ACKNOWLEDGEMENTS

I would like to express my most sincere gratitude and appreciation to my supervisor, Dr. Ainin Sulaiman for her guidance, assistance and patience.

I would also like to thank all the 27 medical sales representative of Servier Malaysia Sdn. Bhd. who had diligently and sincerely helped me to conduct the survey. Without these fieldforce, this study would not have taken place nor completed successfully.

My sincere appreciation also to my MBA coursemates who have guided me patiently throughout the last three years.

Throughout my entire period of study for this MBA program, I thank GOD for giving me the courage, confidence, support and blessings to undertake my exams and overcoming various obstacles.

My parents, the late Mr. Jaganathan and Miss. Vimala who have nurtured me into what I am today.

Last and most important, I am grateful to my wife, children and my in-laws, for their love, patience, understanding and support throughout my MBA and this entire period of study.

I wholly dedicate this thesis to my beloved wife and precious children,
Vijaya, Esshven and Shahnia.

Om Sri Ganesaye Namaha !

LIST OF TABLES & FIGURES

CHAPTER 1

INTRODUCTION

1.1 Background

Healthcare consumers worldwide have embraced the Internet as a tool for information empowerment. The majority of Internet users are Americans (110 million) and of this total, 70 Million have searched the web during the past year for health information [1]. In reciprocal to the consumer's need for healthcare information, a burgeoning array of websites and services devoted to healthcare and medicine have mushroomed. Currently, Internet users can choose from more than 20,000 healthcare sites and every month an additional 1,500 healthcare sites become online [1].

Medical doctors are also embracing the Internet but many have concerns regarding the quality and how it might affect the practice of medicine and the patient-doctor relationship. Sadly, there appears to be a significant gap in publicly available information about the doctor's usage of the Net especially so in the Malaysian context. It is inevitable that the Internet will change the practice of medicine as it is changing the landscape of many other industries.

Currently, doctors in Malaysia can obtain medical information in the following ways:
- medical brochure presented by medical sales representatives (MSR) who are employed by pharmaceutical companies
- through attending medical seminars/symposiums/congresses organised by medical societies
- medical journals
- Internet

Multinational pharmaceutical companies employ medical sales representatives (MSR) to promote products. In the seventies & eighties, pharmaceutical companies employed 'O' level schooleavers, as MSR mainly for promoting the products. Then, the prerequisites for a MSR became more challenging, as only graduates were employed to cater the growing demands of quality medical information amongst doctors. Today, there is a trend for new MSR recruits to be pharmacists or science graduates, as the market has evolved into a sophisticated one with doctors demanding up-to-date high quality product and disease information. It became highly necessary for MSR's to be well versed in the medical and pharmacological terminology. Pharmaceutical companies spend a huge amount of resources in employing these highly qualified professionals as MSR's and the MSR's in turn help generate sales for the companies by convincing the doctors on the superiority of their respective treatments.

Currently, in Malaysia doctors can practise medicine either in the private or public sector. Doctors in the private sectors constitute of specialists in private hospitals and also general practitioners in the clinics. Doctors in the public sectors include specialists and medical officers both in general hospitals and outpatient clinics.

1.2 Purpose of the Study

Now with the advent of the Internet as a health information provider and its potential impact in the way medicine is practised, the following questions come to mind. Firstly, amongst the Malaysian doctors, do they have access to Internet and whether the accessibility of Internet amongst these doctors are at par with their American and European counterparts.

Then, the next question will be whether they are Internet savvy to enable them to embrace the Net as a main source of health information provider.

Currently, there are four ways for doctors to obtain medical or health related information. Medical brochure presented by medical sales representatives (MSR) is the most popular means utilised by pharmaceutical companies and next will be through attending medical seminars/symposiums/congresses organised by medical societies. The most conventional method is reading medical journals and right now gaining popularity fast is the Internet.

The study should be able to tell whether the Malaysian doctors prefer the Internet as their choice of health information provider. Finally, we can postulate whether the Internet is capable of replacing the role of MSR as a health information provider.

