseases              |      |
| 2.7 Common types of herbal used                                      |      |
| 2.8 Common types of dietary supplements used                         |      |
|  |      |
| CHAPTER 3: METHODOLOGY   |      |
| 3.1 Study design   |      |
| 3.2 Sample selection   |      |
| 3.3 Sample Size  |      |
| 3.5 Exclusion Criteria   |      |
| 3.6 Research Instrument  |      |
| 3.7 Instrument Validation  |      |
| 3.8 Data Collection  |      |
| 3.9 Data Analysis  |      |
| CHAPTER 4: RESULTS   |      |
| 4.1 Demographic  |      |
| 4.1 Usage of herbal and dietary supplements among the general public | 10   |
| 4.3 Relationship between usage of HDS and demographic background     | 23   |
| 4.4 Source of information on HDS                                     |      |
|  |      |

### Abstract

**Background**: The interest of the world population has shifted towards the usage of herbal and dietary supplement (HDS) intended for health. HDS are readily available for sale in many stores and online shopping including in community pharmacies. Pharmacist plays an essential role on maintaining the safe use of these products. Objectives: The aim of this study is to evaluate the usage and indications of herbal and dietary supplements among the general public residing in Sarawak as well as their expectations on the professional role of pharmacist with respect to HDS. Methods: A cross-sectional study was conducted by a convenient sampling. A selfadministered questionnaire was distributed in different cities across Sarawak. Results: A total of 209 of general public residing in Sarawak participated in this survey. Majority of the respondents were female (67.0%), ranging from 18-24 years (69.9%) with a low income status (75.2%) and without health problem (53.6%). The leading classification of HDS consumed was vitamins and minerals (57.8%), followed by health supplement (47.6%) and only one-fifth (20.9%) are taking herbal products. The common type of HDS consumed are vitamin C, multivitamins, collagen-containing products, fish oil and Nigella sativa. The two most popular indications were general health (42.4%) and weight-loss (22. 9%). Most of the respondents thought it was important for pharmacists to be knowledgeable on HDS (88.5%), but only half of them (56.4%) felt that community pharmacist have enough knowledge on the matter. *Conclusion*: The usage of herbal and dietary supplements was common among the public in Sarawak. Pharmacists should improve their role as professionals in giving appropriate information and advice to the consumers based on their expectations.

**Keywords:** usage and indications, herbs, dietary supplement, general public, Sarawak, role of pharmacist.

### CHAPTER 1

### INTRODUCTION

#### 2.1 Introduction

The world population has shifted their interest to the complementary and alternative medicine (CAM) to treat or maintain health conditions. The National Center for Complementary and Alternative Medicine (NCCAM) further classified CAM into five categories namely alternative whole medical systems, mind-body interventions, biologically based therapies, manipulative and body-based methods and energy therapies. In the United States (U.S.), biologically based therapies such as herbal and dietary supplements are most commonly used. (Ventola, 2010).

According to U.S. Food and Drug Administration, a dietary supplement is a product intended for ingestion that contains a dietary ingredients intended to add further nutritional value to the diet. Examples of dietary supplements are vitamins, minerals, amino acid, or a concentrate, metabolite, constituent or extract. Herb is a plant or part of the plant used for its scent, flavour, and/or therapeutic properties to supplement the diet (Mehta, Gardiner, Phillips, & McCarthy, 2008). Herbs can be combined with other dietary ingredients and becoming a dietary supplement product. HDS are often used to soothe or treat common ailments, reduce suffering, relieve pain as well as maintain health conditions (Mehta et al., 2008).