1.3 Significance of the Study

If the results from this study enables us to conclude that doctors are beginning to find the Internet as a reliable and credible source of up-to-date health information, then what role should the MSR play to remain viable to the needs of the pharmaceutical companies. Futuristically, what other opportunities or threats will the Internet present pharmaceutical companies with their current strategy in using MSR?

At present, pharmaceutical companies spend a large amount of resources in employing and training MSRs' to provide up-to-date product and disease information to the whole region of doctors. This could mean that pharmaceutical companies should change their current strategies and start shifting their resources allocation towards Information Technology (IT) infrastructures and software.

Currently, most multinational pharmaceutical companies that operate in Malaysia use a international website that operates on a global basis and does not meet the regulatory requirements of the Ministry of Health here, hence the medical information in the international website is usually country specific to the country where the headquarters of the pharmaceutical company is based. This may lead pharmaceutical multinationals to focus their resources in a local website that serves the needs of Malaysian doctors and plan for superior online customer service.

1.4 Objectives of the Study

The primary objective is to study the potential of Internet usage among Malaysian doctors as a source of health information.

The following are the keys areas of research :-

1. The level of Computer Ownership

2. The level of Internet Accessibility

3. Internet Usage

4. Information looked for at pharmaceutical company websites

5. Preferred source of medical related information for doctors

1.4.1   The level of Computer Ownership

To determine the number of doctors in Malaysia who own a computer.

1.4.2   The level of Internet Accessibility

To determine the number of doctors in Malaysia who have access to Internet.

For those doctors who have Internet access, to determine the following:

- The ratios in public and private sector
- The ratios in urban and rural areas
- The ratios in the various age brackets
- The ratios in the male and female groups
- The time frame doctors have had access
- The time span doctors use the Internet
- The venue of access

For those doctors who have **NO** Internet access, to also find out the factors hindering Internet accessibility.

1.4.3   Internet Usage

Usage of Internet by doctors : to find out whether e-mail , seeking medical related information or non- medical related information is the most important usage.

For medical related information surfed by the doctors – to find out whether disease information, reading medical journals online or drug information is the most important information looked for.

For non-medical related information surfed by the doctors - to find out whether finance/banking/share market , politics or other information is the most important usage on the Internet.

1.4.4 Information looked for at pharmaceutical company websites

To find out what doctors look for at pharmaceutical company websites: disease information, drug information or R & D information
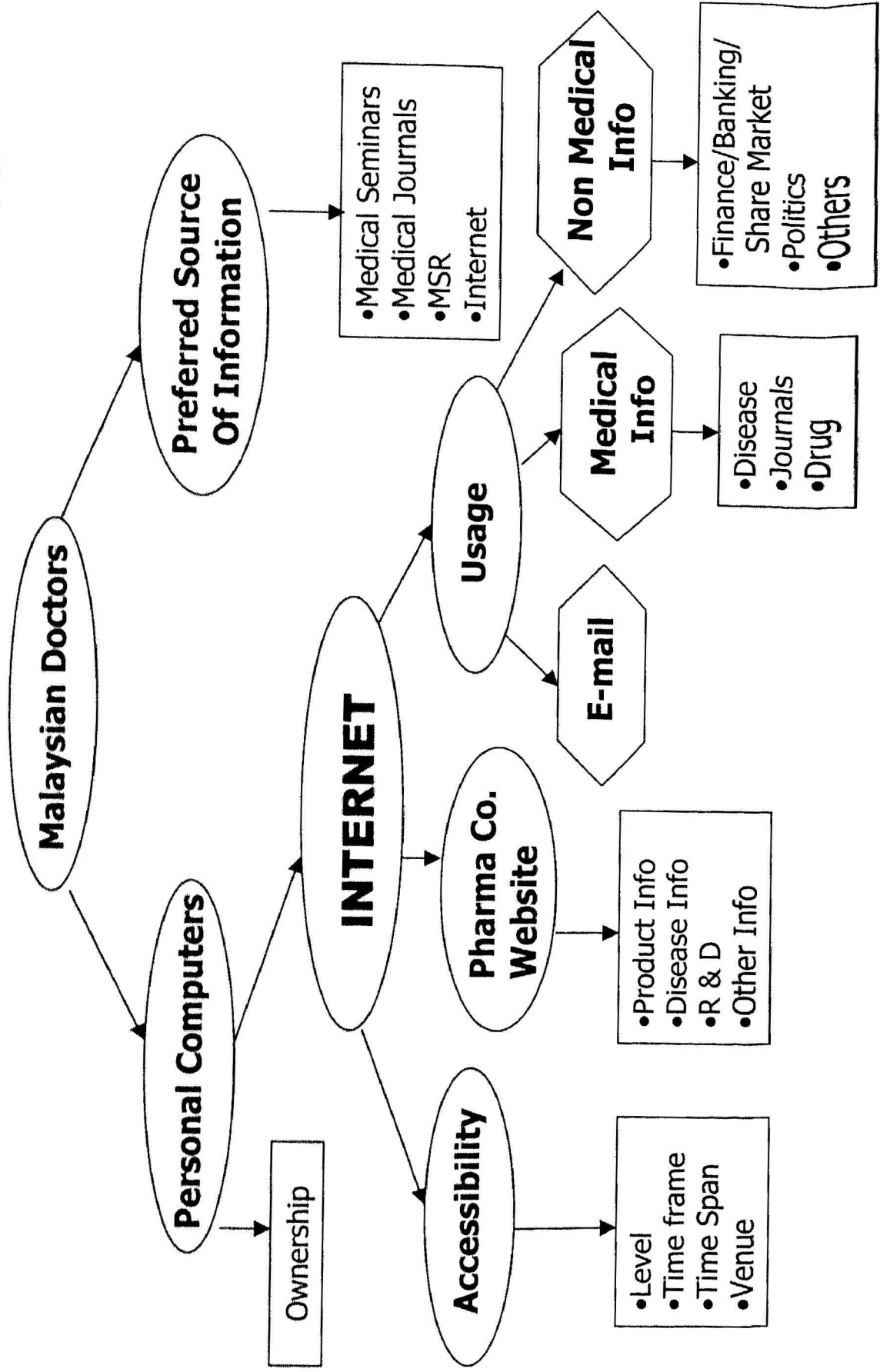
1.4.5 Preferred source of medical related information for doctors

The find out which is the preferred source of medical related information for doctors between : medical seminars/symposium/congress, medical journals, MSR with pharmaceutical company brochures and the Internet.

Refer to Figure 1 — Flowchart of Research Objectives

Figure 1 – Flowchart of Research Objectives

INTERNET USAGE AMONG MEDICAL DOCTORS IN M'SIA

Malaysian Doctors

Preferred Source Of Information
- Medical Seminars
- Medical Journals
- MSR
- Internet

Non Medical Info
- Finance/Banking/Share Market
- Politics
- Others

Personal Computers

Ownership

INTERNET

Usage

Medical Info
- Disease
- Journals
- Drug

E-mail

Pharma Co. Website
- Product Info
- Disease Info
- R & D
- Other Info

Accessibility
- Level
- Time frame
- Time Span
- Venue

7

1.5 Limitations of the Study

The survey was carried out only on medical doctors in Peninsular Malaysia. Doctors in East Malaysia were left out due to limitations in manpower to conduct the survey. Hence, the conclusions of this research are only applicable to West Malaysia and may or may not reflect the actual scenario for the population of Malaysian doctors as a whole.

1.6 Organisation of the Report

So far in Chapter 1, a brief introduction to the purpose, the significance and the objectives of the study has been outlined.

The following chapters will discuss in depth on the following key issues:

Chapter 2 on Literature Review – evaluation of past studies on Internet usage among medical doctors worldwide, Europe, America and also Malaysia. Future of Internet in healthcare is also discussed.

Chapter 3 on the Research Methodology – outlines the selection of measures, sampling design and data analysis techniques.

Chapter 4 on Research Results – analyses the results of the study, comparisons with past studies are made and discusses its implications.

Chapter 5 on Conclusions and Recommendations – conclusions are derived from this study, its business implications and suggestions for additional research are discussed in detail